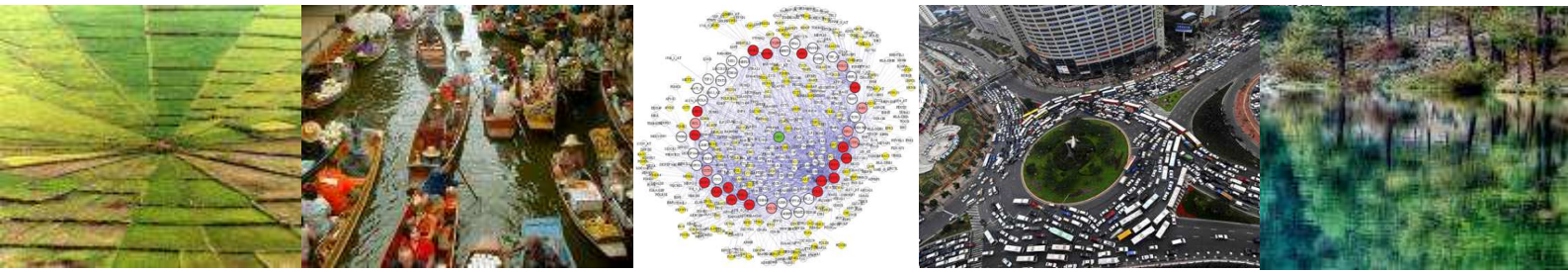

Innovation Dialogue
'Being Strategic in the face of Complexity'
Conference report

DRAFT

Wigboldus, Seerp & Mirjam Schaap (eds)

Wageningen UR Centre for Development Innovation
December 2009

WAGENINGEN UR
For quality of life

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Preface

Welcome to the proceedings of the Innovation Dialogue on Being Strategic in the Face of Complexity. The event was held in Wageningen on 31 November and 1 December 2009.

The event is part of a growing dialogue in the international development sector about the complexities of social, economic and political change. It builds on two previous events hosted the Innovation Dialogue on Navigating Complexity (May 2009) and the Seminar on Institutions, Theories of Change and Capacity Development (December 2008).

Over 120 people attended the event coming from a range of Dutch and international development organizations. The event was aimed at bridging practitioner, policy and academic interests. It brought together people working on sustainable business strategies, social entrepreneurship and international development. Leading thinkers and practitioners offered their insights on what it means to "be strategic in complex times".

The Dialogue was organized and hosted by the Wageningen UR Centre for Development Innovation working with the Chair Groups of Communication & Innovation Studies, Disaster Studies, Education & Competence Studies and Public Administration & Policy as co-organisers. The theme of the Dialogue aligns closely with Wageningen UR's interest in linking technological and institutional innovation in ways that enable 'science for impact'.

'Being strategic in the face of complexity' is not a topic that you can be fully covered in two days. However, we hope these two days created energy and synergy that can be followed-up on in the future.

These proceedings are an attempt to capture and quickly make available the main content of the presentations and discussions during the Innovation Dialogue. No attempt has been made to fully edit all the material. Rather it is presented background material that can later be drawn on for more refined outputs.

The Centre for Development Innovation of Wageningen UR will continue to engage with the quest for being strategic in the face of complexity and is very open to explore opportunities for partnership in these efforts.

In the meantime, we will keep you updated on future initiatives through our web portal at http://portals.wi.wur.nl/navigatingcomplexity/. Videos of speeches, interviews and more resources, which are not in this report, are available there as well.

Jim Woodhill
Director
Wageningen UR Centre for Development Innovation

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1. Introduction

By Dr. Jim Woodhill, director of Wageningen UR Centre for Development (www.cdi.wur.nl).

We face turbulent times. Engaging with the challenges of global development means dealing with much that is unpredictable and surprising. Tackling poverty and inequality, climate change, environmental problems and human conflicts is not a simple business. Moving beyond the current path of development - environmentally unsustainable and condemning vast numbers to poverty - will require deep societal transformations. Yet, too often our strategies for undertaking such change are linear. They incorrectly assume simple and predictable cause and effect relations. And they hinder the very innovation and risk taking that is needed for transformation.

Is it possible to be strategic in the face of complexity? Or is this a contradiction? What does complexity thinking imply for mainstream planning and accountability, and stakeholder expectations? What is the role of scientific analysis in complex situations?

The Linear and the Complex

Intuitively we all know that much of what we deal with in life is 'complex'. Yet the scientific and engineering mindset of the 20th century has too often led us to try managing complex situations in a linear way. Sometimes, linear approaches make a lot of sense. Each time we fly in an airplane we should be mighty thankful that engineers work in a linear way. However, none of us would ever believe that there is 'linear' path for raising our children. We know it is unpredictable and complex and that we have to adapt to what emerges. This emergence is a dynamic of many unknowns, the child's DNA makeup, her health, the relationship with her parents, the friends she happens to make, the teachers who inspire or bore her. We can't predict and control the development of our children but that doesn't mean a 'hands off' or 'anything goes' approach to parenting. Good parents work with some basic principles, love, positive reinforcement, clear and open communication, for example. They experiment with many different strategies and try to create 'attractors' for positive development. In fact humans are pretty good at coping with complexity. Indeed, the way our brains function is largely 'hardwired' to function in complex social contexts.

The great success of the biophysical sciences and in understanding the natural world and being able to use this understanding for prediction and technological development has tricked us. It has led to the believe that this sort of logic and analysis is 'best' and if we can simply apply it to the worlds of economics, social relations and politics we will be better at managing, controlling and developing our organisations, communities and societies. Complexity science teaches us that it is not as simple as this.

A 'Hangover' of Linear Thinking

At the forefront of the biophysical sciences, be it physics, ecology, human cognition or many other areas, the old Newtonian models of a 'clockwork' type world have long been discarded. However, in the practices of, for example, public administration, organisational development, business management and in what society often expects of

policy and politicians (and hence what politicians try to promise) we suffer from a hangover of Newtonian ideas about how the world works.

The development sector for a range of reasons has a particularly bad hangover. From a complexity perspective, the idea that with a bit of financial investment experts from one country can intervene in someone else's country and culture and in a few short years 'have impact' on good governance, deeply entrenched power structures or endemic poverty is to begin with rather ambitious, if not naïve. And everybody seems to know it. Yet the promises made all round, often underpinned by tools such as the logical framework, have created a charade that everyone from recipient governments to development NGO's, international agencies and donor governments is locked into continuing. Not surprisingly there is a growing scepticism about the development sector, many are starting to refer to it as a crisis.

The Nature of Complex Systems

Of course development in the broader sense of overcoming poverty, tackling environmental degradation and the impacts of climate change and dealing with discrimination, inequality and violence remains of utmost importance. Increasingly, these issues must be understood not as a divide between North and South but rather as global challenges that affect all nations and all people. The importance of development in this broader sense counter posed with the failure of old models of development intervention and a growing crisis of confidence in the sector has sparked off a growing interest in what it might mean for the sector to take seriously the ideas of complexity. From a complexity perspective how would problems be reframed, what sorts of interventions would make sense and how would 'development' be 'managed'?

But what do we mean by the term 'complex'. As Snowden explains by way of what he calls the Cynefin Framework, we often mix up the ideas of complex and complicated. Sending a person to the moon or into space is very complicated but with enough analysis and very good planning it is possible to do it (mostly) predictably and on a repeatable basis. In a complicated situation with enough analysis we can largely understand and predict the cause and effect relationships across the system with which we are dealing. However, Raising a child, being a business entrepreneur, or being a development practitioner means dealing with much that is complex. This means that cause and effect relationships can not be fully understood and predicted ahead of time and we must adapt to surprise. This requires fundamentally different sorts of analysis and interventions strategies than if you are dealing with complex or even simple contexts.

Societies, economies and ecosystems can be considered as complex adaptive systems – they do not behave in linear and mechanical ways. The key features of such systems are:

1) Order emerges from the aggregate actions of many interacting individual agents – there is no hierarchical 'top-down' control.
2) Through a complex network of communication linkages the system is constantly evolving in response to changes in the external environment and internal dynamics. The system adapts or 'learns'.
3) The overall nature of the system is emergent – the total system cannot be understood by simply looking at the individual parts.
4) Small inputs can cause dramatic changes in the overall system.
5) Small differences in the starting conditions can lead to very large differences in the outcomes.

6) The existence of 'attractors' which cause dynamic systems to behave in patterned yet not fully predictable way.

In complex systems order and innovation emerges 'bottom-up'. While some coherent patterns of change and behaviour can be observed, how these complex systems evolve and change can't be fully predicted. They are full of surprise and uncertainty. It is impossible to use simple linear cause and effect relationships to understand and intervene. The way people in social or economic systems think and behave certainly affects how they evolve, but this far from predictable or controllable. Combing the emerging science of complexity with political, economic and social theory offers new insights and practical strategies for being much smarter about how we tackle complex and seemingly intractable issues.

Taking a Complexity Approach

Over the last 30 years or more much theoretical development has occurred to help understand and explain complex patterns in natural systems. More recently this understanding is being applied to human and economic systems. Complexity thinking means using this understanding of the behaviour of complex systems when trying to purposefully change or intervene in them. The critical insight is that while complex systems cannot be fully controlled the directions in which they evolve can be influenced. Much of this influence has to do not with top down control but with shaping the conditions under which individual actors and organisations engage with each other. As Beinhocker argues in his top selling book on complexity economics – complexity thinking 'has the potential to make the historical framing of politics obsolete'.

Complexity thinking does not mean accepting fatalism, that anything goes, or that nothing can be purposefully changed or influenced. Rather it presents a radically different way of understanding how to work towards desired change. Complexity thinking has major practical implications for politics, policy, economic strategy and consequently for international development cooperation.
Complexity thinking can help people better understand how to intervene with systems in a structured yet non-linear way. Linear planning, and with it much scientific analysis, is based on establishing clear cause-effect relationships and then using this knowledge to predict the outcome of a design or an intervention. In complex and chaotic contexts, cause-effect relationships either do not exist or cannot be assessed ahead of time. It is necessary to 'probe' – to experimentally test out a range of interventions to see which ones work or fail – and then using this knowledge for reinforcing desired patterns of change and dampening undersired patterns. In doing this, stakeholder engagement and society-wide learning processes offer a key to coping with complexity. They can distribute understanding, improve feedback linkages and enhance capacities for adapting to change in a dispersed and non-hierarchical, yet coordinated, manner.

Implications for Governance

The issues of complexity, stakeholder engagement and deep social, economic and political (transformative) change in complex human systems link closely with the broader issue of governance – the principles and mechanisms used by society to make decisions and establish collective rules for the common good. Faced with high risks, complexity, rapid change and globalisation, much needs to be done, at all scales, to reform and improve systems of governance. Of particular importance is developing mechanisms of

governance that enable institutions (cultural, legal, market, political) to adapt more quickly to technological innovations and human created social, economic and environmental risks.

On Becoming Strategic

This raises the questions of what it means to be strategic in complex situations. Strategy derives from the Greek word for general and means to have a plan of action to achieve a particular goal. In complex adaptive systems both desirable goals and the means for achieving them can be difficult to clearly determine. Unpredictable changes in the context can quickly make old goals and plans obsolete. Being strategic in complex contexts has much to do with being adaptive, flexible and resilient. And this is often at odds with hierarchically structured command and control approaches to management and organisation.

Increasingly the business sector, government, civil society organisations and research institutions are facing up to these question if how to be strategic in the face of complex contexts. Emerging from tensions between old patterns of linear thinking and a growing acceptance of complexity are new ideas and new approaches for social and technological innovation. These include social entrepreneurship, strategic innovation, managing by simple principles, the Cynefin Framework, resilience thinking and innovation systems. While not silver bullets, such approaches offer interesting insights for working in highly unpredictable and rapidly changing contexts.

Such ideas revolve around networks and alliances for learning. They challenge traditional roles and responsibilities of government, business, NGOs, science and citizens. And, they seek out ways for working with - rather than against - the complexity of human and natural systems. This implies that global development processes will be driven by a very different dynamic between the public, private and civil society sectors.

How well equipped are people and organisations to work with these new ideas and approaches? What is needed to embed such capacities in our communities, businesses, and political systems? What are the implications for leadership and management? These are some of the questions that were reflected on during the Innovation Dialogue.

2. Concepts and approaches

2.1. Martin Kropff on Addressing Complexity Issues

Prof. dr. ir. Martin Kropff is rector magnificus of Wageningen UR (www.wur.nl).

The following is close to a transcript of the spoken text, which is evident in the style of writing.

The subject of this innovation dialogue on being strategic in the face of complexity is I think very timely and important. And then I look at the documents that are displayed in the back, you see that so many issues that we try to work on as scientists, are on complex systems while trying to be strategic. Systems are often very complex and chaotic.

When we discuss this in Wageningen, the issues that we work on, when we look at all the major issues like poverty and hunger, so basically on all the MDGs in general, but Millennium Development Goal number one as the most important one, related to food, to health, related to climate change, soon we will have the climate debate in Kopenhagen, very complex, also scientifically complex to understand what is really happening, issues like energy, urbanization, competing claims: All these issues are dealing with complexity. And these are the issues we are facing today and will need to be addressing those in the coming decades.

And we at Wageningen UR are pleased that, with the 7000 staff members and 12000 students, that we can try to make a difference in trying to find solutions for these issues. The innovation issue in this event is basically the exploration of the relation between strategy and complexity in view of these complex issues. I was already talking with some of the participants this morning that not everybody knows what this discussion is about and how to work on strategy and strategic framework as you deal with complexity. So this is going to be very interesting.

Wageningen UR works all the way from the applied to the strategic. We have the university with fundamental research and education, and we also have very applied institutions. And that is making a big difference in the way we address issues and for the way in which we work with society. Because if you try to find solutions for issues in society, you have to deal with the complexity.

So we focus on quality, of course, academic recognition, which is working quite well, nationally, but also internationally. The work of Marten Scheffer, professor at Wageningen UR, who won the Spinoza award, is a good example of this. He is one of the persons working on complex systems. He studied the phenomenon of irreversible disruption of systems. Disruptions after which there was no way back to the old equilibrium. We can find this in financial markets, in irrigation systems, like the Aral Lake, etc. He based his research on his earlier findings in aquatic systems (in lakes in the Netherlands). He looked at e.g. the effects of nutrification of lakes when lots of phosphates came into the lakes, algaes started growing in the lake and this turned to be a process that was practically unreversible. Reducing the level of phosphate back to where it was before, did not restore the system. So he studies these dynamics and has applied this in ecology, but also beyond this in social systems and economy, developing (mathematical) models and approaches. The book he wrote on 'Critical Transitions in Nature and Society', is well-

worth reading (http://press.princeton.edu/titles/8950.html). He also discovered ways of introducing a shock in a system in order to regain the old equilibrium (such as taking 90% of fish out of a lake to restore an equilibrium that could otherwise not be regained). He is now trying to apply this thinking to the understanding of human systems, cultures, financial systems, etc. He is a good example of breaking out of your own discipline.

Science for impact is a very important component of "the genes" of Wageningen. Not just science for science sake and impact on science, but also impact on society and business. We consider that to be very important, hence the importance of public-private partnerships.

In education we have a professional and academic focus in which the lifelong learning approach is very important.

When we look at the issues that you are working on, you need to update your understanding continuously, because frameworks and systems and scientific knowledge is changing all the time. So we have fundamental, strategic and applied research, and interestingly, the scientists from the university are inspired by the issues in society and the findings of fundamental research are applied in applied sciences. We call this process co-innovation. Certainly, the specialists that you are in these kind of processes, you will have specific terminologies as well, but the key is that innovation is not a linear process like we had in the past: fundamental research feeds strategic research, which in turn feeds into applied research, after which extension tells entrepreneurs how to do things. That is not the way it operates anymore. It is a co-innovation process.

Our mission is to explore the potential of nature, to improve the quality of life and this is what I indicated is "in the genes" of our staff members and students. The way we describe our domain is also changing and is completely different from what it was ten years ago. At the time, as a university we were sort of in trouble, like all agricultural universities in the world, and now the system has completely changed, not only here in Wageningen, in other places as well. Over the last five years we doubled in number of students, so we have a bit of a problem, particularly with housing issues, but we are very pleased that our domain is again attractive to young students and potential students. The way we describe our domain is

- Food and food production, all the way from genes to healthy nutrition
- The living environment, marine environment and natural systems
- And the above in relation to people: health, lifestyle and livelihood

So the way we study this is done as an interaction of life sciences and social sciences, in an integrated way. We see this as very essential.

The Wageningen approach combines to spheres of Planet, Profit and People, where the first sphere is about the system of the level of the gene/molecule up to the level of the planet. The sphere of the people is about the system of the level of the individual up to the level of society. The profit sphere links the to through a focus on products, technologies, and institutions. This is how life sciences and social sciences can be approached in an integrative way. Also, the focus on sustainability becomes visible this way. We need to have this interaction of people, planet and profit, and industries and business needs to be tied into this.

It is therefore critical that our education focuses on what we call T-shape competences. This involves training people as specialists, but also ensure connection with other disciplines to prevent isolated disciplinary efforts. Connection with other disciplines and with society. T-shaped competences prepare students to work in interdisciplinary teams.

As Wageningen UR, we are very well linked internationally with connections all over the world on all continents, with projects going on in all these places. Out of the 1400 PhD students, around 50% are working overseas. So we have a pretty international kind of organization these days. We work with industry, NGOs, national systems, and a wide range of other types of organizations. Capacity building is an important component in this and the Centre for Development Innovation plays a major role in this. Consequently, the content of our programmes is international rather than Dutch.

The complex issues we are facing asks for new arrangements, and I think that is what you are also trying to do during these two days. Strengthening the link between research, innovation and the learning process in society. People like Arjen Wals of the Education & Competence Studies and Jim Woodhill, participating in this event, are among the ones who have been focusing on processes of social learning.

This event is a broad collaboration from the Social Science Group of Wageningen UR, of the newly formed Centre for Development Innovation, with the chair groups of Communication & Innovation Studies, Disaster Studies, Education & Competence Studies, and the Public Administration and Policy group. I am happy to also see representatives from the life sciences here.

The arrangement that we as Wageningen UR are working towards relates to a interaction between science, policy and industry to find new solutions through co-innovation. I understand that in this meeting there are representatives from these three groups in order to try to bridge theory and practice.

As WUR, we believe that if we want to understand complexity, we need to work in an interdisciplinary way. Interdisciplinary then means combining disciplinary efforts in such a way that the disciplinary contributions are distinguishable, but are not ordered as separate entities. The picture you see from the last slide is a representation of this idea.

I look forward to the results of this conference and I wish you a lot of success!

2.2. Jim Woodhill on Being Strategic in the Face of Complexity

Dr. Jim Woodhill is director of Wageningen UR Centre for Development (www.cdi.wur.nl).

The following is close to a transcript of the spoken text, which is evident in the style of writing.

I hope what we are going to be dealing with over the next two days, is essentially a three-way tension between sustainability, strategy and complexity. Martin Kropff has already mentioned some of the serious challenges we face in terms of sustainability. From a big-picture perspective, if as humanity we can't really get our act together in terms of dealing with some of the serious issues we are facing, the future does not look very good, not for our children and not for the planet as a whole.

So we have try to think about how we can act strategically, how do we set big, long-term goals, how do we envision a future that we would like and how do figure out a way of getting there. But as we all know, the world is complex and it is not always easy to find out how things do work. We are often hit with all sorts of surprises

A couple of years ago, when the World Bank development report was written on agriculture, and there was very little in that report on food prices and the likelihood of food prices escalating. Twelve months later the world was facinger food prices soared the suddently fuel prices dropped and we see these incredible surprises around us all the time.

So what does it mean to be strategic if we want to deal with some of these issues we face, when we are also trying to deal with a system that is very unpredictable often, we can't always work out how things exactly are working; it is full of surprises. And I think historically perhaps we ended up seeing strategy as working out how things work and then working out a very linear intervention logic. That clearly doesn't work when you try to tackle complex situations. So what is the alternative? And that is really the question I hope we will be exploring in the coming days and I know that David Snowden as keynote presenter will be enlightening us on some of these challenges as well.

Where we also like to end up is what this all means for innovation capacities. Individually, as organizations, as communities, as societies. What sort of capacities do we need if we want to tackle these challenges and these tensions. And also perhaps not just at an intellectual level, but what does it mean at the individual level.

Change is sometimes uncomfortable and we sometimes need to take things more to the heart level. How do we take things to our deeper inspirations for change? How do we keep it away from being only a conceptual discussion. So I hope that in workshops and dialogues tomorrow, we can range from the thinking to the heart or like some acquainted with the U-process talk about *presencing*: how do we get to the essence of what underpins change and human capacity for innovation and change.

Some focusing questions for this dialogue:

- What does it mean to be strategic in complex contexts? – is this possible?

- What ideas, approaches and methods can be used to be make complexity thinking practical and useful?
- What does innovation look like if we are being strategic in complex contexts?
- What capacities do individuals, organisations and networks need to function strategically and innovatively in a complex contexts?

Many of you here are working in the development sector. And of course in practice we all know that it is complex out there. Many development practitioners intuitively respond to the surprises, the changes, the uncertainties that they have to deal with. Yet unfortunately we deal with a sector that often tries to administer things as if it is a neat world out there and where you can have clear linear interventions and where we understand all the cause and effect relations.

I think, as we have seen in much of the discussions lately, the whole idea of development is under threat. There is much skepticism about development and unfortunately it seems that sometimes the reaction to that skepticism is to push harder and harder for predetermined results to hold people accountable to. And those of us from development practice know that that often just doesn't work. So is there a totally different way of thinking about how we manage development, that can be more in line with inherent complexity of the systems we are dealing with, but that can also help us to be more accountable in a way we go about bringing change in the world and dealing with the enormous challenges we face.

Development dilemma's:

- In practice we know its complex out there…
  - things don't go according to plan
  - we have surprising successes and surprising failures
- But, development is largely administered as if it is a predictable world with clear linear cause and effect relations
- Skepticism about development 'aid' is pushing the system more towards pre-determined 'results' based accountability

The programme for the coming days:

- First day:
  - Exploring the concept
  - Practical ways being strategic in complex contexts - workshops
  - Synthesis
- Second day:
  - Implications for policy and development trends
  - Application to domains of practice – round tables
  - Take home messages on capacities for being strategic in the face of complexity

2.3. Dave Snowden on Complexity and the Implications for Strategy

Dr. Dave Snowden is founder of Cognitive Edge (www.cognitive-edge.com).

This presentation introduced a scientific approach to sense-making in organisations. It combines understanding from the cognitive sciences into human decision making with complex adaptive systems theory in social systems. A clear distinction was made between systems thinking and complexity theory. Complexity is sometimes known as the *science of uncertainty* and requires a different approach to management. We need to realise that *hindsight will not lead to foresight* and shift from defining ideal future states to managing the evolutionary potential of the present. In consequence we shift from an approach to strategy based *fail-safe design* to one based on *safe-fail experimentation.*
Complexity requires new approaches to research which take an abductive approach, sometimes known as pre-hypothesis research. The approach uses distributed ethnography to gather thousands of micro-narratives from the field, with the meaning determined by the original contributor. This provides a method that is both qualitative and quantitative in nature. The method is being used experimentally in a range of domains including development and provides a radical new approach to impact measurement. It will be illustrated by two projects:
-A major project to map the comparative cultures of Pakistan and the UK will be used to elaborate the micro-narrative research method. Over 3,000 self-signified stories were gathered in a five day period in marked contrast to traditional research techniques.
-A series of projects in Liverpool to measure the impact of museums on school children will be described together with some of the potential for the lateral and adaptive transfer of learning between different communities.

Personal background:

Dave Snowden has a degree in physics and philosophy, clearly indicating that it is well possible to combine a social science with a natural science. He believes that interdisciplinary thinking is essential for addressing complex issues.

While working in the Aboriginal territory lands, he saw an activist shot in front of him, and this was the turning point which made him see the world in a different way.

Theory Informed Practice:

In order to deal with complexity issues, one has to understand the underlying nature of systems. The nature of systems determines that we know things. Human beings are not ants, they are complex organisms. A system is a network that has coherence. Coherence is very important when thinking about proof. Many believe coherence is worthy of investment. An agent is anything which acts within the system. It is not possible to take new things and put them into old familiar structures in systems. It is about abduction, not induction. Breaking people into new things is difficult and ambiguity is essential to everything.

There are three types of systems:

- Ordered: when linear causality is assumed. Agents are constrained.
- Chaotic: agents are unconstrained and independent from each other. Statistical and Probability Theory work well for this system. "Wisdom of Crowds" can be applied to this system, meaning that the collective opinion of a group of

individuals is taken into account rather than a single expert.

- Complex: Lightly constrains agents. It is an unstable and unpredictable system. Agents can modify system by their interaction with it and each other. It is a system that co-evolves and is irreversible.
  Complex systems can only be changed through radical disruption.

Distributed Cognition:

The Grameen Bank by Muhummad Yunus is a good concept, but the question that can be asked is how can it be distributed from someone in Bangladesh to someone for example in the Tonga island? Here is where distributed cognition comes into place. The basic idea of distributed cognition is that intelligence in distributed into large volumes of people. A problem with distributed cognition is that it is mediated by central agencies.

An example of distributed cognition is a story about fishermen being asked to indicate where the submarine was. They were asked independently and the average was considered to be most accurate. So this means that if you all operate individually, the average cognition is the truth.

In the West, we believe that the market can solve every problem; people are aware of what other people are doing. Though in reality, "no one must be aware of the guesses of others".

Another example was shown by a short clip. A group of people, a couple with white shirts and others with black shirts were asked to pass around two balls. The white t-shirt group passed one ball, the black t-shirt group was asked to pass the other ball to each other. The question was, " How many white shirts are passing the ball?" Snowden asked the room, and answers alternated between 12- 17. The average and correct answer was 14. Then he asked who has seen the person dressed in a gorilla suit passing by.
Only 10 people out of the room put their hands up. Snowden jokes and asks if they are autistic.
The reason that people saw this gorilla, is that the gorilla is a missing signal. One does not tend to notice what we are not looking for. Snowden indicates that economists for example, sometimes are on the mild side of autism do tend to notice the missing signal despite concentrating on the task.

Also it has to do with "retrospective coherence" and the benefit of hindsight. Retrospective coherence means that, in hindsight, its easy to explain why things happened in a complex environment. Yet it is impossible to predict them ahead of time.

The human brain:

The human brain sees things as dots. We join dots from previous experiences. Evolution implies that humans use intuition to make decisions. We make partial data scans leading to a decision. To address complex issues, we need to start talking about the first-fit instead of the best-fit. Since we can only see the world through these filters, there is no such thing as stereotypical archetypal patterns.

Rituals is one way in which people can change their behavior. It indicates where a pattern comes from:

1. Genetics: "nature deals the cards, nurture pays them".

2. Personal experience: humans pay more attention to failure. This underpins the professional patterns of learning.
3. Micro-narratives: It forms patterns to how we see the world.

The children's party metaphor:

Imagine you are organizing a party for a bunch of 11 year old children and you want to apply the three different types of system. If you assume the party is chaotic, the children are acting at random, then you might as well already buy the drugs and alcohol already so children can go on a personal experience of self-discovery.
From the ordered system approach, here it is important to articulate clear learning objectives. The learning objectives should be in line with the mission statements in the society you are found in. You then produce a project plan for the party. The project plan should have clear milestones throughout the party against which you can measure progress and ideal party outcome. Once you have done that the senior adult can start the party with a motivational videotape, because after all you don't want the children wasting time in play which isn't aligned with the learning objectives of the party itself. And then they should use Power Point to demonstrate their personal commitment to the objectives of the party and to show the children how pocket money is linked to the achievement of the milestone targets.

The third approach, the complexity approach is even simpler. Here we draw a line in the sand, known as a boundary in complexity theory and we turn to children and say “cross that you little bastards and you die”. One of the things you learn as an adult is the value of flexible negotiable boundaries. We then use catalytic probes; a football, a videotape to stimulate a pattern of activity which is called an attractor. If its a beneficial attractor we will stabilize it and amplify it. If its a negative attractor, we dampen it or destroy it very quickly. It is important that the emergence of beneficial coherence is managed within boundaries, probes, attractors and social policy. In that way we see the promise of complexity theory, organizations and government alike.

Complexity offers the possibility to manage this degree of constraint. One needs to manage in a way that is appropriate to the system, managing in boundaries of coherence.

The Magic Roundabout:

To Snowden, a roundabout in seen as a highly adaptive system with boundaries. The driver decides which route to take in particular boundaries. Distributed cognition is applied in this case since the system depends on the intelligence of the drivers.

At the moment, many development programs are using the failsafe design but they should lean more towards the roundabout idea that the routes that work get amplified, safe-fail experimentation. In development programs, systems that work should be amplified.

Life Cycle:

Snowden describes a transition from Scientific Management (control of function) to Systems thinking (control of information which is where we can find ourselves now): mass customization, complicated, connection towards Sense-making (the ability to manage a network), using human communication to manage network (Twitter). This is far more important than using technology to replace human communication.

You need to still assume that you can model it (degree of order).

Social Complexity:

Common Confusions:
- Not the same as systems thinking. There is a different understanding of cause and effect. Systems thinking implies outcome-based measurement.

Complex systems need to have a focus on the impact instead of the outcome. After an event, there should be an indication of whether something is good or bad.
- Confusion with chaos theory.
- Computational Complexity: takes deterministic model. Confuses simulation with prediction. People like it, since it gives certainty and is computer-based.
- Complexity as religion. It controls probes and barriers.

It is not so important what type of system we are dealing with, but what you do determines everything.

Key aspects:

-Humans are intentional (birds and ants are not)
-Intent
-Language: can radically change layers of complex systems.
-Connectivity: can constrain the way you think.
-Metaphor & Narrative: transfer complex issues in different ways.

Naturalizing sense-making:
- How do we make sense of the world so we can act in it.
- Utilizing the natural sciences.

Essential aspects:
- Distributed cognition.

Example: In Hospital, patients were allowed to index their own stories (self-index).This had a significant impact on the health services. Nurses indicated an emergence in patterns of depression.

Some stories were about the hygiene levels in the hospital. This created a human-sensor network which actually led to great beneficial changes in the hospital.
- Finely grained objects: Small organizations change easier. They can reassemble themselves quicker than large organizations.
- Disintermediation: removing interpretative layers between decision makers and raw data. By capturing your own qualitative and quantitative data you can set targets. Change can happen quickly. So total impact of what people do in a year is measured. Also, you can look at the impact of different (development) agencies working in a specific area.

Example 1, Generation Open Source: “Children of the World”.

The idea is that children go into the field and gather stories from their elders and peers about the past, present and future. This can formulate into a social policy data base.
In this way, one is linking and connecting people without mediating layers in the system.

Example 2, Cultural mapping:

By showing pictures to different cultures, cultural mapping can exist.
Pakistan and UK have different perceptions of pictures. The identity of Pakistani was considered to be more collective while the identity of UK was considered individual.

Micronarratives:

People are self-indexing their own narratives. Narrative based research is essential for addressing complex issues. It is possible to see the anomaly or cluster and then you can see the missing signal (gorilla).

They are presented by fitness models. The peaks show areas where change can happen. The hollows show deep belief systems that are not going to change.

Conclusion:

Snowden tries to seek the relationship between complexity and cognitive thinking. We need to have different ways of thinking for change to be possible.
He finishes his key note by stating: "We see through a glass, darkly; but then face to face: now I know the part; but then shall I know even as also I am known" And that we are not at a point yet, that all questions can be answered.

Some instant reflections & questions (scribbled on pieces of paper, but not discussed):

- Conceptually the material is weak from a critical social perspective. He said some provocative and seemingly misplaced things about sociology that would have benefited from further discussion.
- You still need to do some planning to start safe-fail experiments.
- I did not get this: "let's get rid of causality".
- In companies, targets helped stimulate people. Efficacy, turnover, profit targets do work.
- What is involved in getting the narratives. What is the role of experts?
- Hot to go about micronarative gathering at such scale and subsequent analysis? Does the analysis go back to the people who submitted the narratives to cross-check?
- Wrong definition of chaos as randomness.
- What is the role of ambition, passion, drive?
- If you do not know in which way an intervention will go, what will legitimize your intervention at all?
- Non-causality taken over the top. Any model we make for the purpose of sense-making will create a suggestion of causality.
- The borders between complex and chaos are not so easily definable as the cynefin framework suggests.

2.4. Alejandro Litovsky on Creating Pathways to Scale

Dr. Alejandro Litovsky is director of the Pathways to Scale Program of Volans Ventures (www.volans.com).

The breakthrough ideas and efforts of extraordinary, 'unreasonable' individuals are critical to overcoming the highly complex social and environmental challenges that we face today. The most important agents of longer-term transformative change are likely to be found at the edges of the current system; and a critical task is how to mobilize resources and influence from inside the mainstream businesses and governments to support them. As social entrepreneurs experiment with new mindsets, new definitions of value and new business models, they struggle to turn market failures into opportunities in areas such as energy access, water scarcity, or biodiversity loss. In doing so, they are pilot testing key components of tomorrow's economy.

Our recent publication *The Phoenix Economy: 50 Pioneers in the Business of Social Innovation* was conducted as part of a 3-year, $1 million grant from the Skoll Foundation for Social Entrepreneurship. Published in partnership with UNEP's Division of Technology, Industry, and Economics, the report outlined the global trends supporting the rise of a new, low-carbon economy. The report profiled the work of 50 pioneers developing social and environmental solutions and proposed a series of recommendations to policy makers, business leaders, and business educators.[1]

"The Pathways to Scale model is helping us frame and understand the barriers we face, and the strategies to overcome them. This is today the core challenge for environmental leaders." **Thais Corral,** President of LEAD Brazil[2]

The Volans' *Pathways to Scale Program* is helping leaders around the world understand and act on the barriers and opportunities they face to mainstream their solutions. Importantly, the program is developed in partnership with foundations, investors, and leading pioneers on the ground, aiming to move beyond the notion that markets and business on their own will solve our great governance, social and environmental challenges. We see the incubation of 'ecosystems' of actors who can leverage and align the necessary resources in the economy as a critical part of this challenge, and as a way to approach the inherent political, social, cultural and economic complexity of social change.

The keynote address at the Strategy and Complexity Conference will address some of these issues, illustrating them with practical insights from the field, which Volans is driving with partners such as the Tällberg Foundation in Sweden.[3] The presentation will also discuss the Pathways to Scale 5-stage model (pictured below), which is used by entrepreneurs and their supporters to visualize the type of market linkages that can deliver a greater scale of their impact for their proposed solutions.

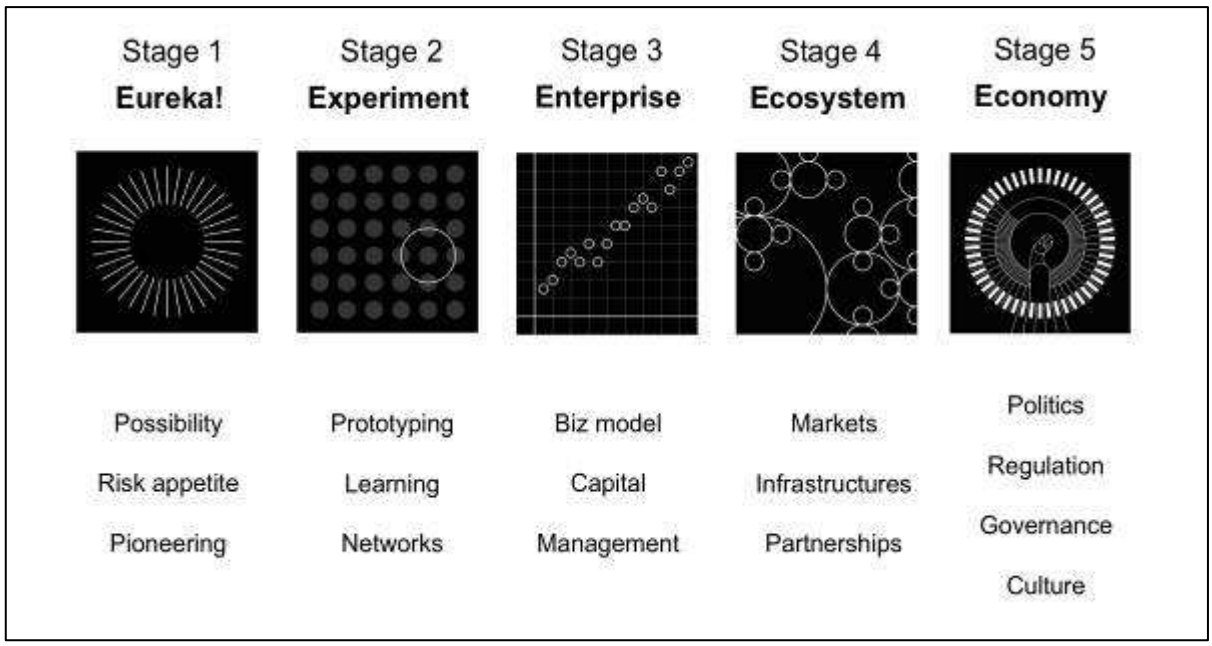
The Pathways to Scale 5-stage model

"Our $16 million investment has focused on creating 'ecosystems' where city governments work with the private sector in public transport projects. In this way we've

[1] *The Phoenix Economy: 50 Pioneers in the Business of Social Innovation*, Volans Ventures, London, available at: www.volans.com/phoenix

[2] 'Brazilian Leaders Discuss Pathways to Climate Security', September 4 2009, by Alejandro Litovsky, at: http://www.volans.com/2009/09/brazilian-leaders-discuss-pathways-to-climate-security/.

[3] www.tallbergfoundation.org



leveraged $886 million in infrastructure investments and created political will to back public transport reform." ***N*ancy Kete,** Director of EMBARQ at Volans workshop[4].

2. Inflection point: Planetary Overshoot

Some things in the economy are not that complex. But most economy and business models are misaligned. Something intrinsic about how we measure economic value and business performance is wrong. What is complicated is: how do you reboot business models? That is my topic of today.

Social entrepreneurs work on business innovation. They have invented business models to take account of bottom line issues, to deal with resources and poverty. Their main challenge is: how to go from innovation of the enterprise to the transformation of a system? that is not about growing a company, but about something much more systemic.

3. 1.6 billion people without access to energy

Concrete case: the hype of solar access at the base of the pyramid. Three things about the picture of the earth at night are striking: massive inequality, lack of physical infrastructure and massive constraint of resources, coast of Argentina (floating city of commercial fish processing factories in international waters). Clear indication of how messed up things are. The question is: to what extent are we really touching the age of tipping points and overexploitation?

4. Entrepreneurial solutions: New business models

Then you turn to social entrepreneurs, very micro and grassroots. People who see problems as opportunities. Most of the sun is where people live mostly in the dark at night. We can solve the problem, the technology is there. So why are we not there? Some examples that Volans has been working with:

[4] Volans workshop "Pathways to Scale of sustainable mobility", World Skoll Forum, Oxford Said Business School, March 2009*:* http://www.embarq.org/en/news/09/04/10/embarq-recognized-pioneer-business-social-innovation

5. Model: Solar micro-franchising
"We want to turn the base of the pyramid into energy producers, not just consumers."
Nick Sireau, Chief Executive, Solar Aid
This is a radical vision of Solar Aid: it is about turning the base of the pyramid into energy producers. The knowledge is available, why is this not scaling up? Solar Aid has been developing the business models and building up the distribution networks ahead of the market. But the market does not exist, so it can's support to scale. The opportunity space is the missing middle.

6. Model: Investing in the 'missing middle'
Example of E=Co that is investing in the missing middle: energy enterprises that are too big to access micro finance and to small for commercial credits. But it is still quite micro.

7. Model: Eco charcoal production (example in Tanzania)
Problem: Charcoal market $240 million a year. People are largely dependant on charcoal (90% of the population cooks with it). This causes 330 hectares of deforestation a day. How do you solve this? Solution adapted from technology in India: Bio charcoal made with agricultural waste. Briquettes burn longer and are cheaper.

This is a massive business opportunity, a low tech and bright solution. But it is still very small scale. It is a bit frustrating. The question is how initiatives like this can be scaled up.

8. 'It's the barriers, stupid!' Solutions are ahead of the market that can support them
Not only enough money or the positive energy of an entrepreneur are needed to be able to scale up. One needs to focus on existing barriers in the system that exist that prevent up scaling. The barriers need to be eliminated.

9. Can they reboot the system?
What about the systems and institutions that are already in place? The World Bank, development agencies, energy companies. Are they prepared and able to embrace these radical changes and up scaling. Are we putting in place strategies to focus and unleash the barriers and markets that are needed? I am not sure, we are slow to change. So what to we do?

10. Analogy from nature – horizontal roots
When you try to pull grass, the roots are ramified in all sorts of directions. Innovators that try to play into future possibilities are in many ways quite vulnerable like young shoots. You pull them out and they perish. But if we think about grass and dispersion, strength and connectivity of the system, resilience becomes more apparent.

11. Solutions beyond the entrepreneur. Taking 'root' in the system
When you think of entrepreneurs that have developed products we take for granted today (think about phone, airplane, train); they started as shoots as well and have been further developed and dispersed. Big investments have been made. Something has happened in the system. Through strategic actions of actors (governments, public investors) the products have been mainstreamed.

12. Pathways to Scale - model
We have come up with a simple model of five stages. This is not intended to be a linear model, but helps to illustrate different scales and the challenge of moving from enterprise into an ecosystem. It is a long way to go from enterprise to a system change. How to

move from stage 3 to 4? It is critical to realign barriers with the actors that work in the same system. Understand the barriers together and do something about it.
stage 1 eureka!
stage 2 experiment
stage 3 enterprise
stage 4 ecosystem
stage 5 economy

13. Leveraging ecosystems
An interplay between leverage and influence:

- Leverage: Business model develops forward and backward linkages. Finding ways of connecting with complementary players downstream and upstream
- Influence: Demonstration inspires (or pressures) others to act and take agendas on board.

14. Example: "Goldman Sachs Forms Alliance With E+Co"
Example of how mainstream players try to connect to entrepreneurs and play into the future.

- Leverage: E+Co forwarded linkage (Goldman Sachs) to create carbon credit infrastructure
- Influence: Get financial institutions to identify opportunities - kick-start competitive juices.

Figures:

- 300 more investments by E+Co
- access to clean energy for 20 million people
- 20 million tons of CO2 offsets

15. Example: "Indian Solar Loan Program"
UNEP:

- Leverage: backward linkages (funders) and forward linkages (banks) to create solar loan infrastructure. Provided $7.6 million from foundations to subsidize interest rate on social laws to provide solar home systems. That was for them the biggest barrier, almost like an acupuncture point. They mobilised and impressive public private partnership.
- Magnetic field of Influence: Create new market for solar credits with commercial banks. Banks see that there is a credit market and opportunity for solar loans.

Figures:

- 1,700% increase in sales of solar home systems
- 19,533 loans disbursed
- 2,076 bank branches

16. Example: Decentralized, peer-to-peer lending
Innovative way in which the missing middle is being developed. MyC4 (Danish organisation) in Africa:

- Leverage: backward linkages (institutional partnerships) and forward linkages (local MFIs) to create virtual marketplace.
- Influence: Inspire large development institutions to invest through peer-to-peer funding platforms.

The beauty of the model is that investments does not only come from big European companies but also from people in small villages in Africa. Investments in the same business through the same platform.

Figures:

- 16,309 investors from 97 countries
- €10,321,954 invested in 5,244 businesses

17. Stage 4: Designing Ecosystems

So the most important question is: How can we go about designing ecosystems?

18. Pathways to Scale Unlocking solar: East Africa

We have worked as Volans on barriers to solar solutions:

- Poor distribution infrastructure
- No education and awareness of customers
- Lack of credit provision
- Shortage of human capital
- Fixed costs

These are the typical barriers we find through research. In Tanzania they are the same as in Brazil. There is something about new markets and the barriers we face because the solutions are ahead of the market.

19. Pathways to Scale Exploring leverage and influence:

We brought together the solar enterprises in Das es Salaam. But also quite experimentally, we invited very different actors like Femina HIP (the most famous magazine in the country). We explored mutual interests. The highest barrier was a distribution network. This magazine on health and HIV/AIDS that took on the message of solar energy. There was a click with them and with youth networks as well. People never thought about these opportunities before.

The result was a partnership created between the actors: "Young Solar Entrepreneur Challenge East Africa"

- Reach 15 million people by 2013 with solar lights
- Create 50.0000 youth 'green' jobs for distribution
- Mass media campaign (another barrier) on 'solar entrepreneurs' targets 2 million people (something that is hip, that is cool)

20. Pathways to Scale - Exploring leverage and influence

'Our media platform creates awareness among young Tanzanians on HIV Aids. We have 300 distribution partnerships. We can create awareness about solar entrepreneurs.' Minou Fuglesang, Founder of Femina HIP Tanzania. Femina HIP said : we have a system in place, we can push the concept of social entrepreneurship.

A bilateral public private partnership between D light Design and Femina HIP was created: they filmed an issue on social entrepreneurs which was showcased nationally. And they published a magazine issue on the topic of social entrepreneurship. This was with zero investment!

21. Pathways to Scale

The picture refers to a blueprint for who does what in a partnership?
Ecosystem approach: they got started and connected, dispersed, the voices were carried around.

22. Helping the Future Take Flight- What can development agencies do to support this?

1. Adopt a mindset of pioneering business models. Understand the opportunities of future markets.
   Learn to explore where you have to invest your money.
2. Invest in working through barriers to scale. What is preventing innovation from scaling up?
3. Design and bring together ecosystems, seeking leverage and influence the broader players in the game. Experiment!
4. Create critical mass to move solutions from Stage 3 (enterprise) to Stage 4 (ecosystems) to exhilarate change.

Questions & answers:

- What is the best methodology that you used to overcome or to benefit from the barriers to move from earlier stages into the ecosystem stage?

The Grameen Bank is a good example. Their solution, the idea of microfinance, has been taken up in the system. It has mutated and evolved. Banco Compartamos in Mexico had a big scandal. Mohammen Unus came out publicly against this prestigious bank on microfinance who charged extra points of interest rate on the loans. They would still have a large clientele but made a larger profit. This illustrates a tension once the solution is out there and incorporated into different organisations. How you go about dispersing the innovation into the system? There are two things: 1. understand the barriers, the simpler the better. We have interviewed both entrepreneurs and people in the market. In Tanzania we interviewed around 5 entrepreneurs working on similar solutions to energy access with renewable energy but also people in companies and in government. We got quite a clear picture of what the barriers are, they are quite straightforward. So what do you do about that? Our experience was quite experimental. We don't have a silver bullet. We brought actors together and started poking. One of the big barriers is distribution networks. What came out of the session was: youth networks were interested, and ILO that trains youth got exited, something emerged. But you could also have Coca Cola in India saying: we have a distribution network, we will carry your product. Different actors, different applications. The process is: 1. identify barriers, 2. bring actors together, identify complementarities in the economy and the local market. Who can help bridge those barriers through collaboration? That is an ongoing process.

- A barrier to innovation might be conflict of interests between stakeholders. How would you deal with that?

Good question. The Grameen example is one level of conflict of interest. The innovation was successful, that can generate conflict: how do you stick to the original principles, do you want to do that? That is complex and political. There is another level of conflict of interest which is: whose interest are you effecting by bringing the innovation about? Some people call this disruptive innovation, how new entrance into markets challenges actors. There is a third level of conflict, for example in East Africa: why don't you work with government directly? Most of the people indicated that in their experience working with government is dangerous because you get co-opted very easily though electoral reasons. They would first build some critical mass and then engage with government. Dealing with power is very much around strategy. There is no one size fits all.

- You told about social entrepreneurship. How do you sell solar systems in poor rural communities where people don't have jobs and don't want to be part of a capitalist system. We want food, that is our basic need.

I would not get to relative about things. Things do work in many different contexts when you adapt them right. Our experience in East Africa is that the average kerosene consumption per household is about 40 dollar cents a day, which can be up to 50% of the daily budget. This expenditure happens every day. The different products being commercialised by these entrepreneurs might cost about 15 dollars. To it is a financial problem: they don't have all the money up front to buy a light that lasts several years, with an associated saving that is massive. Another thing that is missing is the distribution. One of the solutions that has been experimented is micro-franchising. You mentioned capitalism, these are loaded questions, but I don't think market mechanisms are bad inherently. It is about ownership and distribution of power. If you can get people to save money and at the same time produce their own electricity, that is quite a powerful shift. Experiences across all over Africa show that this does work in practice.

- Reaction to the above: The power question comes back here, particularly if you talk about energy on the household level. I think that kerosene is often being bought by woman. So in the approach I think it is required to think about power at the household level. Otherwise it might still fail.

Answer of Dave to this remark: one of the things we would do is map the day to day narratives of a household around the issue of cooking. I don't tackle the issue of solar power or kerosene directly but approach cooking as a socialised process. You can then start experiments and introduce technologies. Don't do it the Western way: we have one global solution and go implement it everywhere. You go with finer grained experiments.

3. Some of the options

3.1. Liselore Berghman on Strategic Innovation Capacity

Dr. Liselore Berghman is assistant professor of Strategy, VU University Amsterdam (http://www.fsw.vu.nl/en/departments/organization-science/index.asp).

Background paper

Strategic innovation capacity - Opportunities and hurdles for international development

In this workshop ideas from the field of business management are illustrated and used to inform the development sector on principles for managing complexity. Research results on the specifics and on the concrete management of "strategic innovation" might inspire to translate the concept of complexity into practice.

What is strategic innovation?

The phrase "innovation" often raises images of expensive R&D labs, white-coated scientists, robotics, and other high-technological advancements. Yet, technological innovation is neither the only, nor the most efficient or effective way of innovating.

Especially in complex environments, with high levels of uncertainty, commoditized markets, blurred industry boundaries and relentless competition, one specific type of non-technological innovation has been suggested as a promising way-out: "strategic innovation" (Govindarajan & Gupta, 2001; Kim & Mauborgne, 1999). Strategic innovation (SI) simply means innovating the strategic play, so deviating from the traditional, taken-for-granted rules, principles and assumptions of the competitive game in a sector.

SI has also been called "business model innovation" (Markides, 2006) as it implies a radical modification of the existing business model in –at least– two ways.

First, an SI implies that a radically new value proposition is offered. This means that un(der)served needs and/or customers are targeted. As companies tend to share the persistent belief that the upper-end of the market is always the most interesting and profitable segment, they tend to create new value propositions as *extensions* to products or services, such as additional features or better quality (Schmidt & Druehl, 2008). Yet, many successful SIs consist of exactly the opposite: so-called "50% solutions at a 15% cost" (Immelt, Govindarajan, & Trimble, 2009). These lower-quality, simple, basic products/services have a price low enough to be affordable to the mass or even the lower-end of the market (Christensen, Johnson, & Rigby, 2002). Think of what for instance low-cost airlines have done. SIs as cheaper and simpler-but-good-enough offerings are called "disruptive" SIs since they "disrupt" the market from the bottom end.

Secondly, an SI can be achieved by re-organizing activities such as the distribution model. To this end, strategic innovators not only re-organize their internal value chain and take up new roles in an existing industry but they often also partner with other organizations inside or outside their conventional sector. For instance, an SI in the truck industry may imply a partnership between a coatings producer, body shops and an insurance company. Both these aspects of the business model may furthermore reinforce each other.

Developing the capacity for strategic innovation: Opportunities and hurdles

Prior research on the corporate sector has shown that SIs' drastic impact on a company's business model creates several hard-to-overcome internal and external hurdles on the innovation process (Berghman, 2006). Building an organization's capacity to successfully initiate and commercialize SIs seems hard. Apart from cognitive, financial, political, processual and structural hurdles, companies have to carefully manage external barriers as well, such as potential retaliation actions from competitors, market cannibalization effects or customers' hesitance to accept the new offering (Berghman, 2009). Companies that are successful strategic innovators do however succeed in overcoming these barriers by specifically and deliberately managing them (Berghman, 2006; Berghman, Matthyssens, & Vandenbempt, 2006).

Aims of the workshop: Discussing opportunities & hurdles of SI for international development

The idea of SI is by no means bound to the corporate world and could be a promising avenue for the international development sector as well. Increasing needs, faulty systems and/or unrealistic expectations make that even generous funding cannot avoid development initiatives to not fully deliver on their promises (Christensen, Baumann, Ruggles, & Sadtler, 2006). The opportunities that SI –and more specifically disruptive SI– may create in/for development are not hard to imagine.

Bottlenecks to be managed for SI in developing markets have typically been limited to external ones, such as a lack of infrastructure, deficient distribution networks, or corruption of local governments (Olsen & Boxenbaum, 2009). However, as indicated, important internal hurdles have to be managed as well.

The goal of this workshop is therefore to validate/extend prior research results on the corporate sector to the sector of international development. In other words, can mechanisms and principles that have proven to increase a company's capacity for SI be translated to development organizations?

First, the convenor will introduce and illustrate the concept of SI and will explain research findings on the corporate sector. Afterwards, opportunities and hurdles for the application of SI to the development sector will be discussed jointly.

Examples of discussion points:

Opportunities

- Should SI examples in international development be considered as rare exceptions or as inspiring examples? Are there any opportunities for new value curves and business models?
- Inventory and discussion of successful examples
- Who are typical initiators/actors involved in these examples? Is there a change/tendency in the type of actors involved?

Hurdles

- Major internal and external bottlenecks in the initiation (invention of ideas/ development of concepts) & implementation (offer/market/distribute/finance/price/…) phases?
- Are actors in the international development sector confronted with similar or completely different barriers to SI, in comparison to the corporate sector?
- To what extent could successful ways to tackle these barriers in the corporate world (e.g. specific mechanisms for the identification of market needs) translate to international development organizations? Are there any side-conditions?

Implications

- Roles of different parties (policy makers, NGOs, MNCs, local producers)

- Who should take the lead? (eg. more decentralized approach?, more MNC-NGO partnerships?)[5]

Workshop presentation & discussion

Presentation

Complexity is rising in the development sector. Actors are struggling to find their way in this landscape. The same process takes place in the business sector. How can companies deal with complexity? Liselore Berghman investigated Strategic Innovation as one way to deal with complexity.

It is difficult to define Strategic Innovation. Strategic Innovation refers NOT to scientific advancements and technology.

The common belief is that the survival of companies depends on their ability to apply. This perspective is questioned.

These companies tend to over-focus on certain actors. The more complex environments become, the more companies focus on structure and simplicity.

Innovative companies are companies that do things differently. They play a *new* game.

These companies offer a new value to a customer / user.
Swatch, for instance, 'reinvented' the watch.

The figure is a strategy canvas. Wii is an example of a Strategic Innovation, as they are deliberately choosing to score low on certain characteristics: a disruptive strategy.

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Disruptive Strategic Innovations might have potential for International Development.

Examples of new value chain / organization of activities:
- Dell has included a new activity
- IKEA outsourced an activity

Strategic Innovation can also be called Business model innovation, or Value innovation

Deviating from the normal rules of the game is complicated and companies struggle with Strategic Innovation.
Research:
Is there a difference in the *capacity* for strategic innovation among companies?
Can we find concrete mechanisms to increase the capacity for Strategic Innovation?

Note that the focus is not on one Strategic Innovation but on the *capacity* (for Strategic Innovation)

The phases can be distinguished in the process of Strategic Innovation:
- initiation
- commercialization

Which mechanisms are successfully used to overcome barriers?

Example of a barrier: not having good customer / user information

Internal barriers in initiation phase:
- there is not enough information about customers / users
- information is not correct
- information is present but not applied

External barriers in initiation phase:
- customers just don't want to share information

Internal barriers in phase of commercialization
- companies struggle to find a balance between their daily business and innovation
- companies struggle with the question how to combine competencies

External barriers in phase of commercialization
- some users don't accept the new value proposition; because of their existing association they do not believe in the new proposed association
- companies are afraid of other existing actors

What do successful companies do?

People who are not supposed to go into the field go into the field & people in the field who are not supposed to report are reporting back.
Customers – especially the most innovative customers – are invited for discussions. Also discussions with non users are organized.
The mechanisms are semi-structured; the format is not fixed. The way in which these mechanisms are executed is free; they evolve.

Strategic Innovation is a separate department, often also physically separated. This provides the opportunity to work under a different company name and use a different brand name, which diminishes retaliation actions from other actors / competitors.

The creation of ideas is intertwined with business.
You would expect that ideas come from outside but more often ideas come from inside, for instance from salespeople, maintenance people and engineers.
The phase of commercialization is completely separated.

At the one extreme there are some Strategic Innovations that are not really development (business opportunity). The other extreme: Strategic Innovations purely for social benefit. Liselore Berghman points to the example of Gyan Shala: a low cost model in which relatively low educated teachers who are currently unemployed (relatively low wage) and senior teachers – who are highly developed – are brought together to provide basic primary education to children from poor urban and rural families. The project is a huge success and clearly a disruptive Strategic Innovation. The quality may be lower but still the children have access to primary education and learn basic skills and knowledge, which is an enormous improvement.
Mid category: partnerships between businesses and NGO's.

Discussion

Of which category (slide 24) do the participants think (business opportunity, social benefit, or the combination of the two), when thinking of Strategic Innovation?

Most participants think that most opportunities for Strategic Innovation will arise in the partnership of business opportunity & social benefit (as opposed to only business opportunity, or only social benefit, slide 24). It is important that both parties understand each other. Therefore translation is needed, or a mechanism that translates.

What are examples of successful Strategic Innovations?

- Sulabh international – the Stockholm Water Prize 2009 was awarded to its founder Dr. Bindeshwar Pathak – is discussed as an example of Strategic Innovation. It is questioned whether this initiative is successful or not.
- Microfinance is mentioned and discussed as an example of a successful Strategic Innovation.
- Also an HIV project is described as an example of a successful practice. This project aimed at preventing HIV among women in sex work. Often HIV is addressed following a fixed method. In this case the problem was not a lack of awareness but the fact that the women were unable to put their awareness into practice. The project focused on the question: What do these women need? Health and HIV were not among their top priorities, as opposed to issues like money, children, violence. Thus HIV was fitted within a larger context. A program was developed fitting the priorities of the women. Issues addressed were violence, alcoholism, microfinance and positive women. Also a nutritional supplement was developed.

Access is an important barrier in the development scene. Poor people don't have access to the services they should have access to. If you go down to the poorest groups in society you have to face many barriers. Lack of access as a barrier is also influenced by the government. International development organizations are restricted by authority because priorities are set top-down. A critical mass is needed to remove these barriers.

The participants are asked: "Do you ever critically assess you own role and assistance?"
Some emerging issues:

- When trust is build up among the community, a project ends.
- Engaging with communities and consulting them is very expensive.
- The international development sector is learning slowly, by mistake and by experimenting. The wish to go really down to the field and consult with local communities is expressed. Though organizations know that this is an important process they often do not carry out this phase in practice, often due to a capacity problem.
- It is also mentioned that organizations do look into their role, through evaluation, learning from success and failures. It is stressed that it is often overlooked that in the development sector a lot of money is spend on evaluation and monitoring.

It is important to realize that there are many different inter-phases and levels in the sector of international development. Those who do have good insight at the grassroots level don't have the connections and the influence at the global level. They cannot make the connections. Organizations have to link this local level to the regional and global level, this system is very complex. This is seen as a fundamental difference between businesses and developing organizations.

On macro level governments together with international donor organizations are trying to adapt the context to the aid (in most capital cities of Africa). Many reforms are introduced to be better able to receive aid. This phenomenon illustrates the need to reflect on our own role. It is said that the development that is created from the outside has more and more lost its anchor in the local culture and society; development is seen as something we have brought from outside and that has been forced upon societies. It is supposed to be based upon investigations into the needs of the poor but these investigations are carried out in such a way that the poor are just saying what they think the others can provide (on macro level).

In the Netherlands the political climate is changing. Development assistance is in a vulnerable position. We are critical about our success stories. Questions about effectiveness and impact are asked, which have been avoided in the past decades. It is expected that there will be major changes in the field of development assistance in the coming years.

There are many people with potential and ideas at community level, but how can these be expressed? A worry is that talent goes up the 'ladder' through salary increase and thus leaves the municipality. Thus we 'poach' talents from the municipality. It is suggested that we as donors need to 'unlearn' a lot of things. We have a blind eye for what is already happening on the local level and for innovation among the local people. There is a disconnection.

The difference between the development sector and the business sector is that the client is not the one who pays. You are in a triangular position between the client and the funding agency: who do you please? This is often a dilemma.

The participants feel that the results from research on Strategic Innovation are applicable. We can learn a lot from business. In the development scene we always ask very much information – whether it is relevant or not. Asking information seems like a 'hobby'. You need a lot of freedom in the field. Control systems kill initiatives. This point invokes discussion. It is also said that it would be a big mistake if we try to adopt business models in our own organizations, for governments and NGO's don't work like that (cost-

effectiveness and profit cannot be number 1 and 2). It might be the case that we face so many difficulties because we try to adopt certain systems which work for businesses. Which means we have to be very careful.

A suggestion in which way deviating from the 'rules of the game' can be useful?

- We are thinking in outcomes (result-based management). In the light of the issue of complexity we have to move towards process-based approaches. Donors from civil society would prefer to have more liberty and to be able to steer processes (instead of being accountable for results and impacts). Can this be done in practice? A trust mechanism should be put into place instead of the strict accountability mechanism. It is important to have some freedom.
- To hear the voice of individuals (instead of representatives of individuals)

Conclusions

- The results from research on Strategic Innovation are applicable and useful.
- In general it is felt that there is not enough insight in the 'customers' / the beneficiaries.
- More freedom instead of accountability
- Some critical questions:
    - Do we critically assess our own role?
    - Should we try to adopt business models?

3.2. Katrien Termeer on Complexity Leadership and Governance

Prof. dr. ir. Katrien Termeer is professor of Public Administration and Policy at Wageningen UR (http://www.pap.wur.nl/UK/).

Background paper

Emergent change in complex governance systems

Societal innovations cannot be understood as the result of central governmental policy or planned change. Governance systems are composed of many organizations (governmental organizations, firms in the production chains, research institutes, NGO's, layered groups of citizens and consumers etc), that try to have some kind of influence on the use of public resources through communicative interaction. In this system, bottom-up processes of innovation are started creating new solutions and new cooperation. Change is emergent here, which means that new patterns of organizing come into being without a priori intentions. Small adaptive changes can accumulate and ultimately generate large institutional change.

Public leadership

For public leaders adjusting and adapting to emergent processes of change is often a wiser strategy than trying to get a grip on them. This is a radical idea since the assumption of directing and controlling societal change is pervasive in governance systems. Public leadership here is about those people who aim to make a difference by seeing opportunities, arranging connections and reinterpreting their own routines. In this

way they participate in the processes of social innovation in stead of social parties participating in the decision-making process of the government.

Leadership Strategies

We will discuss the following groups of adaptive leadership strategies:

1. Creating organizational conditions in which innovations can flourish (*organizing minimal structures, coupling and offering resources)*
2. Making sense of innovative practices and redirecting change that is already underway (*keying, improvising, certifying* and *integrating)*
3. Intervening to unblock stagnations and to restore disrupted adaptive processes *(counterintuitive intervening)*

Discussion: Adaptive networks

Under complex conditions, one public leader's efforts might not be enough. One person has insufficient knowledge and overview, and also insufficient influence, in a governance system as a whole. Therefore, public leaders could meet each other in so termed adaptive networks. These networks facilitate discourses to emerge, even if these threaten the dominant discourse that they still represent. They need to be close to the regime where most power is, yet they must be willing to enable change that threatens the regime.

Presentation

She wants to provide practical guidelines for public leaders. Public leaders are not only ministers, civil servants, parliament members – not only the possible vote buyers. She talks about those public leaders who want to make a difference in sustainability. Therefore she looks at leaders who started with acting, and whose actions resulted in big institutional change.

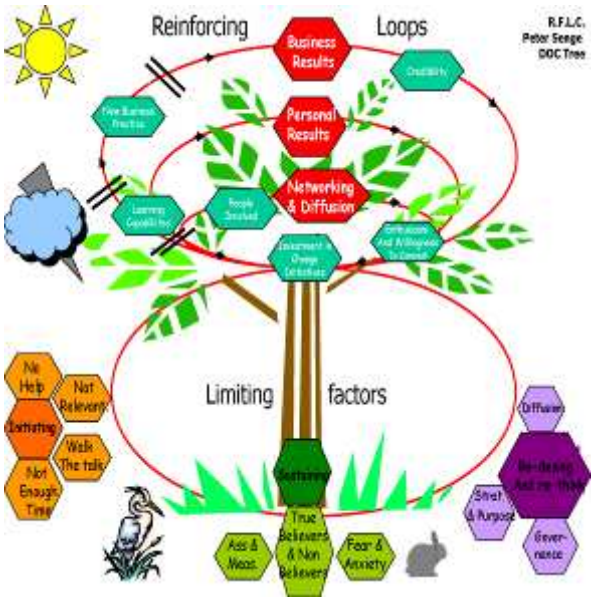
Governance systems contains public, private and civil society actors, local and global, and is non-linear. They interrelate and together make a complex system. One of the key aspects of governance systems is that top-down and bottom-up initiatives all happen at same time. However, societal innovations are never the result of planning and top-down policy.

Today, the top level of a complex system wants to get grip on innovations and to control complex systems. Katrien Termeer looks for a theory that focuses on adaptation to complex systems instead of getting grip and control systems. This conflicts with the dominant assumptions – which are about getting control, and often about more governance. Public management is dominant in our governance systems.

Termeer's research is about what strategies are left. She is inspired by organizational science, by authors such as Karl Weick. Important is to focus on emergent change, instead of planned change.

Planned change is very linear. Emergent change: New patterns of organizing come into being without a priori intentions. Small adaptive changes can accumulate and ultimately generate large institutional change. 'Things happen, so the question is how to deal with it'.

Planned Change versus Emergent change:



The assumption is that people are inertial; they do not change. Change is infrequent. Change means you can replace existing structures for other. Leaders should steer change.
This is dominant in organizational science. Research however turns out that 70% of planned change projects fail.

Characteristics of emergent change:
Change is seen as a continuous process. People are self organizing, and continuously adapting to circumstances, improving their behaviour in relation with changing circumstances. Those small changes can lead to large institutional changes. The logic of attraction is dominant. People are attracted to new opportunities, that is the reason why they change. Change agents are sense makers; they recognize and redirect change.

Leaders should adjust and adapt to emergent processes of change, and not trying to get a grip on them. Therefore they should focus on:

- Sense making. Leaders are always participating in processes of societal innovation.

  Starting point: they have a vision, they start with recognizing what is going on in society and accelerate change that is already on the way.
- Appreciative inquiry: you focus on the things that are going well, instead of on the problems. Instead of the deficit based way of looking, we should look at possibility based way of looking.

3 Strategies/group of conditions that public leaders can use:

- Creating organizational conditions.

  Some minimal structures are needed. Then one can start interacting and innovating. Afterwards they can start talking about it.

4. Redirecting change already on the way:

Four different strategies:

- Keying. Rearranging existing routines to make things happen. All societal innovations will conflict with existing institutions. Use your power positions to remove barriers; rearrange existing institutions to make innovation possible.

  - Improvising: not talking and making plans, which takes a long time. Implement an idea first, first create a fact together, and afterwards discuss it. This means taking risks. This is how innovations start.
  - Certifying. seeing, reframing and telling the world how important it is. Use your power position for this.
  - Integrating. Sometimes it is needed to integrate innovations in institutions to make them more salient.
- Intervening to unblock stagnations.

In case of fixations (conflicts, vicious circles, taboos), it is up to public leaders to intervene But not by replacing a structure for a new structure, but to start again, to revitalize, to restart blocked processes.

Adaptive networks:
We see the influence of adaptive networks, informal networks, which are supporting public leaders. These networks are made up of people who want to make a difference, people who often have also important positions in power networks. Together they develop leadership strategies, create a context and can strengthen each other. They can threaten the dominant discourse or regime.

Conclusions:
- important to observe processes of emergent change.
- Public leaders are *participating* in those processes.
- Recognize fixations and organize interventions in the case of fixations.
- Be selective in new policy. The risk of new policies is that it kills new initiatives of societal changes.
- It's not those acts one can gain voters with; no heroic acts.
- Making sense of small changes, celebrate these and not the big change processes.
- Passionate humility
- Member of adaptive networks. Recognize adaptive networks.

Discussion

- Accountability and transparency of leaders. How can we ask our political agents? Keying, certifying, are being seen as political liabilities. Politicians are driven about their votes. Where is the accountability and the legitimacy of their actions? Transparency is one way. Is transparency possible?
- For routine issues: stability and planned strategies might be sufficient. For innovation: new strategies necessary. Linking of these strategies is important. Balance planned and emergent change strategies?
- Transparency of adaptive networks. Openness leads to accountability. However, when a network is informal and closed it can use its power for change (Dutch party PVV).
- First acting, then sense making and making things public. Is this spin doctoring or a strategy for change?
- Policies often block existing innovations. Initiatives which do not fit into subsidy program, are not continuing. It is the policy of the funding organization that sometimes can kill innovations. Politicians want to take credit of initiatives of people, and then kill it. Paradoxical tension: planned strategy has to do with funding, while you maybe want to do the other strategy. Transparency is very

important here. You actually want people to do what they think already, but what they do not.

- The ones who go against the stream make innovations. We should look at those groups of people and their initiatives. 'Find the monkey'; recognize that what others do not see.
- We give power to people who can create more certainty for us. Politicians promise certainty. Complexity theory helps to understand why it is so difficult. There are always uncertainties.
- Time frame should be taken into account. Within emergent change, the time scale is difficult to grasp, because of its continuous character.
- Ministers often have a short time frame. They are not elected to bring change. A lot of countries have seen a lot of change and do not want to have change.
- Political structure. Party politics: thinking in short term. What we are signalling is a failure of party politics. It simply cannot cope with the globalization, complex processes. Then we only can have dictatorship for long term...
- Recommendation: to set up incentives for governments, and politics, in relation with this paradigm of being a good leader. Refer to accountability.

3.3. Irene Guijt on Strategic Consideration of Theories of Change

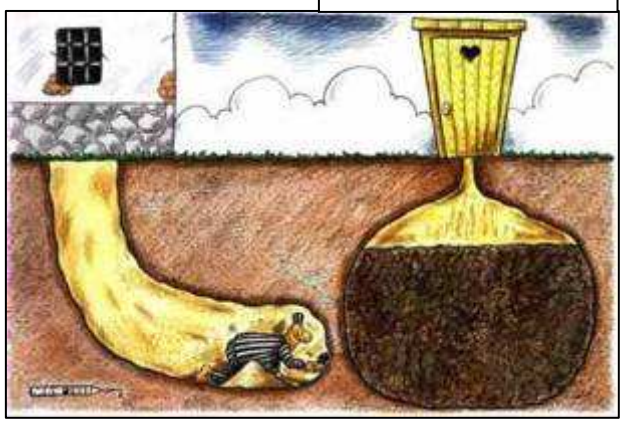
Dr. Irene Guijt is independent consultant based at Learning by Design (iguijt@learningbydesign.org)

Background paper

Is the notion of a 'theory of change' actually useful when dealing with complexity? Doesn't it over prescribe, under guide, and generally just waste time? Shouldn't we just 'flow' with whatever is emerging?

This workshop will start by seeking participants' associations with the term 'theory of change'. Then I will introduce the notion of a 'theory of change' and its diversity of forms and aspects. An idea about differentiating between theory of action, strategic plan, and operational plan will be highlighted. Several 'shades' of complexity and implications for theory of change will also be shared.

The risk of weak theory



The bulk of the workshop will focus on developing insight into which aspects of a 'theory of change' is still useful – given the features of complexity, and how a ToC may need to be developed and wielded differently to be useful. We will do this by contrasting the features of a 'theory of change' within a complicated domain of action, with that for a complex domain of action (based on Snowden's distinctions).

The final output will be a list of principles and questions that can guide workshop participants in shifting towards a 'theory of change' that is coherent with the core phenomena of complexity. This includes principles such as: level of detail being aimed for, core content, diversity of strategic options, rhythm of reflection, and others that will emerge from participants dilemmas and questions.

Questions that will be discussed during this workshop are:

1. What *is*, in essence, a Theory of Change?
2. What can a ToC *look* like?
3. When operating under conditions of complexity:
   a. how does it need to be *constructed* differently from what we might be used to or work with?
   b. which issues need to be considered to *use* it effectively?

Purpose: leave the room with greater clarity about how a ToC might be meaningful (or the limits of this) under conditions of complexity.

Presentation

Features of a ToC and its Use	*Complicated* / Simple Situations	*Complex* Situations
Purpose	Clear intervention logic	Options for action (safe fail experiments and clarifying boundaries)?
Accountability	For results, attribution	For evidence-based shifting of strategy/actions; contribution
Level of detail	Variable but links between all levels	Jumps/leaps of faith ?
Pathway of change	Causal linkages	Principles?
	Single analysis	Multiple options?
Rhythm of reflection	Tweaking	Adaptive, sometimes far-reaching?
Focus	Results	Relationships (?)
Ownership		
Assumptions		
??		

Strategic considerations of theories of change

-This will not be a workshop providing only one answer as I am very much in favor of exploring.

Reasons for being here of participants:
*Following PhD in Nijmegen and this is an issue not dealt with
*Trying to grabble with complexity of planning and intervention in current project
*Initiated collaboration for learning and joined advocacy and theory of change pertinent issue
*Learning in the sector, very interesting insight in recent discussions in development
*Policy dialogue officer, supporting researchers in making sure that research is influencing policies. One of the things that she focuses on is a better understanding of

what it is to engage in policies and what works and what not, theories of change important.
*SNV developed methodologies in Latin America that is would like to implement elsewhere. Theories of change important in this respect, interested to hear what other people think of it. Do not want to adopt a blue-print approach.
*Getting rid of causality – Dave Snowden interesting remark.
*Interest in the practice of theory of change
*Theories of change as an aspect of capacity development
*Connecting community-level change to system-level change

Associations with theory of change:
Intervention strategy
Program theory
Assumptions
Attitude change
Focus
Stories-Narratives
Resistance
Logic
Influence
Implicit
Power
Cause and effect
Mindset
Guiding principles
Thinking
Social movements
Pathway

Providing emotions of audience. Bunch of terms that are about a route and a logic in a route. Action orientation. Dealing with people in the process and their minds or in relation to the content.
Divided into concepts, content, actors involved, common associations.

Sharing some thoughts – Irene Guijt
2 years ago same stype of conference. ToC was not a term used that often before that time, started to be used only a couple of years ago. It was all of a sudden everywhere, but used in extremely different ways. Irene's interpretation is that there has been a lot of critique on development. People started wondering why interventions are not justified enough based on knowledge on the pathway of change.

The essence:
Bad theory sucks. Context analysis in a different way has come up more strongly in theory of change. What assumptions are you making about power and how is it manifesting itself in the concepts you are trying to intervene and what makes most strategic sense. Latin America manager: act now not waiting on the best theory. How to make enough use of current understanding without tying yourself down. Being more honest and clear about what you are trying to achieve. System should be allowed to show you signals that something is not going as it is supposed to. ToC helps to delineate what it is you are going to deliver.

Comments with slides

Fundamental Theories about Life
How do we believe change comes about? Different understandings not made explicit in peoples' choices. Religion is coming up increasingly in discussions concerning development.

What is ToC?
Representations of pathways through which there is a vision of change, growth map with different forms. Different aspects in which they vary. Outcome based: groups of stakeholders and what is desirable in their behavior.
* How is ToC developed? ToC? Who owns the ToC?
- Manager owns project Irene is working on. People do not feel that what they contribute is meaningful enough. Important that people see their contribution, this provides energy. Depends on how it is done. Is it an inductive approach? Or deductive? Now more in the latter phase. What is our theory of change and what is working?

A Hierarchy of Theories
Start with an operational plan. Nesting within strategic plan but also a theory, part of broader Theory of Action compared to other organizations. All of this together is the ToC. But at different levels there are core beliefs, direction of change, strategies that would work best. Values and principles cut across all levels. Different forms in which pathways are represented.

Theory of Change – Pathway of change
What are the preconditions that need to be in place? Other people are focusing on this area, so we are going to focus on an other area.

Next slide
Rather vaguely, no middle in theory of Change. Difficult to track how it has been defined. Large program classic problem with nothing in the middle. It does provide freedom.

Possible outcome map
No linear logic at all. Notion that it has a synergistic effect.

Working with Assumptions
How people use assumptions, what are operational assumptions. What are you assuming needs to happen e.g. taking into account partners which are your vehicles of change and incorporating their values. Started with around 60 assumptions, now focused down to 4-5 assumptions. Surprises encountered in previous years are now worked with to not make same mistakes again.

Human Trafficking – soft systems
Some things in soft systems that are useful. Analysis of interdependence of different systems that maintain human trafficking. Fairly solid analysis of context and how parts reinforce each other. Where is the leverage? How to shift the system? Systems are so fixed and solid. Soft system force you to do a context analysis to fit your capacities. Different mental image of what analysis could look like. Leverage the livelihood option to enable certain links being weakened and in that way put change into process.

Horses for courses.

Notion of diversity. Depending on context you choose what fits that particular context.

Differing Expectations

What are the questions that need to be asked in different contexts? Compass is necessary in theory of Change. It is always a mix. Never a program that is complex or complicated only. What part of what we are doing is which?

* Thought coming up wondering about Snowdens example (morning lecture) of a children's party. As long as you have the combination you always have complex situation. Always dealing with complexity. Some might be more complex than others but even the simplest activities in there would deserve a place in the complexity box. How on earth could we still think of things that are just complicated or simple? Complex element will always be present.
- Children's' party: invitations out on time and stocking the fridge is the simple part. But because we want to make things simple, it becomes complex again.

Locating ToC Options

Way to say which domains there are. Located in a particular way because zones, phase shifts are particular areas where interesting processes can be triggered and occur. Very suited for assumptions. Other tools are needed. Tools and techniques still assume that we do things a certain way but it is not an appropriate assumption of reality very often.

Start interactive part

Features of a theory of change and its use	Complicated (or simple)	Complex Governance, power, perceptions, dynamics, interests
Purpose	- Singular intervention logic for prioritizing actions	Enabling clarity of long term vision, seeing interim unexpected achievements. And adapting long-term goal. Helps to "agree to disagree" but still act. Creating benefits but keeping the discussion going.
Accountability (results		Who judges what is successful. Role of trust? Cycles of learning and interim impact.
Level of detail		Multiple shorter term, reverse loops to allow for adaptation, within a broader vision.
Facilitation qualities		Skills, uncertainty, conflict, space enabling, invite failure
Rhythm of information flow/reflection		Process of revision, process for changing itself
Ownership		Multiply locally developed options for action
Assumptions		More detailed assumptions. Clarity on this frequent, emergence – for (re)orientation allow disagreement about assumptions.
Role of failure		Check assumptions (ToC), adapt action, expect more and be upfront about it. Seek failures, needed in order to advance.
Control		Band with boundaries – co-shaping.
Content		Focus more on process, how to define boundaries

* What is complicated or complex?

- Simple: baking cookies, Complicated: raising a child, Complex: rocket to the moon
Very personal . In your context you would have to decide which one is which.
* Would it not be a complex task instead of a complex problem? Hunger is a problem but raising a child is a task. Something to accomplish
* Always an interaction of people. Who could ever invent procedures? How to have clear defined lessons?
- ToC becomes your task outline as it were. Problem would be that there is no teacher-training and task is to improve the situation.

*Example from audience: complicated is having 100% access to water in Africa, complex is making it sustainable. First one is an operational exercise, second governance issues, power, culture perceptions. Very dynamic environment of political interests.
* Is it not more about creating a paradigm shift? Taking more things in to consideration.
- Easy to produce interesting material and get it to them (complicated) complex would be to get them to take note of it and incorporate it.
* Totality is complex.
* Situations are complex from the beginning
- Depends on what task you set yourself
Is it useful to only assume that everything we are involved in is complex? Let's focus on that now.

Ownership:
* Development citizens generating own well-being and what we do is development intervention externally. Creating local control. Ideally you want people to sustain systems themselves. This is where complexity comes in.
- Ownership of ToC different than ownership of development intervention?
Own ability to respond would mean that they would need to own their own ToC.
* To what degree is future-mapping taking place in the local context?

Image on ToC.
* Need for a broader vision. Lots of assumptions and a number of multiple pathways. Are we leaving a gap in the middle?
* Is there a time dimension in the way things change? We can't have something that is fixed but is has to have built in learning potential. That's the kind of process we are talking about.
* How do you encourage interrelationships and define boundaries?
- Broader vision of change is compass

Features of change
- Purely Irene's ideas
* Adding objective of why you want this change. Relating to process and how the things that come out of process can become achievements. Trying to make sense of what has been said. Having to be flexible and evolve in the course of e.g. five years of a project and allow other achievements to be made.

- Ethic of a single beneficial good for community has been very dominant. People can also agree to disagree and work with the funds available (Uganda example).

*Use it as an opportunity (idealized) what would be its real role: use it for learning.
*To check assumptions (ToC), adapt actions.
*Specific to complex issue?

- Main difference is that you expect a higher level of failure because it is complex. Higher frequency.
*No expectation up front if you deal with a non-complex situation.
* There are different types of complexity
- Might need to have facilitators that are more able to deal with conflict
* You need failure. You have to acknowledge that success is not really going to give new knowledge. You need failure to bring out factors that you didn't incorporate. Failure to develop.
* Building a positive outcome into the system that is not predicted.
* Narratives: people that tell the story attach their own values and express these.
- Often projects are neither owned locally or held accountable locally.

- Can the system handle complexity or should it be masked and put under complicated. Often used arguments "It didn't work out, do it better next time", " It is your fault".
*Holding yourself accountable to learning rather than setting yourself to only work towards preset goals.
* Lot of relativity in this situation
* You can be sloppy everywhere, also in a simple system
- Many more rules in simple/complicated systems that can be used as benchmarks. Complex benchmarks have to be developed still.
* Set plans for five years, certain amount of money and work it out in detail. Proposal mainly written for money and than the real thing starts. Owners could be convinced to accept shorter cycles of learning. More based on flexibility instead of on rigorous log-frame.
* Donors will not be able to tolerate this. Fragile states. So much fluidity very hard to look ahead.
* Co-existence, need to go back to simple model but recognition that we need to look at complex issues as well. Transparent and accountable fashion. Sector needs to promote co-existence. Not an either….or situation.
- Updating yourself on what you don't know. Basis for (re)orientation/change. Emergence of new assumptions. Allow disagreement on assumptions.

Final remarks

- What appeals to the audience?
* Complexity thinking gives a better perspective on how to do development as a critique on what we do not. Could be an answer, formulates the critique on actual practice and can help us to improve practice. Complexity thinking can assist in improving development. Helps to formulate an alternative way of looking at development.
* Level of urgency. Looking ahead the sector will have to change drastically. Breaking through barriers, have been hitting the ceiling for too long. Expecting a break through in the near future.
* Elements of complex thinking are already implemented but formulated ambiguously.
- Thinking through ToC helps us to think through complexity more.

- What are the challenges/critiques.
* Whether we are not always dealing with complex issues. If you look at things seriously you can not deny that everything is complex in essence. What do we need to cut them into different bits. To hell with complicated/simple issues.
* Maybe if something is complicated, approach is linearly.
* What is the definition of complexity. This has implications for how we deal with it.

* Complex way of thinking to ToC. Cooperation between organizations in the sector is paramount but very difficult. It must belong to a complex way of thinking, but very challenging. Cause-effect relationships. What is the role of people?
* We all intervene, better take it serious and improve the skills that are already there.

Suggestions
* Maybe in some future we could listen to people working with these kinds of tools. Where do they struggle, where do they fail. Challenge to think complexity and do something to improve interventions.
* Not how we do things but also whether our organizations have to play a role in change. Can also stand in the way of change. When should be take our hands off? Whose theories of change? Maybe we don't have a role to play.
* What are we going to stop doing? Everything is an add on, the train just goes on whether it is effective or not.
* Can we cope with complex problems. Maybe recognize them and address bits of complexity, not everything.

3.4. Dany Jacobs on Strategic Options in the Face of Complexity

Prof. dr. Dany Jacobs is professor at the University of Amsterdam and ARCCI, Arnhem Centre for Creative Economy and Innovation (http://arcci.femplaza.nl/).

Background paper[6]

In strategic literature basically four options can be recognized in the face of complex and very turbulent environmental conditions: scenario analysis, networking and fast learning, providing a stable beacon, and thoroughly understanding your selection environment.

Scenario analysis
Scenario analysis provides strategists with the paradoxical challenge of 'thinking the unthinkable', setting out different possible scenarios for the future. In practice it appears that a lot of scenario analysis remains relatively conservative. As a consequence, this kind of scenario thinking does not help much in the face of really complex and turbulent situations.
However, one important clue from complexity theory may help to think about possible future scenarios: the difference between unorganized and organized (i.e. interactive) complex situations. It is especially important to understand when turbulent situations may be get an organized complex nature, leading to a possibly rapid tipping of the balance from one side to the other of a bifurcation (think of hypes and similar information cascades).

Networking and fast learning
Other strategists say that in turbulent situations setting out a strategy is basically futile as small changes in the system (the metaphorical butterfly) may lead to totally different

[6] References:
Dany Jacobs (2007), *Adding Values. The cultural side of innovation,* Arnhem: ArtEZ-Press and d'Jonge Hond.
Dany Jacobs (2010), Mapping Strategic Diversity. Strategic thinking from a variety of perspectives, London: Routledge.

outcomes. So it is important to keep your options and your information channels as open as possible. For this it is important to network, especially with actors outside your normal environment as form these you learn the most ('the strength of weak ties').

Providing a recognizable stable beacon

Some actors in turbulent situations try to provide stability in turbulent, complex situations. Possible tools are strong brands and related value connections with certain loyal customer groups (~ niche strategies) or 'credible commitments' in the form of big investments which should deter competitors from doing the same (however in many cases such investments are just copied by these competitors and lead to overcapacity).
A bit less stable are what I call 'half empty' strategic concepts (Jacobs 2010). These provide a kind of strategic compass but also some flexibility. With the help of these people of your organization may experiment, so that on the basis of a darwinian logic the most successful applications may be selected.

Thoroughly understanding your selection environment

For each industry and even for each organization the relevant selection environment is different. So, it is important to understand your specific niche within the more general, possibly turbulent environment (Jacobs 2007). The fashion industry is for example a classic example of a relatively turbulent and complex environment. This doesn't take away that for each firm within this industry the situation is different, and the complexity of the selection environment of each as a rule is less complex than that of the whole.

Clearly, some of these four approaches may be combined: for example thoroughly understanding your specific selection environment, learning rapidly and adapting your 'half empty' strategic concept accordingly.

Presentation

Dany Jacobs works as professor in the field of mapping strategies in management. In his work he deals with the question; what can you do with these strategies in practice?

To be strategic in complex environments you have to realise that actors are always linked with one and another. People are continuously networking.
Developments in real life do not take place in a linear way. Developments are often chaotic in which attractors can function as equilibriums. If you are aware of such attractors and their function in the system you become able to intervene in the system.

There are two kinds of complexity:

1. Disorganised complexity
2. Organised complexity

When you are talking about complexity theory it concerns organised complexity. Within these systems of organised complexity, people influence each other. These systems are called Complex Adaptive Systems (CAS).

Characteristics of complexity theory tells us that it is not possible to isolate systems. There are always influences from outside (no borders).

There are four approaches in what you can do strategically in complex systems:

1. Scenario analysis
2. Networking and fast learning
3. Providing a recognisable stable beacon
4. Thoroughly understanding your selection environment

Making use of these four strategies, keep in mind what Eric D. Beinhocker (in: *The Origin of wealth*), has written: 'long term strategy is hopeless'.

The first approach: scenario analysis

It is difficult to think in future scenarios. People have difficulty to think out of the box and think of possible future scenarios. Besides that it's difficult, people are often not prepared or willingly to do so. But then in order to be strategic, it is good to think of relevant scenarios that could possibly ruin your work in the future.
Many things we can foresee, but sometimes only weak signals are given or we just don't want to see things beforehand. *We can only see what we want to see*.
In order to be able to recognise signals of what is going to happen, you need an open mind and dare to say out aloud what it is that you think. *Dare to try and think the unthinkable*. Most people are afraid to do so. But, we need people who are prepared to say different things than the average opinion. Like Peter Drucker (1909-2005), he said: 'I didn't forecast, I just described what was there'; often you can already see signals of what is going to happen. For the survival of the group, people are needed with original ideas and who are independent thinkers. Like Einstein was. Therefore, Dany Jacobs appeals for *tolerance for people who think and speak different*.
Listening to 'weird ideas' might create feelings of uneasiness, but you don't have to believe people with different messages or other opinions; but at least listen to them. Especially in science it turns out to be difficult to be open for other ways of thinking.

QUESTION: How could we see this in the development context?
ANSWER: It is good to ask yourself: what could happen that I wouldn't expect? What could ruin your story? And then you could wonder what would be the risk to say this out loud? Think of different scenarios that could ruin your strategy.

The second approach: networking and fast learning

There are four sub-approaches within this approach:
1. Guerrilla
2. Innovation as co-evolution
3. Strategy as co-evolution
4. Understanding tippy markets and information cascades

The first sub-approach -Guerrilla-, concerns situations of hyper competition. As soon as there is an open window, you have to jump onto it. You always need to be very rapid to make use of things that come up; opportunities. To do this strategically, you can make use of the seven S's of D'Aveni (new 7 S-model, 1994). These learn you that you need to be able to react quick to things that come up. You need competences to be a guerrilla.

The second sub-approach concerns 'innovation as co-evolution'. In this strategy, a rough plan is developed, but you need to learn as rapidly as possible (in terms of technical as well as cultural aspects). You have to try out your ideas in the world, and then redefine it

further. An eventual product that will be applied, might turn out to be very different from the original idea. Learning is co-evolving.

The third sub-approach -strategy as co-evolution- concerns the process in which the strategy is designed. When you start such a process, you need to be aware that your way of thinking at the beginning influences the whole process and eventually the strategy is developed at the end. Strategy is developed over time, each step influences the next one.
COMMENT: The way your strategy develops is a continuous process.
COMMENT: If your strategy is working towards specific results, you also need to have clarity on the results that you want to achieve.
ANSWER: Yes that is true. But even if you are aware of the goals that you would like to achieve at the beginning of the process, this idea of the preferable results may change over time due to external influences and obstacles that you come across. But *your strategy might function as a compass in a continuously changing and complex environment*.

The fourth sub-approach concerns the understanding of information cascades and tippy markets. Tippy markets are mostly about standardization. Networks develop around the standards that are given through these markets. Economies of scale can play a major role in these network effects; there is often a specific majority that rules.
In the case of information cascades this is different; information is often clustered around specific communities. We are living in a clustered world. You live and work with people who are connected with each other and have more or less the same ideas. Therefore, if you are able to connect with people outside of your own system/community, you're able to learn more. People who are able to do that, can function as bridges between clusters and information cascades. Sometimes it are not people but a fashion that runs throughout and across all the clusters.
And, if you want to influence strategy processes, or other clusters of connectivity, it is good to have a sticky communicator in your group (see for the 'Stckiness Factor', Malcolm Gladwell's '*The Tipping Point*').
There is a kind of mathematical law concerning the level of which someone is to be influenced in relation to his connections with other people. Because, if you know very many people, than the opinion of only one is little; the more connections you have to other clusters, the more difficult you are to be influenced by other ideas.
And nowadays with new high technology medium options there are information cascades all around us.
In a world of many information cascades you should try to understand possible tipping point of the system. If you want to have influence, you need to know about the rules of the systems.

The third approach: providing a recognisable, stable beacon

This approach concerns branding as a strategic compass. As a brand, you need to be stable but at the same time very flexible. You continuously have to consider whether you have to change or if you have to keep your old profile. You always have to be open and prepared to adapt to new situations.
Like McDonalds; they are everywhere the same, but at the same time different in each culture/place.

The fourth approach: thoroughly understanding your selection environment

It is important to understand your specific niche within a more general, possibly turbulent environment. Through your selection criteria, you are better able to map your

environment, and you know your specific position. You will have to map that part of the system that is relevant for you. By knowing precisely who you are, you can narrow down the whole system, so you can understand better, and can focus. Do not waste energy on things that do not matter. If you understand your selection environment/criteria good, you will be better able to deal with it. By understanding the complexity of a system, by really analyzing you can focus your energy for each step. That is the relevance of this strategy. Be organised in what you do to achieve your goal.
Furthermore; try to understand the markets that you are operating in through the existing hierarchies. If you understand better how these work, you become better able to influence them.

Discussion

QUESTION: With regard to the sub-approach 'innovation as co-evolution', when thinking of how to apply this in practice, one thing came up. It is very difficult for people to learn during the process. Because you are continuously occupied with your activities. Do you have an advice in this matter from the complexity theory?
ANSWER: Learning is sometimes easier when an obstacle is being put on your way. Because this makes it very concrete what you have to learn in order to continue with achieving your goal. Sometimes you have to take external complexities as a given fact, but at the same time; keep focused and remember your own position in this matter.
This brings us to one of the fundamental things of learning; the conclusions that you have drawn from previous experience. Learning is a very optimistic term; it presumes that you took the *right* conclusions from your experiences in the past. You might think you have learned, but that doesn't necessarily mean that you took the right conclusion. There are different levels of learning. It also very much depends from the feedback that you get from your environment. It is difficult to really learn and to know that you are improving.
And then, learning or adapting might be good for the individual but might eventually not be for the whole system.

COMMENT: [with regard to learning from the past and the selection environment of individuals (or organisations, companies)]: Human selection environments do not take the natural boundaries sufficiently into account, through which natural resources are not used in a sustainable way.

QUESTION: How do you see the importance of having a set of rules and regulations? The role of rules in general. Does it put order; makes complexity less complex? Is it something that can be either beneficial or constraining?
ANSWER: Many rules and regulations can be constraining. You have to understand your selection environment. Do these rules really matter for your situation? In general it is part of the system, and not only official regulation; also cultural aspects. Too many rules within the system can constrain initiatives and creativity. Especially in a country as the Netherlands where there are many things organised and many rules for different aspects in society; regulations can be very constraining. And this can block opportunities. But then a bit of control definitely might help. There is a need to fine-tune, what is most appropriate in which situation to prevent the loss of creativity and inventiveness.

What was appealing?
Often people are lazy in trying to envision scenarios. They tend to only think in terms of the already existing trajectories, but sometimes there is need of thinking beyond what is considered to be normal. People need a compass that guides them towards potential

scenarios. And in order to go beyond 'average thinking', you need people that dare to think differently; who are more open to strangeness. Maybe we do not do that enough. *Tolerance and openness for independent thinkers*.
One way of finding out what people truly think, is by making use of narratives.

QUESTION: How do you create strategies for goals on the longer term while you have to deal with short term cycles of the political system.
ANSWER: Many politicians don't dare to think ahead. Many politicians don't dare to take responsibility now for potential for consequences in the long run.
Try to see politics as continuous campaign. These politicians continuously have to campaign, if you slow down for a moment; other people will come in. Strategising never stops.

QUESTION: On what basis did you choose these four approaches?
ANSWER: These approaches are in my opinion the strategic answers to the problems of strategic thinking in complex systems. Even though long-term strategising might not be tactful (see abovementioned: Eric D. Beinhocker), but then focus on what is still possible. I think still a lot is possible; make use of practical tools.

3.5. Cees Leeuwis and Steve Sherwood on Science, Complexity and Innovation

Prof. dr. ir. Cees Leeuwis is professor and Dr. Steve Sherwood assistant professor of Communication and Innovation Studies at Wageningen UR (http://www.com.wur.nl/UK/Organisation/).

Presentation

What can science do for innovation and complexity?

When we talked about innovation, we mainly focussed on systems innovation: 'Innovations' do not consist of technical devices only but of new 'hardware, software and orgware' at multiple levels, they happen in societal networks. So innovations happen *in* society, what and how then can the university contribute to this. There is a need for engagement of researchers in society. It is not always the best technology that is implemented, it is a process of building an innovation in society.

Complexity: the only constant is change. There are positive an negative feedback loops but we cannot predict the consequences in the system. Order emerges but we cannot manage or control it.
There are attractors (Coleman et al, '07) like values, religion, rules, market, that make something more likely to happen in the system (e.g. Palestine: war, pesticides in Ecuador: use remains). The attractors can change in the system: either the dominant will get less, or another atractor will become more dominant. How to influence the potential for change.

The role of science is often seen as to reduce the complexity and bring it under control but this is impossible. Conditions change continuously, it is too slow and too isolated. We

need more interdisciplinary science, embedded in society, to improve the quality of societal negotiations. Science questions are not neutral.

So what can scientists do **in** complexity?
First of all: Become engaged / connected to 'local' contexts. This may be in more and less conventional role positions:

- critical outsider: critical feedback, conventional research, setting agenda for societal debate, make timely contributions to societal debate
- consultant / advocate: working for specific stakeholders (client) provide ammunition (weapons) and arguments
- action researcher: studying and changing the system, collaborative research, carrying out niche experiments with stakeholders
- knowledge broker: getting the questions right, organise high quality interaction to get the knowledge demand clear, translate this into research questions, identify and connect with experiences elsewhere, connect people
- explorer: support vision development / solution space, trend analysis, scenario's, analysis of emergent innovation, modelling, identify attractos
- reflexive monitor: consequences of emerging action, monitor progress and change, monitor change in a wider environment

Innovation: science can build networks, deal with conflicts and foster learning.
Towards the future, working with complex systems we might need more researchers in the role of knowledge broker and explorer.

Discussion

- Example India: little salary for researchers helps in some way: they do the research they want to do anyhow, more activist science: rejecting dome information from the government and the market, this is 'food for thought' for them to become active in certain areas.
- Motivation – asking the right questions to address problems in society. A lot of African MSc and PhD after studying abroad go back to their own country to work with science, but not with the rural poor. It is only 1 generation timeframe, because most of those researchers come from a rural background. There might be enough highly trained people to work with the rural poor to solve the problem. How to increase the number of researchers with this moral obligation to do something for society.
- The Western universities have certain knowledge systems but this is different from some other countries. Example: the Taliban uses an other knowledge system
- Hoe did we create dysfunctional systems. Nobody started a project called global warming. We need to look back at complex problems (like poverty) to help us understand and look forward in order to know what to do in the future
- Worms-eye-view or tors-eye-view of science: do we look from the bottom or the top. Take climate change as a example or MDG, and look at the rural income basket, or look from a very local economic perspective. Or take autonomous adaptation or planned adaptation: what will in the end change the local decisions of rural actors.
- Science and media. Often science is looking at a problem in society. But what is the problem, and who's problem is it? Are we talking about the research – policy relevance, where the politicians have the power, and the researcher the responsibility (to whom? to provide good information but also look at what really is the problem). Who's science are you facilitating, Monsanto?

- Is a researcher also a facilitator? One issue is whether they have the right competencies (not every researcher has those competencies), but the other issue is legitimacy, depending on your role as researcher.
- A researchers is one component in the change process. The future researcher need to be a 'hybrid person' (multi-skilled)
- Science can help to understand the complexity, to find the leverage point/choack point, a rather 'simple' point in the system from where to start change. Symplexity. (example: cholera epidemic, a lot of people sick, find the one well where people get sick to change/turn the epidemic system.

3.6. Steve Waddell on Visualizing Complexity for Realizing Change

Dr. Steve Waddell is principal of NetworkingAction (http://www.networkingaction.net/).

Background paper

Visualizing Complexity for Realizing Change: New Mapping Methods

Every change initiative involves "systems" – internal production system ones relating to how work gets done, issue systems relating to the topic that the NGO is working to address, and mental model systems about strategy. Clearly "seeing" those systems is important for success. This workshop reviews new forms of "mapping" that can vastly enhance and speed understanding of the systems. The maps are diagrams of arrows and nodes that can communicate tremendous amounts of information visually much more easily than volumes of text.

Within a system are stakeholders that include individuals, organizations, networks of organizations, the range of their actions, their ways of thinking vis-à-vis the issue, and the natural and man-created environmental factors that influence the system. Stakeholders may or may not identify themselves as participants in the system. One of the challenges of developing an issue system is to build participants' identity with it; this is critical to creating effective action to respond to change opportunities, needs and challenges.
Different mapping approaches have different strengths and weaknesses. "Production system" maps – exemplified by inter-individual social network analysis (SNA) – aid an organization to understand how work actually gets done, in comparison to formal org charts. This analysis can assist in bringing greater alignment between the two, which in turn reduces conflict and enhances productivity.

Issue mapping – exemplified by SNA and value network analysis – builds understand key leverage points in the bigger system it is trying to influence. These are points that, when focused upon, have a large ratio of amount-of-effort to desired-change. The focus can involve application of resources, or actually reducing resources.

The mental model mapping – exemplified by strategic clarity mapping – can uncover conflict, make it discussable, and enhance effectiveness. People can understand why someone else is doing what they are doing. Often this helps people understand that their mental model may be important, but incomplete vis-à-vis the change goal – and therefore help people's respective efforts connect much more effectively.

These maps can include literally hundreds of nodes and arrows, or very few. Experience working with people around the world proves that even relatively complex systems with even a couple of hundred nodes can be understood by people with very limited education. Key is a participatory development process.

Results can be impressive. Mapping was undertaken by a couple of dozen people in Guatemala to support CARE to vastly enhance its impact. An evaluation a year later showed that the process was transformational from two perspectives: people had significantly changed their relationships (who they were working with), and they had significantly changed how they understood their work vis-à-vis others'.

Presentation & discussion

Background Steve Waddell:
He has a background as a community organizer and uses different technologies, like mapping, to do that. He has experience in setting up and working with (global) networks. His organization can be found on www.networkingaction.net.

Reasons of the participants to take part in this workshop:
mapping as an evaluation tool; application of mapping to network initiatives; as a tool to support clarity in monitoring & evaluation; to support governance; social modeling, as a theoretical background; to support connection among community parts; to get deeper project understanding; complexity and small scale projects; for learning, responding and evaluation interventions in crises; visual learning strategies with regard to wicked problems; as an evaluation tool.

What is complexity?
Complexity has to do with actors interacting with each other in a co-evolving environment, dynamics, conflict, diversity. We don't know the relations of causal effect and there are power differences. Difference with chaos: in chaos we cannot speak of any relation. In complexity on the other hand, there are still some rules that can be managed. So, complexity allows for management. Chaos does not.

Steve Waddell deals with four specific types of complexity:
- Geographic: spatial complexity
- Dynamic: there are lots of actions and variables, things are happening at the same time, how do we handle that?
- Cultural: between business, governments, civil society, different belief systems.
- Temporal: this is complex because we don't know what s going to happen and when.

Different types of mapping:
- Visual diagnostic: mapping as visual diagnostic
- Conceptual mapping: relation between particular concepts
- Mind mapping: in planning processes, priorities, different opinions
- Geospatial mapping: characteristics to different geographical spaces

Basic mapping terms are: nodes, links, attributes and networks.
Arrows point out the direction of the relation and how power is concentrated in the relation. Still you have to be careful with your conclusions. You need additional information to find out who is powerful and how strongly connected the different actors are.

Why would you map?

- For organizations (internal production systems): here mapping gives insight in power distributions and it pictures how the work *really* gets done (in comparison to formal organization charts). In this way this analysis can bring greater alignment between how work actually gets done and the formal org charts.
- For inter-organizational 'issue systems' (e.g. food and security): here mapping shows different clusters of interest groups, coalitions and cliques by identifying key leverage points. In this way these leverage points can be optimally influenced.
- For mental model systems: here mapping shows the theories of change of the actors. Mapping mental model systems can be used to identify conflicts, synergies and gaps (strategic clarity) and to create collective visions and theories of change.

Mapping is used to make this all discussable and generate effective action.
You need to be aware of the fact that maps are artifacts. They are a representation of something and should not be taken as accurate in a scientific sense. They are valuable when taken in a participatory context, together with a community. Here mapping can help finding out what is missing, what is needed to make programs more successful and in the end to make action more effective.

Networks:
Types of networks

	Inter-Personal	**Organization**	**Inter-Org. Partnership**	**Inter-Org. Network**	**System**
Legally Distinct Entities	Many	One	Small to Modest	Very large	All stakeholders
Organizing Structure	Informal	Hierarchical	Spoke and wheel	Multi-hub	Diffuse
Organizing Logic	*Personal*	*Administering Managing*	*Coordination*	*Coherence*	*Diverse self-direction*
Operating Focus	Relation-ships	Organization	Task	System	Definitional
Participation	Open	Closed	Highly controlled	Loosely controlled	External

All our lives are structured around networks. Steve Waddell mainly works with inter-organizational partnerships. The key line (horizontal) is 'organizing logic': understanding what the underlying factors are that a specific structure is being put together for. What is the reason for a specific personal connection? Why do we coordinate collective resources? How do we try to get things moving in a similar direction? Who decides which direction is legitimate?

Method 1: Web Crawls
This method can only be used for communities where all actors have websites. The link between the organizations (the nodes) are electronic connections. You can do this for a particular field. Mapping helps finding out which organizations are in and which are out and how the different organizations are related. Steve Waddell did it on global finance.

Global finance has different aspects such as commercial finance, security, trading organizations, banks, trading funds and insurance companies. First he went to the websites of global associations and looked to which other websites they were referring. You put this information in software like www.issuecrawler.net and this will generate a map of all the linkages between the organizations. You can choose the number of organizations that are in the map, this depends on the level of analysis. The bigger the node in the map, the larger the number of linkages between that node and other nodes.
A positive thing about this method is that it is relatively objective because it shows who is most important from the point of view of the organization you study rather than your own opinion.
The map shows particular structures and key bridges between clusters, this shows you who are the main power makers. Such a map can give great insights. Steve Waddell found that NGO's were all clustered around the UN which has hardly any power in this system, instead of focusing on the most powerful organizations. A map gives an initial impression of the field.

Method 2: Social Network Analysis (SNA)
This method describes an issue arena of individuals' or organizations' structures. It identifies the workflows of individuals or organizations and identifies strategic leverage points. The output is a map of links and attributes. Steve Waddell did this with the Global Reporting Initiative in South Africa. By interviewing different representatives of many organizations they came up with a map of all these organizations showing how they were related. In this map you can also find different clusters and key bridging organizations. This makes it easier to make decisions which organizations should be represented in conversations. The map needs to be confirmed by additional interviews.
An important point is that data is gathered by interviewing individuals, so, you extrapolate an individual response to a set of organizations. This is a touchy thing and you shouldn't be too simplistic about it. SNA is a useful tool for starting discussion about relationships.

Method 3: Value Network Analysis (VNA)
This method doesn't only tell you about the existence and direction of relationships, but also what is exchanged in the relation. VNA really moves you into the true network world and shows what is necessary to make a healthy network. So, it identifies the roles of the networks and the relationships and the strategic leverage points in the networks. Steve Waddell used this the relationships of the Bank of International Settlement of the global finance study as an example for this type of analysis. It became clear that the BIS is a funder and global policy developer for many other organizations. VNA gives information on both tangibles and intangibles. It's often useful to gather more extensive date to get more information on the tangibles and intangibles.

Method 4: Strategic Clarity Analysis
This method really works with people's theories of change. So, the nodes in this map are the people's actions and ideas. Steve Waddell did a project with CARE in Guatemala. CARE wanted to be more strategic and engaged in the mapping of strategies of its partners. Interviews were conducted with a large number of stakeholders. They were asked about their specific visions on change and the theories of change on others. The result for each interviewee is a personal map of what they aim for in fighting poverty. Finally you combine all personal maps which is a very participatory process. You make sure from the stakeholders that you got the picture right. In the end the people involved could position themselves and see who they should influence and with whom they should work together. In the map for CARE three clusters were found: traditional socioeconomic

reasons about poverty reduction; security factors; and 'the ability to be', to be whoever you are as a good Guatemalan.
This process changed the way they thought about their work and how they connected to others. They started to look at the system rather than at their own specific project, so it increased their system understanding. Relationships changed entirely, they had to go out and talk to people they had never talked to like the military and their role in poverty reduction. The map showed that people in the system had a quite different sense of what was needed as an outcome of poverty reduction than what CARE thought. In the end this helps creating a common stakeholder vision.

Comparison of mapping methods

Characteristics of Mapping Approaches					
	Complexity it clarifies	Required knowledge of who	Required knowledge of relationships	Increase in knowledge of value created	Increase knowledge of sustainable value-creation
Web crawl	Stakeholders relationships in a system	low	low	low	low
Social network	Structure of relationships	medium	low	low	low
Value network	Value creation among relationships	medium	medium	high	high
Strategic clarity	Leverage points for dynamic, collective value creation	high	medium	high	high

3.7. Alejandro Litovsky on Social Innovation

Presentation & discussion

The following film by Bunker Roy of the Barefoot College in Telonia, India was used as an introduction: http://www.barefootcollege.org/ – Barefoot Solar Engineers.

We watched the film and then used it as a springboard for discussion.

Here are some links to the Barefoot Solar Engineers work:
http://www.inhabitat.com/2009/11/09/indias-barefoot-solar-engineers-are-building-a-brighter-future/
and http://infochangeindia.org/20030107135/Women/Changemaker/Barefoot-female-and-a-solar-engineer.html

YouTube: http://www.youtube.com/watch?v=8oS2iUFvdTE

Alejandro worked recently with entrepreneurs and investors in India. He showed a short film about the Barefoot College in which two illiterate widowed women from Timbuktu

were educated as solar engineers in India. Through them the whole town could be provided with solar energy.

He asked the group to reflect on the fact that within the complex situations that we work with is no one right answer, but many possibilities.

a. what is your action?
b. what are your strategy options?
c. issue of power- how to shift the balance?

Reactions to the film were:

- This is clearly about shifting power, they chose deliberately to work with women as agents of change.
- If it works there, can we replicate it? The idea of educating solar entrepreneurs is universally applicable but needs to be customized to an environment.

Alejandro explained that there are three points of intervention in entrepreneurship:
1. The entrepreneur.
2. The business model, the idea.
3. The environmental conditions and context.

The group discussed about the definition of social enterprise, which was to be considered: tackling a social issue in a business-like manner. Thereafter, the issue of grants came up. Should the grant component be reduced in social enterprise? It was argued that it is a continuous challenge in finding the balance between social and financial. An enterprise needs to be financially sustainable (for-profit). At the same time impact should be more then financial profit: social impact. Either economics or and NGO mindset often take over. Finding that balance is the major challenge.

Alejandro reacted that there is ample evidence that the aid industry kills markets and enterprise. There is a use for grant funding as an investment. Social entrepreneurship can be seen as a hybrid model between commercial and non-commercial. Some start of as NGO and morph into a business or the other way around. It is interesting to find out how grant money can be used to kick start markets. Putting in place market infrastructures with grants can help.

The group reacted that the issue is: what is the basic principle on which you are running the system? Sometimes the grant becomes the driver. Another question put forward regarded who benefits from the system: the entrepreneurs, the community, the company that invented the model? Who plays the cards?

This raised another question: what is the need of the community, do they benefit? It is legitimate that as a seller you make money. But it is also very important that the community really benefits from the system. It becomes clear from the different examples that the 'customers' are better off. By using biofuel for example money can be saved that would otherwise be spent on kerosene. And time is saved because people don't have to go to town and stand in line to get kerosene.

The group also discussed whether a solution like this, top-down, external, can be seen as something negative. These technological solutions to a problem are brought from outside. But it was agreed upon that solutions like solar energy are not more external from the community then kerosene. It is a competition of market forces, not imposed, but

can be seen as an experiment in collaboration. An important addition made to this argument was: the market infrastructure is often not in place and imperfect, so you have to put a system in place before competition can be honest. You might not know if a village really wants solar energy, because most likely they do not know of it.

The point was made again that there are moral and ethical issues the moment you put grant money in it. The market will decide you will be successful, consumers will buy your product or not. If it is not relevant for them, they will not buy it. The dilemma of public agencies is: do we bet on a future winner or not. How do you make the value judgment? How do you negotiate these things from the aid or government perspective? It was argued that the mechanism is the market. supply and demand will meet. If you work grant based, the issue becomes more complex

The group discussed again what the boundaries are between a social business and a business. And what is the role of the government: guardian of the public good? Or is there a social contract of accountability?
The market may be the mechanism, but there is too much market failure! We have to deal with that.
What are the different roles in doing so? That is the core issue.

How do social entrepreneurs deal with constraints in the market? Social entrepreneurs address market failure. Role of entrepreneurs is to mobilize actors to support a new approach, create the awareness campaign. Entrepreneurs do not save the world, they have to create an enabling environment. They need support of institutions for a healthy market to emerge.

The example of a rocket stove was discussed: how to scale up? It is about the barriers, look at them, break down the barriers. Need to make the product meaningful for the local situation.

The discussion went back again to the need of the community. The example was given that every village in Africa has 5 kinds of beer and coca cola and mobile phones. We do not question whether there was a need for that! These examples show that it is possible to scale in a few years! What is sparked there? Scaling was based on both a real need and a commercial campaign. Important is that products are often seen as a status model as well. We have to learn from these marketing successes. One of the barriers is that people don't know of the products. There is also a degree of politics, they are intermediaries, create momentum in a parliament as well.

The group discussed what strategic options, leverage and influence points are. There is no blueprint, there are contexts in which needs to be explored: who do we get on board? who do we ignore? Alejandro explained that at Volans they do practical applications and draw lessons learned from it. They do not want to create theories. Energy and an entrepreneurial spirit are important. But also people with lots of energy fail.

The group discussed the issues around social entrepreneurship and aid. Not everyone has to become an entrepreneur. 'Everyone a change maker' means everyone has his own place in society. Entrepreneurs take a lot of risks, that is interesting. Others can learn from that and try to support it. The challenge is to not create environments that are static itself, but entrepreneurial as well. It is uncommon that system itself is organic. The challenge is to not create the full system beforehand. Who would allow that in the aid

sector? Can we deal with the idea: 'we do not know what will happen after the first 6 months'. A system needs to be a collection of relationships that evolves, not an institutionalized system. The idea of social impact is leading, how you get there is a journey and can not be completely planned.

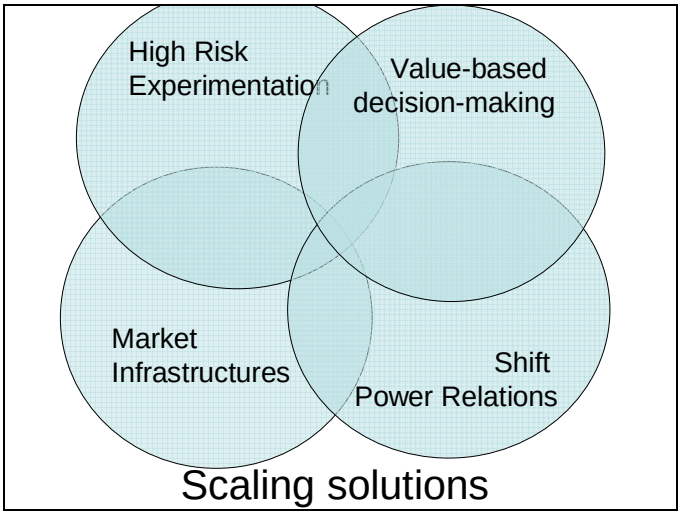
Wrap up comments:

- cross the institutional barriers.
- there is no right answer. the conversation is important
- you do make choices all along the way. be explicit about the value driven process. why is the business idea valuable? take it out of value neutral environment
- experimentation, not do the right thing but try out different ways. flexible
- dynamic! non stop case studies. what works in what context? understand dynamics
- gender and power issue

Insightful messages from the workshop for the plenary:

1. the idea/concept of social entrepreneurs being in the frontier, experimenting and addressing market failures (dynamic, high risk, experimenting)
2. issue of scaling up models not being value neutral. almost political: I want to back/support this.
3. market failure. if you want things to scale, you need to grapple with the environment. that requires political will
4. power shift on the community level. how can the models create change there?

What does it mean for aid? Development agencies can create space for safe fail environments. Experiment within the aid system.



3.8. Dave Snowden on the Cynefin Framework and Sense-making

Background

Key topics:
- The Cynefin framework & strategic sense-making
- Measuring impact through narrative

The workshop will elaborated on Dave Snowden's keynote by introducing the Cynefin framework for sense-making, elaborating on the article *A Leaders Guide to Decision Making* which won the Academy of Management best practitioner award for organisational development.

Participants were introduced to workshop techniques designed on complexity principles, these include *ritual dissent* and *the future backwards*. Methods used in the workshop are part of the open source library of material which has been created by Cognitive Edge.

Workshop process

In this workshop the Cynefin framework was explained briefly and a short interactive exercise was done by the participants, to introduce them with workshop techniques designed on complexity principles, more specifically the technique of 'ritual dissent'. The workshop is concluded with some situations where micro narratives were used, and people were able to ask clarifying questions.

There are three types of systems:

- **Ordered**: *system* constrains *agents*, reductionism & rules, deterministic, observer independence
- **Chaotic**: *agents* unconstrained & independent of each other, studied through statistics & probability
- **Complex**: *system* lightly constrains *agents*, *agents* modify *system* by their interaction with it and each other, and they ***co-evolve*** (irreversibility).

Constraint is an important notion in this workshop. Next the Cynefin framework was explained. The Cynefin framework is a model used to describe problems, situations and systems. The model provides a taxonomy that guides what sort of explanations and/or solutions may apply. Cynefin is a Welsh word, which is commonly translated into English as 'habitat' or 'place', although that doesn't cover it completely.

S = Sense
C = Categorize
R = Respond
A = Analyze
P = Probe

In reality, most of the situations and problems are either complicated or complex. If they are complicated; analyze. If they are complex; probe. Mr. Snowden gave the room the assignment to divide in four groups, to experience the framework themselves. In each domain one of the groups own practical problems/issues were placed, distilled from the experiences of the group members. Then, each group had to divide into the four domains using one of the issues raised by the group. The people that choose the simple domain all had to form a new group, and likewise for the people in the complicated, complex or chaotic domain. The groups discussed their issues in the new group.

In this way, mar. Snowden explains, the framework is defined from people's own experiences, instead of for example management findings that are commonly based on data of a number of US manufacturing firms. Furthermore, in this way the data precedes the framework, instead of the other way around.

Workshop technique *ritual dissent*

Ritual dissent is a workshop method designed to test and enhance proposals, stories, ideas or whatever by subjecting them to ritualised dissent (challenge) or assent (positive alternatives). In all cases it is a forced listening technique, not a dialogue or discourse. It can be used on its own, or linked to Story Construction, social construction of the Cynefin framework and a broad range of methods. The basic approach involves a spokesperson presenting a series of ideas to a group who receives them in silence. The spokesperson then turns their chair, so that their back is to the audience and listens in silence while the group either attack (dissent) or provide alternative proposals (assent). The ritual of not facing the audience de-personalizes the process and the group setting (others will be subject to the same process) means that the attack or alternative are not personal, but supportive. Sitting in silence without eye contact increases the capability of listening. Overall plans that emerge from the process are more resilient than consensus based techniques. (taken from www.cognitive-edge.com, visited December 1, 2009).

The room (20 people) was divided in four groups. Each group had to choose one idea or proposal, preferably related to their field of work, that belonged to the complex domain within the Cynefin framework. Because the strategy in this domain is P-S-R (probe; sense, respond), a safe-fail method had to be designed for the selected problem. Only ten minutes were given to the groups to select and design this 'safe-fail' experiment in a complex environment. One spokesperson was chosen in each group that had to present their groups idea to another group in three minutes, without interaction. When the three minutes had passed, the spokesperson had to sit down with his back to the group, and listen to the 'dissent' of the group. The assignment for the receiving groups was to do a 'savage attempt to destroy the idea!' After some hesitation, the groups were able to be critical in a very blunt way. After the commentary, the spokespersons returned to their groups, and reported their findings.

Making use of this workshop technique, organisations, firms and ministries have been able to generate a concrete set of projects that were thoroughly criticized and iterated in only two days. By going through several (4 or 5) rounds of criticism, the experiments are challenged by many people within the organisation, resulting in improvement of the experiments or simply the making of new ones, which then are challenged again. Where traditional trainings send groups in different workshops, where at most the different groups can share their experiences at the end of the day, the ritual dissent approach engages the whole group, while increasing the critical assessment and feasibility of the output already in an early stage.

Micro narratives

One example that was dealt with in the workshop, was the museum where micro narratives were used to measure and monitor objectives. One objective was that museum employees should treat children at an appropriate level. After a museum visit and tour by one of the employees, the children were asked to write two short stories: one for their parents saying why they wouldn't ever want to go to this museum again, and one for their

best friend saying why they would definitely want to go to the museum again next Saturday. Besides giving the story (which can be as short or long as desired), the children had to score on scales with different topics, e.g. 'staff patronize children' on the one hand, and 'staff is too child like and pathetic' on the other. Extremes are chosen, to prevent the easy answer. This 'indexing' or 'signifying' gives meaning to the stories of the children. The data this method generates is both qualitative and quantitative, and using software the outcomes can be easily plotted, for every day use, but can also be used to discover trends and correlations. Furthermore, employees were able to get very good feedback, increasing their learning and performance (in this particular case, employees were allowed to view results two weeks before management would).

The micro narratives have also been used in a hospital, where often a lot of targets and key performance indicators exist. The problem is often that the monitoring of these targets needs personnel as well, and the targets are often 'hard', neglecting the obvious need for qualitative measures for a health service provider. The micro narratives recorded of patients and relatives, gives a lot of insight into the direct impact of the hospital practice. Patients even contributed to the hygiene control in the hospital, because they had the time to see things the nurses might have overlooked, while they had been given a tool to mention this. At the same time, nurses, interns and residents were given honest feedback of the patients and relatives and they could see the direct impact of their behavior. In short: a perfect example where micro narratives allowed for impact measurement as well as knowledge distribution & learning.

More info on the Cynefin framework:
http://www.cognitive-edge.com/
For the article of Dave Snowden and Mary Boone, "Any leader's framework for decision making," published in the Harvard Business Review: http://harvardbusiness.org/product/a-leader-s-framework-for-decision-making-hbr-org/an/R0711C-PDF-ENG
(Selected as the 2007 Best Practitioner-Oriented Paper in Organizational Behavior by the Organizational Behavior Division of the Academy of Management, and according to Dave Snowden one of the 'easier'-to-understand articles he has (co-)written on the topic).

3.9. Discussing the concepts and options

Strategic insights from workshops Monday 30 November.

Visualizations

Appealing aspects:
- Offers different scientific methods (more scientific than snowball sampling)
- Mapping helps you if you want to change a system, e.g. on which nodes do you want to focus
- Gives insight in understandable way for the stakeholders to see their system

Comments
- Visualizations are often quite static
- Difficult to differentiate between personal and organizational connections

Suggestion:

- Organize courses/ follow courses on these methodologies (in real life situations)

Strategic thinking

Appealing:

- Strategy as co-evolution
    - Learn as rapid as possible
    - Learning is not so easy
    - Learning is continuous; strategy never stops
    - How do you know learning is improving?
- People are lazy in thinking in scenarios; need of people who think differently ◊ be open and show tolerance for "other" ideas
- Human selection environments do not take the natural boundaries sufficiently into account, through which natural resources are not used in a sustainable way.

Challenged:

- Tension between short-term life cycle of coalition government and long-term strategic thinking (does this make sense at all?)
- Politics is a continuous campaign; strategizing never stops

Science, complexity & innovation

Appealing

- 'Innovations' do not consist of technical devices only but of new 'hardware, software and orgware' at multiple levels
- Innovation happens in societal networks
- Complexity: role of science is NOT to bring it under control

Issues

- Engage with whom? Questions and problems are not neutral
- Researcher – facilitator: legitimacy and capacity issues
- Can science find leverages for tipping points
- Motivation – to engage with the right questions + taking responsibility
- Worms-eye-view, people are adapting to change already
- Research is one component in the change process

Theories of change

What appeals to people?

- Complexity thinking helps to formulate alternative way of looking at development
- There is a level of urgency –this can help us in a break through
- Thinking through the ToC helps us to think through complexity

What appears to be opposed / challenged / critiqued?

- Are we not always dealing with the complex? Forget about simple-complicated-complex…
- Optimism versus pessimism re potential for ToC of complexity

- The importance of cooperation between people, organizations etc. that is the most difficult to deal with and we don't know how.
- What is managing complexity? Maybe recognize complexity and address bits of it?

Suggestions/questions:

- What are we going to stop doing? The train keeps going whether its effective or not.
- Clarifying our role (North) Should we intervene? Necessity of our ToC?
- Exchanging experiences on using 'tools' to deal with ToC

Complexity leadership

- Transparency, legitimacy, accountability, democracy & emergent change and adaptive networks
- Formal & informal networks
- Dealing with tensions between dominant governance paradigms (Control & NPM) and complexity leadership
- Time scales (climate change vs political terms of office)
- Citizens long for certainty, politicians promise – so why change?
- Dictator as sense-maker (I hope it is my dictator)

Feedback from the small group discussions, including comments and pressing issues:

- "Let's see what emerges, there is potential. At the same time, engage in the enthusiasm of people. it won't do to wait for what emerges because what you're waiting for might not always emerge."
- We need to investigate how aid may disturb social entrepreneurship.
- How do theories of change relate to complexity thinking? → The setting of a theory of change is of high complexity.
- Legitimacy: are you legitimate to intervene? Might mapping the fitness landscape, to find key points of change, help at finding our role?
- How does it work when in complexity thinking you need to distinguish clearly between causality and correlation? Is there in fact any cause and effect at all? Or do we have to let go of that idea?
- Some worried if the sector learns enough from its experience. Impact needs to be defined. Can we learn more about our impact with the methodology of collecting micronarratives? We are so far removed, there are many intermediate levels before we reach the people that can give us the micronarratives.
- As development organisations and in development programs, we are used to doing everything. We're like the guy on the train: we drive it, we sell the tickets, we control the tickets, etc. We implement, learn, assess impact, understand

political economy of the environment. Do we have to be more discriminate in how we do our work?

- Is everything complex and can we do anything at all if it is? D. Snowden's reaction: Human beings have learned how to impose constraints in systems. You start with things as they are and you evolve them, moving forward. The order we can bring into complex systems is in creating boundaries and attractors. Then we see new patterns emerge. You can have an effect. You do things because you can see what the effect is. Local communities should do the experiments.
- A reaction to this: a lot of development organisations would be reluctant to let the people they work for, make the decisions.

4. The challenges

4.1. Invited reflections

The conference asked three participants to present reflections during the morning session of the second day of the conference.

By Tricia Ward (IIDRC Evaluation Unit; www.idrc.ca)

At IDRC, some elements of complexity thinking are being taken up that resonate and that can be tried out. IDRC is looking at how to apply certain elements of complexity thinking in monitoring: like feedback loops, and using narratives to increase understanding of outcomes. In program reviews, IDRC asks to map out strategic choices and the evidence that was used to make those choices. Sometimes sticking to a predefined plan can be a waste of time. Evaluation processes can make clear what was kept in the plan and what was taken out, and why. This makes strategic choices more appropriate. Outcome mapping has proven useful to IDRC for some programs aimed at social change. In outcome mapping, IDRC looks for early indications that goals are being achieved. Evaluating programs with predefined plans have to incorporate more accountability for learning. Micro narratives (keynote Dave Snowden, day 1) seem appropriate and the graphics visualize what's sometimes hard to see otherwise. The presentation on scaling raised the point that too often, we are focused on replication in scaling up impact evaluation results. Other frameworks have to be used because replication doesn't work.

By Alan Fowler (*ISS/Erasmus University)*

Alan's reflections on complexity cover three areas: roots and origins; drivers, and application. Roots and origins of human beings are very important: how do human beings think, which is rooted in evolutionary processes during long time frames. We don't like disorder, we prefer not to be anxious. We are more afraid to loose what we have than we are interested in what we could gain. People learn more from failure than from success. Symmetries play out on different time frames. What time frame is meaningful in terms of processes? Complexity thinking is about uncertainty. Human beings don't like uncertainty. We try to create certainty to prevent risk.
Drivers: in complex systems, look at what are the drivers, what are the energy sources?
Application: the development sector wants predictions. How can we sell what we do if it is uncertain? Politicians train on promising certainty. Promise of certainty attracts power.
How can complexity lenses help in practice? Readings, Boundaries, Probes and Barriers:

- Readings: A complexity lense in the context analysis may help us better read a situation.
- Boundaries: you have to set them explicitly. They might come implicitly depending on what probe you apply.
- Probes: what are probes that are meaningful for the people and situations they are in? Think about the notion of measures of the measured rather than measures of the measurers.
- Barriers: there are two sorts. Our own mindset is a barrier. Western cultural upbringing, the political economy in which we function. Our own limitations, predispositions and our own wish to banish ambiguity are barriers. And political

economy, funded by states, with political cycles, are difficult to break free from. The implications of breaking free are daunting. So it is not a question of ignorance, because we don't know what comes out of that pandora's box. We have to be prepared to cope with a degree of discomfort if we want to make a move in the direction that complexity shows us.

By Frans Bieckmann (The Broker)

The Broker is a bimonthly magazine on globalization and development. www.thebrokeronline.eu . Bieckmann invites the participants to contribute to the conference blog and further discuss complexity there.
Bieckmann distills the big question he has about the complexity theme: what can we do to still intervene in complex situations? If we have to rely less on planning, what comes in place? Taking away barriers and creating enabling environments, and/or redefine interventions? What are practical, concrete next steps? Can we create tools to use these new insights?
Can you still be guided by values and ideals? Complexity thinking might mean you stop imposing your own values and ideals. The Broker, being an intermediary between science and policy, translates academic discussions to practitioners and policy makers. So what does the idea of disintermediation mean for the role of The Broker? Social media tools, like blogs, wiki's, might help to get more multiple thoughts and visions of people in. Until now it is only experts, academics, that contribute, not as much visions of people at the local level are included. Bieckmann plans to blog about this, and participants are asked to answer his questions there.

After these three reflections, Jim Woodhill identified three broad questions to the participants to bear in mind during the second day of the conference:

- Key areas in which you see challenges in being strategic in the face of complexity;
- What have you heard that can hold potential for addressing these challenges?
- What are your recommendations?

4.2. John Young on Policy Entrepreneurship

John Young, M.B., is Director of Programmes on Research and Policy in Development at the Overseas Development Institute (ODI) (www.odi.org.uk).

Background Paper

Policy entrepreneurship: The role of research in development policy

The Overseas Development Institute (ODI) is the UK's leading Development Think Tank. It has been around for nearly 50 years doing policy research, advisory work and public affairs to promote better development policies and practices. It's a tricky balancing act trying to remain academically credible and perceived as independent, while actively seeking to promote policies and practice that we believe will reduce poverty. Over the last few years the Research and Policy in Development Programme (RAPID) has been studying the link between research and policy, and has developed a series of approaches and tools to help researchers to maximise the impact of their work.

It is well known that policy processes are not linear and logical, and while they have been described as chaotic that is not really the case, though they are certainly complex, multi-factorial and non-linear. RAPID's tools and approaches to help researchers to navigate this draw heavily on some of the principles from complexity science, in particular on issues around context sensitivity, interconnectedness, adaptive agents, feedback and emergence.

It is an iterative approach in which researchers are encouraged to work closely with policy makers to ensure they generate the evidence necessary to inform decisions and policies to address the most pressing development problems. Once there is convincing evidence to support a particular solution it is an eight step process:

- The first step is to **define a clear, overarching policy objective**. Influencing objectives need not be limited to written government policies they can include changing concepts, language, attitudes, procedures and behavoiur.
- The second step is to **map the policy context** around that policy issue and identify the key factors that may influence the policy process. Political factors are often very important, but social factors, policy procedures, communication and the perspectives and ambitions of other stakeholders are also important.
- The next step is to **identify the key influential stakeholders,** especially those who can help or obstruct the proposed policy.
- Once the target audience is decided, identify the changes needed among them if they are to support the desired policy outcome – in other words, **develop a theory of change**.
- Having identified the necessary behaviour changes, the next step is to **develop a strategy** to achieve the milestone changes in the process. Sometimes it is not possible to influence actors directly, and it is necessary to target others who can influence them. This might mean rethinking the priority stakeholders.
- The sixth step is to **consider the competencies required to operationalise the strategy**. Competence is an evolving set of systems, processes and skills that enables actors to make the right decisions and act accordingly.
- The information gathered up to this point can then be used to **establish an action plan** for meeting the desired policy objective.
- The final step is to **develop a monitoring and learning system**, not only to track progress, make any necessary adjustments and assess the effectiveness of the approach, but also to learn lessons for the future.

ODI's RAPID programme has produced a wide range of practical guidelines and toolkits, and has run training workshops and seminars for a wide range of researchers seeking to maximise the impact of their work, and while attribution is a challenge, there is emerging evidence that they seem to work.

Presentation

With the Research and Policy in Development Programme (RAPID), ODI aims to position itself at the interface of research and policy development. The link between research and policy has been studied, and a series of approaches and tools have been developed to

help researchers to maximize the impact of their work. ODI aims to promote evidence-based development of policy & practice, through research, advice, public affairs and capacity-building. Therefore, ODI works with researchers, policy makers, parlementarians, and southern think thanks.

It is well known that policy processes are not linear and logical. There is not just one simple process of problem identification, followed by the development of research, and research based policies, which are evaluated in the end. While policy processes have been described as chaotic, that is also not really the case, though, in practice, they are certainly complex, multi-factoral and non-linear. Instead of a linear process, policy cycles rather emerge, where different processes can take place simultaneously, and where a diverse range of actors influences both policy making stages as well as each other. As a result, policy processes are never static, but ever in an on-going process of change.

RAPID's tools and approaches draw heavily on some of the principles from complexity science, in particular on issues around context sensitivity, interconnectedness, adaptive agents, feedback and emergence. The emergence of PRSPs in 1999 can be seen as illustration how different processes coming together can lead to win-win situations, which enable policy breakthroughs. In the case of the PRSP, among others, the issues of accountability, the inclusion of a poverty focus, and the linkages with the development of national plans in Uganda were crucial. Besides, in relation to the issue of chronic poverty, the case of Uganda also illustrates the limited role of research based evidence in policy making.

In addition to the limited options of creating research based evidence, Young also considers policy makers to be practically incapable of using research-based evidence.

The challenges of policy makers can be seen as the so-called '5Ss'.

1. **Speed**: e.g. policies should be developed quickly
2. **Superficiality**: e.g. limited research teams
3. **Spin**: e.g. policy makers cannot change their mind too many times
4. **Secret**: e.g. policies often (have to be) develop(ed) secretly within governments
5. **Scientific ignorance**: e.g. few policy makers are scientifically trained

In addition, many other factors impact on the interface between research and policy making, ranging from experiences and resources to pressure groups and traditions. The matter is even more complex, as researchers and policy makers tend to have very different understandings of the concept of 'evidence'.

Researchers' Evidence	**Policy Makers' Evidence**
'Scientific' in the sense of context free	Colloquial (contextual)
Proven empirically	Anything that seems reasonable
Theoretically driven	Policy relevant
As long as it takes	Timely
Caveats and qualifications	Clear message

At the same time, ODI recognizes examples where research is successful in making policies more effective. The TEHIP project in Tanzania, is seen as such example, where successes in the health sector can be attributed to the development of the right kind of

research at the right time. By adapting national policy by means of research to the specific context of certain districts, infant mortality was drastically reduced.

In response to the complexity of making policy making more evidence based, ODI came up with RAPID as an iterative process. It is a process in which researchers are encouraged to work closely with policy makers to ensure they generate the evidence necessary to inform decisions and policies to address the most pressing development problems.

Once there is convincing evidence to support a particular solution, ODI proposes an eight step process.

1. Define a clear policy objective

For Young, the first step is mainly about how ideas emerge. The definition of a clear, overarching policy objective can be focused on changes in the attitudes, procedures, and behavior of policy implementers. Changes at all those levels are required for achieving real changes in the content of policies.

2. Understand the context:

As a second step, the policy context needs to be mapped around the selected policy issue. Key factors need to be identified which might influence the policy process. This step is thus about external influences, the broader political context, but also about the evidence itself, and linkages between policy and research communities. In order to get insight in these real life processes, many sets of questions should be dealt with, ranging from social and cultural factors, policy procedures to communication issues and the views of different stakeholders.

> *External influences:* This issue deals with socio-economic and cultural influences, donor policies, etc. Who are the key actors? What is their agenda? How do they influence the political context?
>
> *The political context:* this topic deals among others with political and economic structures/processes, the issue of culture, institutional pressures, and the kind of change (radical vs incremental). This means, the political interest in change, and the political room for manoevre should be addressed.
>
> *Evidence:* Concerning evidence, the following issues are important: first of all the existence of any evidence. Besides, it is about the relevance and credibility of evidence, the degree the wisdom challenges received wisdom, the research approaches and methodology used, the simplicity of the message and the need or re-packaging, etc.
>
> *Links between policy and research communities:* This topic is mainly about networks, relationships, power, competing discourses, trust, knowledge, etc. Specific questions on the issue are among others: How best to transfer information? and What is the role of the media?

3. Identify the key influential actors

Once more insight is generated in the context of the policy issue, the key influential stakeholders, involved in this particular policy process, need to be identified. An alignment

interest influence matrix (AIIM) can be used for this. Actors are positioned in this matrix, by their interest in the topic, and their alignment on the issue. Therefore, the matrix is a useful tool to get insight in which actors agree with you and who shares the same interests. Depending on their position in the matrix, different strategies might be useful. While partnerships are a good option in case of a shared interest and strong alignment, a strategy to challenge the ideas of the other might be more advisable for instance, in case of a shared interest but different views.

4. Develop a theory of change

The fourth step is reflecting on what you want these key actors to do. This step is inspired by the challenge of safeguarding and promoting impact, when your own project team decreases its involvement. If your own work on the issue goes down, it is important to keep others enthusiast, so they continue working on the issue and try to create impact. Behavioral changes can thus be necessary at this stage.

5. Develop a strategy

Keeping in mind positive and negative forces, this step is about assessing your ability as an organization to influence these specific forces, and to ultimately make change happen. Sometimes it is not possible to influence actors directly, and it is necessary to target others, who can influence them. Therefore, a rethinking of key stakeholders might be advisable in some cases.

6. Assess competencies

As a sixth step, an analysis should take place of the competencies of the organization to make this change happen. Which competencies are required to operationalise the proposed strategy?

7. Develop an action plan

An action plan needs to be developed to meet the desired policy objectives. Different stages of outcome mapping can take place in this step.

8. M&E & learning

The last step is about monitoring and evaluation to check whether you move in the right direction. In this step, learning is also important, as the findings of monitoring can be used to make necessary adjustments and lessons for the future can be generated.

In relation to the role of researchers in developing policy, Young talked about the different aspects of being a 'policy entrepreneur'. First of all, researchers need to be good story tellers, in order to bring their message across to policy makers. Besides, researchers should be networkers, who are out there, and work with policy makers. They need to be good engineers to know which research is needed, and to see which challenges one will be confronted with in the future. Finally, researchers should be fixers.

ODI is involved on the issue of groundwater in India. They investigate how to make use of research to address these groundwater problems. They analyze the broader context, try to identify the key actors, etc. In this specific case, the dominant discourse is about groundwater diminishing because of deforestation. However, by means of research, it became clear that in practice, deforestation is not the cause of diminishing groundwater. Instead, the pumping of the water by wealthy farmers, subsidized by the government seems a more direct cause of the problem. As new insights on the issue were generated, a different strategy emerged. In short, because of this evidence, no additional research

was required and more effective investments were made possible to improve the communication between stakeholders.

ODI offers practical tools from different disciplines for researchers to increase their ability to influence policies. A handbook for researchers is developed, called 'Tools for Policy Impact'. More information can be accessed at the ODI website, or by contacting John Young, j.young@odi.org.uk.

After the presentation, questions were among others raised about how to use the approach in practice, and about the underlying views of RAPID. Clarifications were asked about the eight steps as a rational answer to the complexity of policy making, and participants wondered whether Young considered policy (change) as a more spontaneous or introduced event.

Young clarified that with this presentation, he deliberately focused on a narrow dimension of the policy process, in terms of changes in which communities can behave, organize themselves, etc. The questions as a result, relate rather to the broader framework of the conference, he argued. However, the ideas presented were considered useful in the face of complexity, as also for issues of climate change for instance, one needs to understand the context of different actors with varying agenda's. Therefore, researchers should reflect which evidence they can produce for these actors to make better decisions, and how they can contribute to these broader changes.

One participant also mentioned the need to pay more attention to different kinds of power. Young agreed with this, as by understanding the nature of power, one can also become more aware, when power is for instance exercised in an invisible way. The issue of power also requires that one goes beyond the matrices and tools available. One needs to be clear about what one wants to achieve, to analyze the broader context, as well as the interests of key actors. As Young framed it, 'you can only catch a bus if you know the bus time table'.

Another participant also mentioned the importance of creating evidence, which makes people feel that they can be empowered as well as empower themselves in the decision making process. This goes beyond organizing workshops, etc. As people tend to have a lot of resistance at policy making level, it was argued that you need a mass of evidence from different places, contexts,… to really influence policy changes. Young acknowledged that gathering evidence is indeed a very long process. In order to generate evidence, which is effective in influencing policy, he suggested story telling as a useful tool, which is also used by ODI. What seems remarkable about this, is that stories often seem to be taken up as hard evidence. In Uganda for instance, researchers work very closely with policy makers on the issue of chronic poverty. Researchers were able to exercise influence by organizing an international conference with many high level people from different countries to impress the policy makers with stories from different countries. In this case, story telling was used in combination with statistics.

Finally, a participant asked whether Young had any experience with business strategies. Young answered negatively on this question.

4.3. Lisa Jordan on Global Governance, Global Citizens and Democracy

Lisa Jordan is executive director of the Bernard van Leer Foundation (http://www.bernardvanleer.org/).

Background Paper

Summary

Linear development frameworks have not withstood the test of time. To explain the interaction between nations, and address global inequities we need new models and a better understanding of the complexity of governance arrangements. Lisa Jordan will explore new global governance arrangements, the actions of global civil society and whether we can perceive global civil society as a democratic force. This analysis is offered as an alternative framework to development cooperation.

Article

Global civil society is the sphere of ideas, values, institutions, organizations, networks and individuals that are based upon civility, located between the family, the state and the market and operating beyond the confines of national societies, polities and economies. (Anheier 07) Earlier in this century academics questioned whether global civil society actually exists. Today, evidence of the density of association, a global social sphere, and the proliferation of forms of association has tamped down the question of whether global civil society exists. The question scholars tend to ask today is not about whether it exists, but what its legitimate role is.

Global civil society operates within the global political arena, an arena in which private and public actors are engaged in defining norms, policies, regulations and law that transcends national borders, - or in short creating global governance arrangements. While not a government, and certainly not a state, global governance arrangements are proliferating and are taking on government and state functions. Robert Keohane offers a simple definition to understand global governance. 'Governance can be defined as the making and implementation of rules, and the exercise of power, within a given domain of activity. 'Global governance' refers to rule making and power exercise at a global scale, but not necessarily by entities authorized by general agreement to act (Keohane 2003 in Held).'

Global civil society is organizing to influence those who are exercising power at a global scale. Through advocacy and protest actions, some activists within global civil society are assuming citizenship rights and responsibilities. Most of the actions and organizations can be characterized as an attempt to create new social contracts to reflect today's interconnected world and address the impact of globalization on social conditions. Scholte would also call them 'enactments of citizenship, that is, they are practices through which people claim rights and fulfill responsibilities as members of a given polity.' (Scholte forthcoming)

Whether pushing for a new global compact for the poor or on climate change, these activists recognize either intuitively or intentionally three realities: one, representative government at national level is not an effective arrangement to address social problems; two, representative governance arrangements do not naturally extend to the global arena; three, in order to resolve local problems sometimes people have to organize globally. As such, they also speak to a new maturity of global civil society, i.e. a society that is

defined in relation to governors whom collectively fulfill many functions that previously were undertaken predominantly at the national level.

Much of the literature on global civil society tracks the impacts of campaigns and civic actions taken up by networks and INGOs in the same way in which those campaigners declare victory or failure (see Florini, Clark). The impacts that matter are new public policies that further social justice, human rights and peace. These impacts are fantastic and speak to the value and need for a global civil society. I have steered away from the impacts as defined by issue domain (e.g. environment, rights, development and peace) to look at whether global civil society is a democratic force on global governance arrangements. Democracy is defined through three of its underlying principles: accountability, transparency and participation.

Transparency, participation and accountability are processes, necessary steps that civic associations must take in order to have the impact on the issues that they wish to influence. It is important to periodically look across the issue domains and assess where we are on the democracy and governance front so as to keep civic associations from spending very precious resources (human and capital) on the same issues over and over. Battles over participation, for example, are fought over and over again with each new institutional arrangement. Best practice is not carried from the human rights realm to the environmental policy realm to the trade realm etc. Civic associations following the World Summit on Information Society and the Millennium Summit fought the same battle for the right to participate in isolation from one another. Legal precedents are not recognized either by civil society or the Intergovernmental Organizations in large part because there are very few cross-issue fertilizers, i.e. people whom have set a precedent in one issue domain informing other emerging domains.

Transparency, participation and accountability outcomes should be aggregated to determine whether or not we have reached a democratic tipping point in global governance arrangements. That tipping point will be reached when governors crafting new institutional arrangements 1) understand themselves to be governors; 2) assume that they must make arrangements to consult and otherwise engage a public if only to solidify the legitimacy of the arrangement; 3) build in transparency provisions from the outset; and 4) create accountability mechanisms. In specific issue domains and with certain intergovernmental organizations some of these lessons have been well attended. Trade negotiators, for example, are acutely aware of their governing status. Some U.N. agencies have also realized that building their legitimacy with the public will help them in negotiations with specific states. That legitimacy rests upon accountability and transparency.

From new research we can see that global civil society is generally a positive force for democracy. We can see, first that global civil society has clarified for actors inside and out that the arrangement is first and foremost a *governance* arrangement - not a technical matter for bureaucrats to resolve. By clarifying the nature of these institutions, civil society actors create a sharp focus for demands of public accountability. For institutions such as the World Bank and the Asian Development Bank, power without accountability is more easily wielded the more they are seen as “banks”, and the less they are identified as “global governance institutions”.

Second, by challenging and clarifying the relationship between multiple governing authorities, global civil society has contributed to subsidiarity, the organizing principle that

matters ought to be handled by the smallest, lowest or least centralized competent authority.[7] Participatory democracy at the global level requires and can strengthen participatory democracy at the local and national levels. Examples include Mexico establishing the precedent of applying national freedom of information laws to the activities of international institutions. Officials of individual states of the United States of America act after learning that decisions made at the global level of the WTO were infringing on their own jurisdiction over procurement of food and other matters. They acted through Congress, who in turn influenced the decisions made at the level of the WTO. The final result was reinforced authority at the state level that ultimately led to WTO decisions that opened the door for community school systems to buy locally grown food. Independent multi-stakeholder entities formed at least in part through the influence of civil society efforts explicitly recognize the importance of locally driven participation in public policy decisions far upstream of end decisions. This is illustrated in the case of the introduction of multi-stakeholder dialogues on water and energy planning in Nigeria in response to recommendations of the World Commission on Dams. Perhaps the most telling example is states within the United States forcing the USTR to renegotiate many trade provisions within the WTO. When global arrangements get too far ahead of the populations served they are sometimes reeled back in through democratic means to account for their actions.

Third, a clear trend of appreciation for civic engagement in global governance is emerging. The G8 is now spending millions of dollars on public consultations after a very reluctant start to dialogue with civic associations. While civic associations are loath to lend legitimacy to that governance arrangement, by their very presence in a dialogue they do. This lesson is not lost on new arrangements now under negotiation on climate change, communicable disease, and the future of the internet. In all three cases, global civil society has a seat at the table.

Four, global civil society has also forced global institutions to develop accountability mechanisms that hint at the right to redress when basic human rights have been violated. The accountability trend is there. While the limitations of each of the mechanisms noted in the research is probably greater than the rights that they bring they are breakthroughs and should be noted as such. We cannot conclude that we are at the tipping point where global governance arrangements embed democratic principals in their operations. After all, we still have the BIS. But every where global civic associations choose to become engaged, it is likely that the governing arrangements will become more democratic.

Presentation

Global Governance and Global Civil Society and the Future of Democracy.

Lisa talked about how governance is structured and the role of global civil society.

To set the scene she started by giving some of the answers:

- Governance today is interspatial in its arrangements

[7] In international affairs, subsidiarity is presently best known as a fundamental principle of European Union law. According to this principle, the EU may only act (i.e. make laws) where member states agree that action of individual countries is insufficient. The principle was established in the 1992 Treaty of Maastricht, and is contained within the proposed new Treaty establishing a constitution for Europe. However, at the local level it was already a key element of the European Charter of Local Self-Government, an instrument of the Council of Europe promulgated in 1985 (see Article 4, Paragraph 3 of the Charter).

- Global civil society its job is to assume global citizenship in the global political arena
- To push citizenship rights both up and down this spatial arrangements that we are co-creating
- The impact of the global civil society over the past 10 years is to make this interspatial arrangements more democratic.

In 2000 she started working at the Ford Foundation were she was trying to strengthening the global civic society. Firstly she was explaining more about global governance and the context were she was working in while working for Ford Foundation.

She used the definition of Keohane (2003 in Held) to better understand what is global governance:

> *Global Governance refers to rule making and power exercise at global scale but not necessarily by entities authorized by general agreement to act.*

She explained this definition by using the example of a social movement which is deeply concerned about the internet cooperation ICANN (Internet Cooperation for Assigned Names and Numbers). This cooperation is structuring the internet but is not authorized on a global level to do so.

In 2000, there was a growing unregulated Global Market, Public Private Partnerships and the shrinking of sovereignty. Furthermore, she told about the decades of summits organised by the UN. (slide pp). Research from Italy showed that those summits catalysed the growth in global civil society. At that time you also had an increasing conspiracies between the rich and the poor and the triangle of power; market, civil society and state developing global public policy.
Within this emerging complexities we were co-creating with the huge amount of actors. But the big question was still; What is global civil society?

Today we have a definition (Anheier (2007)):

> *Global civil society is the sphere of ideas and values institutions, organisations, networks and individuals that are based upon sustainability located between the family the state and the market and operating beyond the confined national societies, polities and economies*

Lisa showed us all kind of civic associations that are active at the global civil society level. She explained that many are unaware of the divers group active at the global civil society level. She gave an example: "OECD and development agency will tell you Greenpeace and Oxfam are global civic associations and that is the beginning and the end of their definition. They define them literally as international NGOs". Her most favourite global civic association is the world social forum, because it combines all kinds of different civic society organisations together. To create space for them to network in new and creative ways.
This large number of organisations gives us evidence of a large social sphere. But what is the role of this global civic society? For her their role is to democratise the political arena. Not just at Global governance arrangements, but also regional level and local level so that people have more authority to express their needs and demands to hold the governors accountable. The collective actions of global civic society have influenced global governance both in the process of how decisions are made but also how institutional arrangements are set-up..

Lisa wanted to make global governance more accountable, transparent and participatory for the lives of the people they are influencing. To make IMF, WorldBank and WTO in particularly responsible for the lives they are changing with their decision making. She found a lot of global and regional association with this same goal (see slide 9/10). She funded those group as a founder and after 8 yours of funding she evaluated the outcome of supporting those associations. She came up with the following research questions:

- Is the global civic society a democratising force on global governance arrangements?
- Have we reached the democratising tipping point in global governance arrangements?

She was not looking at the social side of this story of networking and connecting people which are great results of the global civic associations but at what is happening in the way we are governing. And what is the power of the civic global society, by looking at how we are governed taking into account transparency, accountability and participation. She was assessing if global civil society has been effective in promoting democratising principles.
The research parameters were:
They looked at 23 global civic associations. They did a kind of self assessment by asking them to mention the 5 greatest outcomes of their work they have been undertaken in the global political arena. They got 104 outcomes. Those were analysed on accountability, transparency and participation dimensions. And she was looking at the democratising manifestations for each of the principles.
She was showing some of the outcomes and impacts (slide 12). The forcing down of Wolfowitz was a concrete example of concerted civic action.

Global civic society causes governance arrangements, which is very important when talking about development policy. Development policy is a technical thing and a linear process. Consequently, i.e. WTO, WB all become technical institutions, just carrying out technical reports to make the economy grow. She believes when you are going to call them governance arrangement it becomes much more difficult to take political decisions over the southern government and of the expense of the poor. She finds it very important that governors are going to think about themselves as governors. She believes many of them working in those big institutions don't understand the governing power that they hold. By clarifying the nature of those institutions the civic society actors create a very high demand for accountability. The second impact is about interspatial government arrangements. We are no longer governing at local, national, regional or global level, but independent from one and another. We have national laws used at international level and we have global laws impacting locally etc. We have a weaving process of government arrangements. Global civic society is contributing to subsidiearity.

There is a clear trend of civic society engagements in global governance arrangements. Global civic society did force global institutions to develop accountability mechanism were basic human rights have been violated She gave examples from the Asian Bank in Sri Lanka.

On the question if we are at a tipping point were global governing arrangement begin to embed democratising principles in their operations. She answered that there is some evidence that new government arrangements have more civic participation, but we are not at a tipping point yet. She has four points whether we are or not at this tipping point:
1.Do new government arrangements understand themselves as governors?

2.Do they assume that they must make arrangements to consult and otherwise engage the public if only to legitimacy of the arrangement?
3.Transparency issues
4.Accountability
We don't have this yet, which made her conclude that we are not at the tipping point, but civic society is acting as a democratic force.

Questions and answers:

Some believed that we reached the tipping point as interweaving takes place between all the civic society associations across nations. Others said we are not there yet, because we are lacking a vision.
Lisa answered on this last point by asking a question; Do we have a government about climate change. She answered: No, we don't have such a coherent visions. Those people dealing with this issue, don't see themselves as governors but they see themselves as activists. If they should understand themselves as citizens it would become much more interesting.

Some said that they became more aware of the importance of political will.

There was somebody missing a fourth element, besides accountability, transparency and participation, namely the Rule of law which is a huge driver for change. Lisa answered to this question that this is a really important part. And it is continuous process to build it in slowly.

More questions:
Are there are any no go terrains for civic society? She answered by posing the questions: Are there any associations dealing with Terrorism networks?

Wondering if we actually should undermine political systems or should we focus on those systems instead of creating parallel pathways? She doesn't believe that global governance arrangements is something different from making democracy work.

There was a point made about focussing on movements instead of civic organisations. Her reaction was that it is really difficult to focus on the global community, as those are not really organised. This is directly about the complexity theory. How do you get your hand around them. This global social sphere is a powerful something and needs more study.

Others reacted that they are positive about the global civic action but they missed in her story the corporate civic action. Cooperate is missing because she did not had the data. She was not funding those organisations.

Last remarks
Globalisation is not a good framework of understanding global civic society. Global governance is a much better framework for understanding action and reaction. Civil society is a product of globalisation. It shows our interconnectivity in our world.

The global food regime is exactly the point why I cannot decide that we are at the tipping point FAO had a big meeting in Rome to address the current food crisis but they did not include any civic association in that process at all.

4.4. Impromptu invited input by Dave Snowden

After the three reflections, Dave Snowden was asked to address the distinction between complicated and complex, and to talk about what to do when everything seems complex.
Dave Snowden started with the discussion of the political tactic of Swiftboating: to tell a deliberate lie to people who want to believe it, and then let it build until the pattern of belief becomes unstoppable. In the fitness landscapes (see Dave's presentation of the Keynote speech on Monday 30 November), the hollows represent gravity holes. Come close to a hole and you'll fall into it. Patterns of belief that have become unstoppable are the holes in the landscape.

There are gravity holes in human behavior as well. In a complex system, you may be able to predict when you are moving into one of those hollows, even if you can't predict where you go when you enter the hollow. So you can predict probability: whether moving into a different phase is possible, in a complex system.

To explain the difference between a complicated and a complex system, Snowden often uses the metaphors of the aircraft and the mayonnaise. You can take apart an aircraft and then put it back together again, even if it is a complicated system. With mayonnaise, once you have made it, you cannot take it apart anymore because the parts have changed into something else. So that is complex: it is irreversible.
In practice, problems usually can be broken down into complicated and complex aspects. It is not a matter of something being either complex or complicated. It is important to study the aspects of a problem to determine what aspects have stability.
Nobody says that we are obliged to allow things to self organise in a complex system. You have to manage it: you may constrain conditions. Then take a deductive approach: b can happen as a result of a.

In our current culture, inductive approaches are dominant. Because of the focus of inductive reasoning, we sometimes confuse between correlation and causation, which is a basic error. This happens in management theory of businesses, but has crossed over to the development community but comes from business management theory.
Next to deductive and inductive reasoning, there is abductive reasoning. In this approach, a pre hypothesis research experiment leads to testing hypotheses, while reducing the initial bias. As we have seen in the gorilla video clip, a hypothesis constrains what you actually see. Using abductive reasoning allows you to investigate the logic of a hunch. If you increase the number of people making the hunches, acting independently, you can get to an hypothesis that is objective.

To get back to the distinction of complicated versus complex systems: in a complicated system, deductive or inductive logic can be used. But in a complex system, it is better to use pre-hypothesis, abductive methods.

Current western thinking relies on normal or Gaussian distribution. In Gaussian distribution, the bell jar, outliers are discarded. But in complex systems, outlier events are low probability events that are more likely to have a high impact. This has a consequence

for policies. Systems have to be build that are resilient – flexible and able to be recovered – rather than robust. An example of this is when the New Orleans levies burst: the models didn't predict that this was likely to happen, however the impact was high. In these situations, it is important to manage rapid adjustment of the system to recover. Narrative research techniques can be used to capture and retain outlier events (stories that are signified/indexed in a different spot lie out). Capturing and retaining outlier events are critical to managing complexity.

Another way of looking at the distinction between complicated, complex and chaotic is to look at physics. Has everyone heard of latent heat? When water is heated up, it becomes gas. Cooled it becomes ice. The phase shift between those states takes in heat or loses heat without changing status. An amount of heat is thrown out without a change of state yet and creates physical change in the atmosphere.

Ordered systems are solid. Increase heat, and they become liquid. Containing liquids is more difficult, you need boundaries or barriers to manage the flow. Heat it up again, then it becomes gas, which is dissipative, it is everywhere. The latent heat is already present before the system changes dramatically; these are the weak signals that predict that something is up, before it happens. The Sensemaking methodology picks up on those weak signals that might predict change through micro narratives (fragments, short stories) that lie out of the average indexing (rating).

Dave Snowden's experience is that when he works with groups in workshops and uses the framework, nobody has any trouble in distinguishing their own situations into complicated and complex. More information on the workshops and the framework are on the Cognitive Edge website.

5. Applications and opportunities

The roundtables on the second day of the conference were meant to explore the challenges and opportunities for applying suggested options from the first part of the conference in the context of specific 'arenas of practice'.

5.1. Roundtable on Development Policy

Host: Dieuwke Klaver, Wageningen UR Centre for Development Innovation

Subject of the discussion is Development Policy and complexity. What are important issues regarding the issue of complexity and Development Policy, according to the participants?

The objective was to have an open discussion about complexity and Development Policy. Three questions were formulated to guide the discussion:

1. What are key challenges faced by Development Policy in the face of complexity
2. What are possible strategies, taking into account these challenges?
3. Can we come up with recommendations?

Development Policy is no longer a protected area. It is joined by other areas, e.g. security, trade and climate. Thus Development Policy has increasingly become an interrelated area of concern, with growing complexity.

Several times the question arises whether development assistance has failed. Looking at economic growth, the answer could be yes. Looking at the investment in human capacity and the shift in human capacity, the answer could be no. It depends on the perspective from which you look. Participants agree on this point: there is a lot of failure but there are also many people who have benefited. We should not think too much in black and white, or in good and bad.

Should we still talk about aid from north to south or is global development maybe a more relevant description? There is a global agenda. To deal with our own problems here (e.g. in the Netherlands) we depend on other countries. We need to reach out.

Donors and other actors in the field of Development Assistance tend to overestimate their own influence. There are strong systems present in the countries themselves. Our system tends to overestimate its own power. It is important to realize that we can also have an enormous influence in a negative way. There is concern that International Development undermines the capacity of the governments in developing countries.
→ To what extent are *we* the main creator of problems in developing countries?

People are struggling to deal with and to makes sense of these changes in the field of international development and development assistance. Can we use the tension in a positive and productive way to deal with the imbalances in power in the world? It seems like it's the right time.

The participants feel that the aid sector is coming close to a crises. We cannot steer or manage reality. This is a paradox for politicians. It is suggested that it is time for a more modest approach. This is an extremely difficult realization.

It is said that the government has lost control and keeps up a façade. NGO's are also part of a complex system and face the same restrictions as governments; do they critically reflect on our own role?

Policy used to be seen as control. The participants think that people do not believe this anymore themselves. The system is fake because we pretend to be in control. Wider public starts to see through this façade. In this way the whole legitimacy collapses.

We are in a planning mode, working according to a linear approach. We work with mechanisms of effectiveness and control. How to transform development assistance? Instead of a more flexible and dynamic approach, control is currently even strengthened due to the economic crisis. Maybe we should try to contribute instead of trying to control, for instance by taking away boundaries.

The need to feel good drives development assistance, also if we see it doesn't work well. The system of development assistance is likely to keep existing. Important questions are: Do we understand the system? Do we understand the forces? Can we come up with a strategic approach? Applying complexity theory can be useful.

New steps are needed to deal with global issues. An important step is acknowledgment. Things are as they are. Are people ready to accept that things are not working the way we want or thought? It is felt that not everybody is ready

Participants miss a sense of purpose and direction and a binding vision. It is essential to have a more open mind and realize we are very interdependent.

Some participants are convinced that there will be a new kind of paradigm, which will emerge. It is discussed how much we can and should try to steer or influence this process. There is no consensus on whether this process of change will be self organizing or whether we are able to influence and steer it. On the one hand it is believed that there is some sort of organization and a self organizing principle, which we need to understand better. On the other hand it is believed that this process of change is not self organizing, and we cannot wait for the change to come by itself.

RECOMMENDATIONS

- We should recognize and face that we have limited control. It is important to realize that we could be (the main) part of the problem. We should also recognize that we are only one actor in a complex network.
- Aspire to honesty in the debate. We should try to be honest, ask ourselves questions and reflect. What are we doing? Why are we successful? Why are we failing? What is our own role?
- It is important that people should come together to discuss these issues more in depth. Also donors should be present. Start the dialogue in different places.
- Try to organize visible events.
- The alternatives are not yet clear. We should try assemble reasonable alternatives: basics, examples, best practices, positive lessons. Collect approaches or elements of

approaches and bring them together in a digestible form. (It is believed that these approaches are ready to be found.)
- A group is needed to pull things together. Is there a group of people (among the participants of the Innovation Dialogue) interested in a follow up? A group of 10 to 15 people is suggested.

CONCLUSIONS

The key message of this dialogue:
- Give up the illusion of control and planning which is still dominant
- Collect (elements of) alternative approaches.
- Organize strategic open dialogues

5.2. Roundtable on Capacity Development

Host: Heather Baser (consultant)

Heather Baser is a consultant who is co-author of a major study by ECDPM on capacity development (www.ecdpm.org). She started off discussions by sharing some insights from EPCDM's capacity development work, in which she was involved.

Status of capacity development: Capacity development is a big issue internationally (It is an important part of for instance the Paris Agenda and the Accra Agenda for Action). There are many commitments on the issue. However, the term is very fuzzy, and different understandings exist. Different views range from Amartya Sen to the World Bank with its broader institutional focus. Because of this fuzziness, the concept has limited academic legitimacy and there is a lot of scepticism. Heather also recognizes a lot of talk about capacity development in general, while very little is been said about the concept of 'capacity' within 'capacity development'. Because of these issues, ECDPM aims to unpack the concept of capacity development.

According to ECDPM, one should make a division between different aspects of capacity development:

1. *individual competencies* (like skills, mindsets and motivations)
2. *collective capabilities* (what can groups do on day to day level of functioning, this level is thus about 'functionality')
3. *System capacity* as overall higher order ability f.e. sustainability, in other words, the ability to carry out a broader mandate.

Capacity development refers to a process of enhancing, improving, and unleashing capacity. It is about working together to achieve a higher level of change, and involves competencies and capabilities.

5 core capabilities are involved in the concept of capacity: *(same as ppt)*
- To commit and engage – empowerment, motivation, attitude, confidence
- To carry out technical, service delivery and logistical tasks –implement core functions
- To relate and attract – manage relation-ships, mobilise resources, network
- To adapt and self renew – learn, strategise, re-position, manage change

- To balance diversity and coherence – manage complexity and stability, control fragmentation

Related to Complexity and the design of capacity development strategies, Heather first of all made the remark that capacity is something which emerges, and that the process of capacity development cannot be controlled or identified in advance.

She presented three slides with different aspects of creating capacity development strategies (see ppt). These issues link to the key note speech of John Young, as both start from the context, try to understand it, aim to work with the present energy of the system, look at possibilities for change, check which competencies one needs, etcetera.

As we all have our theories of change, with different perceptions f.e. focus on market orientation, innovation,… it is important to understand these differences. Going beyond the differences and develop a shared understanding is necessary to work together and develop interventions.

Complexity and the design of CD strategies (2): additions to ppt

- Agreeing on most appropriate planning processes
- Staging: what comes first?
- Encouraging dynamic processes: How do you get groups working together
- Helping organizations to position themselves, how to define their roles,…
- Identify windows of opportunity
- Capacity development should be seen as on-going process! It happens in all countries, without clear beginning or end. This understanding contrasts with the project or programme approaches with clear boundaries of capacity development.
- Do not push the process too much, 'go slowly' and experiment
- Look for small interventions with potential large impact
- Capacity development requires long term engagement

5 challenges of capacity development emerge:

1. Pressure for tangible results in donor communities. ECDPM work focuses on intangible results, the so-called 'soft side'.
2. There are few methods for M&E for capacity development in the face of complexity
3. A lot of vested interest in linear approaches as many organizations have invested considerably in this
4. There is a high level of analysis needed on capacity development. This puts organizations under pressure. They need to go beyond a managing role.
5. Expanded level of efforts needed on the issue.

<u>Roundtable Reflections</u>

In short, six main discussion themes were raised:

1. Definition of capacity development
2. The issue of purpose
3. Limited ability to measure capacity development
4. Problematic aspects of the concept
5. Capacity development in the face of complexity
6. Room for innovation and experimentation needed

1. Definition of capacity development: endogenous ongoing process versus a clearly defined planned process

ICCO was involved in an evaluation of capacity development, in which many Dutch organizations were involved. ICCO tried to put more emphasis on complex adaptive systems in the evaluation, by using ECDPM framework. What fascinated Hettie Walters as a member of ICCO, is the difference between capacity development approaches, and the tension between them. On the one hand, there is an approach which considers capacity development as endogenous process, which takes place from itself, but which can be stimulated. On the other hand, some people/organizations view capacity development as an outcome of very well defined planning processes.

For Heather Baser, this tension is very recognizable. Opposite to the idea of planned processes of capacity development, is the notion that all individuals undergo change all the time, which turns capacity development into an ongoing process. Heather also realized that ECDPM started with a rather traditional framework on capacity development, by looking at the factors individually. Now, a transition is happening within ECDPM, as they try to move more in direction of complexity theory.

What is striking for Heather Baser, is that donor still use the concept of capacity development as a catch all term, a container word. There are limited attempts for clearer definitions. Also among the participants of this roundtable, there seems no clear shared understanding on the issue, as well as a demand for clearer communication on the issue. It was also believed that capacity development could be more robust with a clearer understanding, as this might reduce the resistance to change, which one encounters in for instance several government set ups.

In the face of complexity, there is a challenge to make people think more about the dynamics of change, and take the broader context into account. Field experience is valued so much, while academic thinking is not, though a complexity content does require this kind of thinking. One needs to analyze what individuals, groups, etcetera do, and how this comes together in a broader 'system'. Hettie (ICCO) is also very interested to see how complexity theory can help to go beyond limited definition of capacity development as a planned process. Even if not captured as capacity development, several participants agreed that this does not mean that capacity development does not happen.

2. The issue of purpose

Related to the issue of purpose, an extensive discussion emerged, whether one should see capacity development be seen as a means, an end, or both. Besides, some also argued that while some approach capacity development as objective, capacity development also takes place as side effect of other interventions/cooperation.

Heather Baser clarified that ECDPM considers capacity development as both a mean and end, but that this view is not that accepted in general. ECDPM sees capacity development as the ongoing ability as individuals/groups/… to continually adapt your capacity as system to the broader context. Many people however see it as a means to an end.

John Young questioned whether capacity development could be viewed independently of purpose. He argued that capacity development takes place as a process with the ultimate aim to achieve/ enhance the capacities of individuals/groups. As it aims to achieve this purpose, it should be seen as a purposeful intervention, he argued. This intervention could be either planned or emergent, as illustrated by the example of exchanges between traditional healers and development practitioners. In this case, the development practitioners used traditional healers to get access to the community, while the other way round, the healers also used the practitioners as a way to get access to medicines. This was presented as an example of not a planned but purposeful intervention. Others argued, that capacity development can also be something which you discover in retrospect, which is a much broader view than seeing it only as a purposeful process. In relation to Belgian ngo's and their partners, one participant referred to some interesting cases, where capacity development was never put forward as the goal of intervention but nevertheless took place. It could be seen as an import spin off of other processes. Just by providing reflection activities for instance, the means were created for organizations to sit together and to think about their approach, etcetera.

3. Limited ability to measure capacity development

There seems to be limited ability to measure capacity development, especially in relation to soft skills. In the context of the pressures to show tangible results, this raises monitoring and evaluation (M&E) challenges.

The limited measuring of capacity development can be seen as a barrier to approach capacity development in a complexity context. Especially regarding soft skills, it seems very hard to see the impact of capacity development. It very easily becomes so subjective. "Whose idea is better than someone else's?" "Snowden has a statistical basis with micro narratives but how many have the opportunity in practice to collect this kind of robust material?" "We do a lot but we don't know whether it sticks to the wall, whether we are really changing mindsets,…"

4. Problematic aspects of the concept

Related to the fuzziness of the concept of capacity development, participants also came up with problematic aspects of the concept. Among others a discussion evolved whether the concept is problematic as it can be seen as a western concept? Or is it mainly problematic as it tends to be seen as a (predetermined) outsider intervention?

One participant argued that the use of the concept in different processes like the PRSPs tend to turn the concept into a 'good process' in itself. However, it is important to have a clear view on what good development is, and in this respect, capacity development not just a good thing anymore. There are certain values underneath the concept, related to the change aimed at, and the point where one want to go to.

What seems surprising is that in the ECDPM case studies, the concept of capacity does not come a lot in these terms. However, ECDPM puts the experiences in this construct. As a reaction to this, someone argued: "What works best is when people have the opportunity to determine what they needed themselves."

For others, the problematic aspects of the concepts are not about the western nature or not. What makes the concept problematic is that people still tend to think about it as something which is done from the outside, by facilitators for other people. Instead, developing capacity can also take place on your own, an aspect which is often forgotten. In the practice of development cooperation, roles and responsibilities are often blurred. Not just one party is learning, and actors influence each other. Someone else also felt uncomfortable about viewing the concept from a North -South divide.

As a last remark, it was also argued that the focus on people, whose capacities would be developed, misses in the concept.

5. Capacity development in the face of complexity

Working in a complex context, implies that also capacity development is challenged by this context. Capacity development becomes questioned. One participant argued that we need to step back whether capacity development is always the good approach. It seems everyone jumps very easily on the concept, while it might not always the best strategy to deal with issues like for instance sexual reproductive rights.

While working with capacity development in this complex context, it was surprising that in relation to about 30 Belgian ngo's and their partners, the strategies often talked about complicated instead of complex processes. There often seems to be a focus on planning and technocratic approaches, which work limited if one goes beyond technical and operational issues.

In the transition from a systems based approach to complexity, participants felt challenged by the need for tools to work with a complexity approach. The complexity context challenges both instruments and procedures, and so, new solutions are needed. A wider context analysis is for instance needed, which pays considerable attention to how capacities have been developed over time in this context. How can you come in to strengthen this on-going process (if you have to intervene at all)? There is a need to go beyond the interventionist type of frameworks. In other words, one has to look at what is happening and try to build on the positive aspects.

The impact of complexity was illustrated by UNDP's cooperation with a specific Ministry of Finance. For 5 years, this cooperation seened clearly defined. However, when the financial crisis hit, it became clear how poorly scoped the cooperation was, as complexity issues were not taken into account. A system based approach was used instead of a complexity approach. Because of this different mindset, not enough attention was paid to factors like the dependence of this ministry on others and the limited macro finance capabilities. This case raised the following questions: Capacity for what? For whom? Why? Why do we focus on government counterparts? What is crucial in the broader context?

6. Room for innovation and experimentation

Very little experimentation seems to happen in partnerships on capacity development. Room for innovation and experimentation is needed with back up from donors. Participants would like to see more diversity in strategies, and hopefully, because of that, more strategies, which work. One participant wondered whether more experimentation is needed or whether there is a need to recognize what is already happening?

Other remarks

As capacity development is a new discipline, one should be careful to link the concept to existing models. One participant argued that one should be careful with preconceived ideas, like f.e. the 5 C – model, which is used by the paper Heather Baser provided.

One participant wondered whether capacity refreshers are needed, as certain developed capacities might fade away over time. There is the risk of capacity being developed over time, and going back in natural behavior before the process of capacity development. This especially relates to issues like assertiveness, leadership,…

In the conference, many tools and approaches have been discusses, which could be used more often and might provide new insights, f.e. the micro narratives. Besides, there seems a lot of enthusiasm of participants to try out these approaches and to be involved in a community of practice on this. Especially more appreciative methodologies catch the interest of participants.

There is a need of feedback loops, the creation of more regular and formal feedback processes. There is a need to go beyond individual processes, and to learn more about the role for external agents.

There seem to be many websites and portals on the issue already, but participants are especially looking for interactive platforms, where ideas,… can be shared. Capacity.org would be a relevant website for this.

5.3. Roundtable on Civic-driven Change

Host: Alan Fowler (ISS/Erasmus University)

Exploring Civic Driven Change and Complexity

The CDC initiative: 'To identify, debate and advance a story of change in societies stemming from peoples' actions as citizens'.
The initiative is a working process, which started out of frustration. A lot of Dutch co-funders were unhappy 3 years ago with way the government wanted to allocate finance, which is now called MFS1. The development aid framework was far to narrow on change processes. The organizations haven't been steering the debate with the government, only were responding to their story. We should come up with a civic story, a story of citizens, instead of the dominant story of market or states, which see citizens as consumers or voters.

It took a year. We invited ten people: academics, practitioners, activists. Different regions, disciplines, ideologies, gender balance. Open agenda, no log-framed deliverable.
It took a while for them to understand that there was no idea what we wanted. No consensus was required. Because consensus is false, it is not necessary to achieve. Instead, difference matters.
We wanted to see whether the initiative would still live, and it still does now.

This is only one of many CDC stories. Segments of different existing ideas are present in CDC, such as: Citizenship Matters, Civic Values are Vital, Language is Critical, Civic Agency is the Focus. It is about civic behaviour, values. Hence, there is a normative aspect. The P-words are so manipulated that do not mean anything. We use C-words rather than P-words, but we keep power..

The whole society can be seen as a political project. Citizenship contains all sectors. Citizenship is individual and collective simultaneously. CDC says everyone is working on a political project called society. This changes the debate from the sector debate. (You can work responsibly or irresponsibly in Shell or in World Bank). Civic agency is about exerting control over those who have power over our future.

Features of CDC

5. Is directed at the interface between citizen and (party) politics
6. Is sensitive to all forms of power
7. Operates within and across institutional boundaries. This is the non-sectoral approach
8. Questions divisions between public and private arenas, responsibilities
9. Is risk-sensitive

- to 'globalizing' trickle down of risk to those most vulnerable: economic growth is not the core issue
- to risk distribution in the promotion of change by 'external' actors' goals, values and principles

10. Seeks equity of political agency rather than equity of economic opportunity or incentives. Dominant market view is that people have equal economic incentives. But CDC says all people should have political equity (as well)
11. Premised on contention as well as collaboration. Being a partner with everyone and everywhere probably doesn't work.
12. Confronts uncivic agency wherever located
13. Relies on citizen self-organization with connectivity of the 'local' to gain scale and rebuild political systems. This deals with the question: How do you scale up?. Not just vertically. Connecting horizontally is an important way of scaling up (for example farmers from western cape with farmers of eastern cape in South Africa, or Obama who connected small groups with each other)

CDC and Power.
We give mandates to politicians because they promise certainty. Notion of certainty, uncertainty, order and disorder is important in complexity. Simple things tend to be more certain. Chaotic, complex things are uncertain.

Complexity = understanding uncertainty
Characteristics:

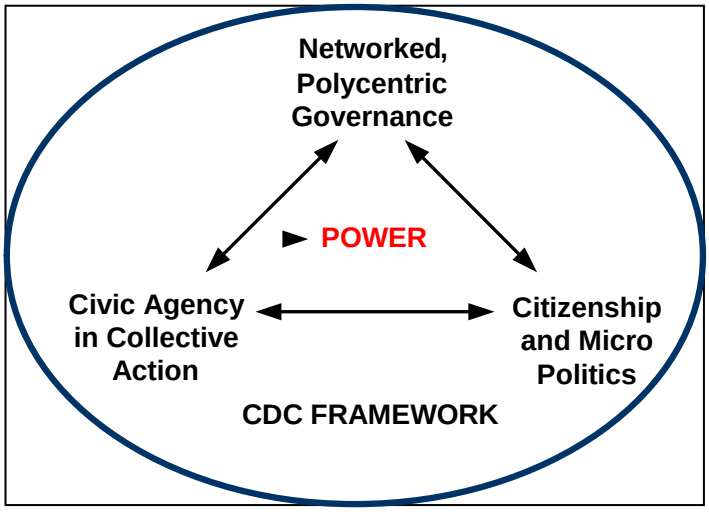
- Connected social processes
- Multiple agents. Citizens as agents with rights and obligations.

- Adaptive iterations/adaptations. Decisions never end and effects next decisions. (That is why prediction is so difficult)
- Feedback, patterns and emergence

Navigation:

- Boundaries
- Probes and attractors
- Micro-narratives
- ?

CDC and Complexity
'This model is sort of where we are now'.



CDC Framework:
There are many kinds of governance, not just one. There are more and more centres where things are governed = polycentric governance. Polycentric governance means also that policies are not always in harmony with each other.
CDC asks: on what moment people decide to do things collectively? Connect micro politics with collective action.

Power:
What power do people have within themselves; power with others; power to do things; and power over one/you. Power over you is the notion of *habitat* (Bourdieu). Pschyo-social when it is not enforced on you, but that derived from very early imprints; Power of which thoughts you can have; Power to make the rules; Physical Coercion.

Complexity:
Complexity is to look at the interaction between all those actors.
Using these various inputs: What are the drivers, connections, time frames? Who sets the boundaries? What attracts people to act collectively? What are the rules, what is the feedback in these mechanisms? Also look at micro narratives (like Snowden includes in Complexity).

This model leads to questions about the links of the different actors and the mechanisms involved:

- What is a trigger that moves an individual citizen into collective action? What are the impediments? What power stops that happening, and what power enables that to happen?
- What power mechanisms operate between collective action and governance? Is it civil disobedience, is it voting, participation? And what conditions?
- And which between governance and micro politics? What forms of governance? What micro politics form national politics or higher order politics?

Points of discussion:

- Micro-narratives are important. By interaction people take over ideas. Through

conversation and doing things together we can restructure relationships. Horizontal networking. Influence of cell phones and the internet.

- Does connecting horizontally happen spontaneously or do you need to do something?
- What is tipping point/threshold for citizens to take collective action. Is it a matter of numbers, or should micro narratives be similar enough? Fowler: number does not always matter (in village setting a number of 50 may result in major changes)
- Fowler: In complexity theory it is and and, not or. And you can explain only afterwards.
- Maybe there is a tipping point in repression: when it is on a certain point, it actually feeds contra feelings. (like US policy on terrorism now)
- Can this model helps to understand this process, instead of to predict?
- Fowler: Normally link between 'citizenship and micro politics' and 'networked, polycentric governance' is by elections. Elected democracy often does not work, politicians have their own interests. We should move to a participatory democracy and look at other methods than party politics. Party politics is out of date. States are not capable any more, because of market influence, globalization etc. Politicians have empty promises.
- How do governments make an analysis of how to control large numbers of people/demonstrators?
- In which stage do you connect bottom-up to government? Generally citizens make governments nervous.
- Role of middle class is critical for shifts. NGOs can play a big role.
- People should be in control of power. But how much blood will be spilled on the way?
- Netherlands: people do not know whom to vote for, and vote on the one who shouts loudest but does not offer solutions (party PVV). Have anger, but no remedy. People are fed up with the main parties, lack of awareness on democracy.
- Fowler: Should we have a normative approach? Should we talk about civility?

We would argue that all societies required some 'respect for difference and some concern for the whole' to be viable societies. These civilities are specific for this approach of CDC.

- Fowler: You can have these two conditions by fear, by dictatorship. But this is very costly. In all countries is tried to find maximum stability for minimum costs. That is how countries evolved and are still evolving.
- Although a repressive regime has lots of mismanagement, a unifying narrative of a common enemy can keep people together (Cuba for instance). Fowler: Any political party, any regime is predisposed to gain compliance by referring to an external threat rather than their own internal shortcomings. (US always did. US needed the Russians/communists to gain domestic control. Also depends on who controls the language of thought. US funded right wing think tanks to change the language of political discourse (the thought process). Solidarity for example does not exist in it).
- A civil society effort can be uncivic. (Minarets in Switzerland which are banned now is also uncivic action by civil society). In our view Geert Wilders (PVV) are uncivic, because he is intolerant, no respect for difference. You do not need to agree with everyone, but not denigrate others.
- Kind of relations across the world: 50 percent of relations is reciprocal; 15 percent are free riding/grabbing; 5 percent altruism; and cooperation 30 percent.

Key challenges:

- How to enlarge the respect for differences? Is there a way to get educated, disciplined in it? How can we use socio-psychology to manage changing values?
- Defining the boundaries of the whole is difficult. People see different wholes.
- Find the agreement/interface between disagreement. Accept other opinions to have more harmonic political life.
- Tale time frames into account
- Is there a way to increase number of catalysts, who can facilitate interaction/social networking? Intermediation, rather than translation. We don't need interpretive facilitating.

5.4. Roundtable on Sustainable Supply Chains

Host: Myrtille Danse, LEI, Wageningen UR (www.lei.wur.nl)

There exist different trends in the sustainable supply chain in the agro-sector (food chains). The trend which was emphasized is that there is currently too much certification . Different actors, like retail and purchasing offices have their own certification system which makes discussion about sustainable supply chains very complex. This trend leads to the emergence of new mechanisms to communicate, sustainability indicators, and quantifying behavior.

Myrtille Jansen demonstrates the hourglass model in which consumers are at the top, producers are at the bottom and retail and purchasing offices can be found at the bottleneck. Outside of the model, other actors like the government and civil society keep themselves busy with sustainability issues (climate change).
A constantly returning problem is that of the criteria (labels, certification) set to the producers. There is either a pull-effect or push-effect meaning that small-scaled farmers are either allowed entrance into sustainable supply chains or not. So it is important that producers are helped to meet the criteria. The question in this case though, is which labels and certification schemes should be used?
Another question that should be answered is how can lower income groups be supported to involve them in the sustainable supply chain.

In short the trends found from the brainstorm are the following:

1. Demand-driven
2. Sustainability, Competition factor.
3. Governmental mechanism
4. New markets-new rules.

Who is involved in the roundtable dialogue?

6 people are involved in the dialogue excluding the host Myrtille Jansen.

1)Dealing with multi-stakeholder processes, working for an advice office. Analyzing food chains for SNV.
Has trouble with the Battle of the Models.
Chain=institution, what are the norms and values?
Certain actors have the power.

2)Another working in promoting biological cotton in the outdoor sports sector. Goal is to have Europe used biological cotton within 12 years.

3)Someone from Capetown, South Africa working on multi-stakeholder processes. Involving stakeholders in chains. South Africa: few research done, while growing fast.

4)Other person working for a Belgian NGO, looking at food chains in particularly West-Africa. Feels that chains in Africa are often forgotten.

5)Next person tries to bring techniques together to produce sustainable tomatoes. How can we set up our own chain, what can you expect actors to do? Difficult to gain entrance in chain.

6)Deals with actor and stakeholder processes. Agripofocus (Uganda). How do you make sure that constraints are taken away so that small-scaled farmers gain entrance. How can the value chain be organized so that small-scaled farmers are involved.

Challenges:

- Battle of the Models
- Local Market Access + Development in Developing Countries
- Positioning Sustainability as a producer
- How to create hopeful livelihood opportunities for dispersed producer base dealing with massive control concentrations in market.
- Complex development leads to Complicated “chain”.
- High risk & uncertainty
- Ensuring producer-critical criteria are equally considered as consumer critical ones.
- How to make local food markets inclusive for small-scale farmers (production, transaction costs, quality)
- Lack of knowledge on sustainable issue.
- How to come to farmer friendly certification/communication systems.
- Strict quality criteria for production and consumer.
- Building a relationship between the producer and the consumer.
- Communication on indicators of sustainability.
- How to address change in consumer behavior (sales strategies): gap between what people say and do.

Questions raised & reflections:

-Is the hourglass model complex enough? Local markets are the complex systems since it is difficult to change them. The pressure they are getting due to criteria makes everything complex.

-Producers need to build up on their own livelihood which is another complex issue. How can you take care that they change the criteria. Link to mayonnaise rather than aircraft (Snowden).

-How can we make the sustainable supply chain a dominant paradigm?

-How can we set up a relationship between the consumers and producers. On the one hand, need to look at how consumer can be reached and how to change their behavior. On the other hand, producers; farmers need to have more friendly certification/communication systems.

-Are we talking about complex or complicated? Due to the fact that you implement sustainability, you make it complex.

-Is the sustainable supply chain, an aircraft or mayonnaise (Snowden)?
-What is the link with social entrepreneurship?
-Do we need to create a platform for dialogue or not?
-Is sustainability uniform or pluriform? How can you define the criteria?
-Are we talking about niche or mainstream?
-Does the disambling of chain lead to changes in the context and linkages?
-How can we create a mechanism that leads to sustainability in the chain?
-How can we deal with the reality of chains?
-How can one provide an enabling environment to make chain sustainable?
-The product is there but how can we bring it along the chain to the consumer? Do you do it with 100,000 micronarratives or do we have an alternative?
-Missing till now is that little is heard about taking action and providing solutions, emphasis is too much on analysis. Is it complex or not?
-How can you direct the system, through probes?
-How do you get agents of change in the direction of sustainability? First they need to accept that they are drivers of change and a governance sector. There needs to be more transparency and accountability in decision making. It needs to be recognized and made familiar that there is a governance structure.

-Returning Question: What is the role of governance in sustainable supply chains? Too much emphasis is put on the market.

-Does the internalization of external (planet and profit) cost lead to a reduction of the complexity in sustainable chains? Compare carbon poor tomatoes vs conventional tomatoes.

- Can the " Polluter pays principle" take away the complexity of the chain?

<u>Recommendations:</u>

-To actively stimulate value-driven organizations (government, civil society) in developing governance mechanisms that stimulate drivers of change to work towards more sustainable chains. Negotiation mechanisms and power relations need to be taken into account.
-No analysis, experiment as much as possible and define experiments to obtain experience with the hypothesis.
-Independently allow people to make the decision: Chaos and complexity solves by itself.
-Amplifying the probes: Coherence of a general idea.
-Reconsidering the market as a dominant system, intervention is needed. It would be important to oblige civic-driven partners to take their role in the sustainable supply chain.
-Learning between chains (different countries and products).
-Making values explicit. In the sustainable supply chain the value is high but the costs are also high. There could be more focus on imprinting at consumers. Most consumers see

the greater value of buying sustainable products, others do not. So it is necessary to fight against the prejudices/assumptions and replace them by positive values.
-To understand the effect of the internalization of PP(Power and People) costs in reducing complexity.
-Develop pilots on consumer behavior and how to influence this. Need for social psychology.
-Impact assessment of chain interventions at household/livelihood level. This could be possible through micro narratives.

5.5. Roundtable on Education for Sustainability

Host: Arjen Wals, professor of Education & Competence Studies of Wageningen UR (http://www.ecs.wur.nl/uk/).

This roundtable took the form of a brainstorming dialogue on ideas and practices around education, sustainability and complexity. The minutes try to capture the direction the dialogue took and to distill the key findings and conclusions.

Brainstorming

The session opened with the general question of what the topic "Education for Sustainability" triggered among the group of participants. The list below enumerates a number of questions, concepts and keywords that came up during this preliminary brainstorming exercise:

- local content/culture,
- participation in curricula development
- reflection
- ideas and how they change a person and the environment
- co-evolution
- sustainable impact
- Learning for what?
- the normative direction of learning
- capacity development
- formal and informal learning settings
- socially constructed knowledge
- thinking in boxes and thinking out of the box
- experimental learning in children
- Who is learning from whom?
- Best practices and learning from failure
- learning as never-ending process

Education for Sustainability and Complexity Thinking

The workshop progressed with a more focused dialogue on education for sustainability in a complex environment. These are some of the core issues and questions that were discussed.

1) A key concept in complexity thinking is the idea of experimental learning and the possibility of failure. As failure seems to be more acceptable with young people the question arose whether they should be the once applying complexity thinking in practice.
2) Learning is often focusing on best practices. However, people seem to learn more from what went wrong that from what went bad. A failure can become a best practice if you get the time to reflect on it and change your behavior according to what you have learned from your earlier mistakes.
3) Higher education does not teach sustainable values. Instead students are taught to seek careers in an intrinsically unsustainable economy. The system should help students to question the system and not become an extension of it.
4) Education FOR sustainability implies that we know what sustainability is. Sustainability is often treated as an emergent property you can work towards to. But it is an illusion to know whether we will really become sustainable. Sustainability can only further develop…
5) Can you really teach people (top-down) to lead their lives sustainably? On the one hand, this contradicts the notion of participation. Yet on the other hand, currently we are all taught to act, behave and live out lives in certain way. The current paradigm is to rely on consumerism and market ideology. Why should there not be a shift in educational systems towards teaching more sustainably minded life skills.

Key Issues: Resilience in the Face of Change

The group debate ended up centering on a number of key issues pertaining in particular to complex systems, fast changing environments and how to make education for sustainability possible:

- Anticipatory learning: complexity and uncertainty going hand in hand, learn to live and cope with uncertainty so that it doesn't paralyze you, anticipating change, how to be taught to be more resilient?
- The challenge is to be resilient and to develop in people a sense of flexibility to cope with change.
- Education and current disciplines is based on standard frameworks that guide you but make you blind to other issues and new ideas (the gorilla??).

Propositions to Foster Resilience in Complexity

The question was raised how to make people more resilient in complex environments and a fast changing world. Which qualities and competencies do you need to cope with complexity and to become tolerable to change (not to become paralyzed by change)? Resilience is important not only for individuals but also for communities. It is important that people and communities learn how to handle, navigate and understand complexity (or to drop and raise boundaries where needed). Two key concepts came up:

1. Gestaltungskompetenz: to think in a forward looking manner, working interdisciplinary, develop a sense of cooperation/collaborative learning, developing once participation potential, being able to feel empathy, sympathy and compassion.

2. Gestalt-Switching: put yourself in the position of others that have a different cultural background; trans-geographical shifts, trans-disciplinary shifts, trans-generational shift, trans-species, etc.

Additional Practical Implications

- Stimulate people to think in new patterns and to make connections.
- Look for diversity and the plurality of knowledge.
- Story-telling as an innovative approach to learning and knowledge sharing on sustainability. What does it mean for different people in different contexts?
- Allow for more reflection.
- Identify the barriers that hinder people to learn and to apply the learned lessons in practice.
- Learning is an ongoing process with no clear pre-defined end-product.
- Focus on building peoples' capacity to learn and apply the lessons.
- Look beyond the expected to see the unexpected.

5.6. Roundtable on Competing Claims over Natural Resources

Hosts: Cees Leeuwis (professor of Communication and Innovation Studies http://www.com.wur.nl/UK/), and Ken Giller (professor of Plant Production Systems Group http://www.pps.wur.nl/UK/) both at Wageningen UR.

The main questions that guided this discussion:

1. What do you consider to be the 3-4 key challenges in this particular 'arena of practice' as regard being strategic in the face of complexity?
2. What have you heard during these two days (or in another way) that you consider to hold potential for addressing such challenges? How would that enable to make a difference then?
3. What would be your 3-4 recommendations (indicating to which relevant actors, such as government donors. (i)NGOs, academia, policy makers, Southern partners etc) regarding what should be further explored or acted upon towards becoming more strategic in the face of complexity?

Part one: challenges

After a round of introduction, one of the hosts shortly kept an introduction to the subject of competing claims over natural resources:

Even though for many years they have discussed the idea of multifunctional land use, within the programme that they (the hosts: Ken Giller and Cees Leeuwis) started together with the University in southern Africa, the main issue is actually about competing over land use. The name of the programme is 'competing claims on natural resources'.

There are some strong global institutions (such as IMF, WTO and IMF) that have very strong influences downwards to the local level. These global forces constrain local innovations. These binding constraints come from national and global influences, and have to be taken away in order to increase local initiatives and innovation. Feedback is very poor upwards (from local to global). One of the solutions for this problem are the NGOs, which can operate in the middle fields (between local and global), even though they are not the final or ultimate solution.

If you want to be engaged on the local level, inevitably you will have to deal with these global forces. In the programme, one of the central questions is how to deal with these forces.

But every case is different. Global influences differ per situation, also in terms of competing on natural resources. How strong global influences are on a specific locality, differ per place.

Some of the external influences are no-go-areas. As a development worker/researcher you might be aware of the fact that these highly sensitive issues are there, but you might not be in a position to really mention them and somehow deal with them. Even as a researcher when you are dealing with such a sensitive topic, the legitimacy of your position might be questioned and come in danger.
In that case it might happen that you have to just take these as a given. This means that, in search for local solutions, you sometimes have to work within a given confinement. You have to find the boundaries within you are going to work.
Don't touch where it hurts.

A way to find out about these highly sensitive issues that play a role within communities and projects, is to make use of participatory planning in a project.
But one of the difficulties that can come up and was mentioned in the group, is the fact that local communities do not always immediately trust officials/people from the project. They will not immediately share their information with outsiders. They will question what will be done with the information.
Therefore it might be necessary to build a relationship with these communities.
But then there might be the danger after intensive involvement with local communities, that great expectations are created. One should prevent to create such expectations if they cannot be fulfilled on the longer term.

Some of these initiatives for local projects and programmes are externally driven, and the legitimacy of being there, might be questioned.
Before you start to intervene at the local level, one should question himself; under whose right are you there? Who are you to think you have to influence anything at the local level?

In the case of this university programme, they had been invited by local actors.
In this programme of competing claims, they have given the organisation in hand of local stakeholders. One of the interesting developments that already occurred during the process, was the role of students who became resource persons. They have been gathering data for some time, which turned out to be useful information for some of the actors involved. And therewith they created transparency. Through this transparency they have been able to influence processes.
Influencing through transparency.
It turned out in the project that the student researcher had their influence, just by gathering the data. People changed their behaviour. Students have information that local people can make use of. And through that information you can have influence.

BUT: People are very selective in what they want to say to whom. People use knowledge strategically.
Information can become a strategic good.
REMARK: Maybe we should talk about competing claims on *meaning* instead of on natural resources.

Through questioning people started to think and reflect; which can be a powerful force. To let people think about what you oppose. And also the fact that there are people who came from abroad, can put their living world in reflection.

Sometimes it happens that local people become aware of the fact that they have little capacity at higher level; they recognise the higher power. They want advice on what they should know and do, and how to work with these external influences.

Sometimes there are specific factors that play an important role but are no-go-areas. It might be helpful then to do an analysis to find out what is your room of manoeuvring; recognising the boundaries and therewith the confinement in which you will have to work. And then you can also seek for ways for how to make this room for manoeuvre bigger. What are the possibilities to break through specific limitations.
But of these highly sensitive issues might sometimes not be noticed by those who work and deal with them on a daily basis, and only outsiders are able to identify and reflect on them.

As a researcher you need to be aware of your role in the whole process. You are part of the game; through which you also exert influence on the process.

Part two: addressing these challenges
One of the big barriers or challenges in working in complex situations, is the fact that there is often poor or no communication between the different stakeholders in the country. Which is quite often a standard fact. And it is very difficult to break through those communication leaps. People work and live in specific 'boxes'.
One solution is to find someone or a project who can facilitate in overcoming of the barriers of these boxes (and break through these boxes, vertically and horizontally). And who can bring people together.

There is a need to break down classical dichotomies (or boxes).

BUT: Constraints to do this, often have to do with lack of resources; because we are working in contexts of scarcity.
Issues of how to work with these boxes, is to plug in locally. Start and working and living at local level. But then also you need to be aware of the effects that you will bring about, which can be much more than your intended effects.

But sometimes there are too many resources, and there is an issue of abundance. Problems are then socially created through which situations can become very complex. In this sense, complexity is often socially constructed and linked to abundance or otherwise scarcity of natural resources.
Conflicts form an integral part of complexity.

Projects can enable local people to cross boundaries (in terms of boxes but also boundaries of countries). Through these projects they can widen their perspective.

In terms of building resilience and coherence it might be good to organise experiments. Communication is stimulated by doing something together. By doing something together (such as experiments) you can bring people around the table and let them communicate.

Experiments can function as platforms. To test something in practice. Experiments are part of bringing people together. These experiments can be part of your strategy to stimulate communication between the different stakeholders.
Coherence can be built through collective action. Not only coherence in terms of the specific activity, but also in perspectives and world view.
A good example is in the Netherlands when farmers and other stakeholders were brought together in order to share their vision and achieve coherency for land use and protecting the environment. People eventually became tired of trying to achieve the same vision just by sitting and talking together. Only when people really started to do something concrete together, coherence between the different actors was found. They had to do something real in practice before they reached a certain level of coherency.

BUT: How to put this in practice? There is often the case of lack of resources to actually start doing this.

REMARK: Maybe it is not a question of how to put theories/theorising in practice but a question of how to built a theoretical framework about success in practice. What can we learn of experiences and positive outcomes of these experiences that we have had so far? This might help to mainstream a specific way of thinking in order to cross boundaries and stimulate communication between different stakeholders in innovation processes.

One relevant difficulty in these processes of connecting people and bring about coherence between different stakeholders is the continuous change in civil servant positions. This makes it very hard to really establish something and/or influence a system.
Even though civil servants are sometimes willingly to contribute to these processes, they are also unable in their positions.
The same issue accounts for researchers, because within the existing institutions it has become very difficult to do good work as a researcher.
This concerns a broader social issue; how do we define problems, how are we organized?

We have to be far more critical about our own role and own system.

When one has to work within complexity, it helps to do system analyses. In order to find out how do the relevant systems function? What are their constraints and limitations, and where can you seek for possibilities and opportunities? *Every constraint is an opportunity*. The constraints become opportunities when you can break them up, and you can brake up to another level, and create more room for manoeuvre. This way of thinking in systems, is a way to work with and create this space for yourself to be active in.

Yet, an entry point is needed to create such space and find opportunities to experiment and create possibilities for social learning.

Part three: recommendations
What would it in practice mean to explore opportunities to break through these barriers? What are ideas for action points here?

One way is to clarify and define concepts to all relevant stakeholders. But also keep them to a minimum for the sake of clarity. Work with terms that people can really understand and work with. Multi-stakeholder processes happen occur within different jargon and

terminology. This very often forms the underlying consensus or model through which they take place.

Also realise that research can open up your eyes and shed light on the complexity of a specific situation but it has always been there; complexity has not come just because you realise now that it is there.

Maybe 90% of the work is not effective, but then 10% *is* effective. Complexity exists, it always exists. There are at least 10% that do work in these complex environments. And how does this work looks Like? Have to look at these examples. Where are these projects that plug in, respond quick and are actually effective at the ground, however complex it is. Study their mechanisms and document on this.
These positive examples can be socialized and become part of the existing regime.

The difficulty is that we are often aware of how work should be done, but there are constraints existing in our own systems. We accommodate and maintain those because we are comfortable in them and safe within those constraints. Often people cannot say much because of their mandates, and bosses; they are not in a position to speak their heart out. *You have to challenge your own comfort zone and sometimes dare to take risks*.

Therefore: try to put things in an informal setting so people can talk out loud. Just creating informal situation, which creates a safe environment. If you do this systematically, and create trust, and you repeat this to many communities opens up possibilities for people to talk out loud whatever troubles their mind.
BUT then you come back to the question of time. We are constrained by time → One of the relevant remarks mentioned before in relation to complexity.

Here lies a task for research at Wageningen University/Research Centre. Open up the black box of influences from global to local level. Because they can have far-reaching impacts for local communities; this can hit so hard. And it is the world that we are working in; the aid/development world. How does the aid industry work within the current political economy? *How do all these big institutions in development work out on the local level*? They need to be held accountable for what they do with all the aid money.

5.7. Roundtable on Water Governance

Hosts: John Dore, chairperson of steering committee of M-Power http://www.mpowernet.org/) and Dipak Gyawali, director of the Nepal Water Conservation Foundation (http://www.nwcf.org.np/).

Dealing with the complexity of international waters
Thoughts from South Asia (Himalaya) and East Asia

Dipak: Water is a wicked problem: unpacking and more problem appear to be underneath.

Only two participants present, best to have a conversation. Discussion on complexity of international waters. John is working in South Asia, Dipak in East Asia.

Dipak: Dealing with water. Wicked problem that is difficult to define, extremely complex. Challenge: too much of international water confined to general blue water. Much more water, very little discussion on grey/white water. Little work on green/ground water flowing in between. We argue that international boarders are only one set of water, there are also other waters that you have to cross.

Alejandro: background already known.
Samantha: Arup consultancy. Joining the workshop because working on project IUC looking at water government in rural communities. Part-time PhD looking at network governance around major water projects.
John Dore: Relation to network, met Dipak through networks committed to much greater analysis in advance on decisions. Contrast between South and East Asia quite strong.
Arend : CDI. No background in water but in forest governance and accountability in natural resource management sector.

John: Production called NEGOTIATE, book of assistance making the case for constructive engagement for complex decision making about water. Not a book promoting hard bargaining, but an effort to make the case that water is quite complex, lends itself for interdisciplinary approaches. Encouragement for people to connect and take a different approach.
Other examples of books of IUCN: "Share" on trans-boundary waters."Pay" on payments for environmental services. "Flow" on environmental flows.

Shift focus away from governance per se towards negotiation.
* [8]Why?
John: To me water governance is such a huge field, negotiation is just a sub-set and an easy one for me to have an interesting discussion on. Informal negotiation would create a different shape to how it is instructed or inherited.

Slide of Negotiation.
* Governance and negotiation can go together, right? Determining what the constraints are is governance and that is what you are negotiating.
- Good point, in most languages governance is management.
* In water, not necessarily in other sectors
* What is it that is being negotiated. How do we transcend discussions on global frameworks, campaigns etc? Hear what is actually from the solution point of view, what works and it that incorporated in policies. Case for multi stakeholder platforms, clarify what we think they are around and help people involved to be more functional. Terms of what are people negotiating, not just principles. In any level what are the benefits? Not just water flows. Rewards from diversion, what are they? Who is benefiting? What is the magnitude of possible rewards? Unpack that.
* Benefit from this project? Is that project given?

Slide of 4R's
John: Not a given. Assume that there were 11 possible dams in Mekong. Capital is washing around, before you know it different nationalities have their designs created and people already paid. Whole momentum for cascade approaches. Not negotiated at all, no

[8] Question or comment from the audience

real analysis whether these projects are good? How good are they? Pushing the system along. Suggesting in this slide to look hard at rewards, benefits.
* Rewards based on proposals put on table? It appears that it comes out of some power structure. Behind 4R's what are the best solutions for that area. Before starting the negotiation find out what the best sustainable solutions are. I feel that all of this is already taken as a given and we are not looking at where it came from.
- Fair comment. At the moment that is what is happening. All energy is drawn on proposals having a momentum. Getting governance banks, construction companies allowing space for communities to say well hang on what are the solutions? It is proven really hard to go back to that point. Because of traffic that is there and lot of interest behind getting things going.
* Not just a problem in developing countries, even in the UK people are trying to understand how you get involvement, how to make decision on how to get energy and water. It also ends with the government publishing something and nobody really having an input. People then go along with the ideas and try to make the best out of it.
John: Big projects: in order to have a discussion about them a sensitivity analysis becomes the best you can do. Is it 11 dams or 7? 11 or 9? Only assuming big hydro and diversion and expansion of agriculture. Not saying that half of the irrigated area not even used. Difficult to force into MRC.
Dipak: Sometimes active agents, business and coercive government, propose something. Most civic movements are always reacting by protesting.
John: Farmers say at a late stage, when proposals are already formulated that they never had the chance for them to get involved.
* Not only in the developing world. There needs to be effort to involve people more in negotiations, absolutely. Not just one country making the decisions.
John: Not unique to sector and this place.
* You are focusing on where you have the ability to influence at the time.
Dipak: There are conflicts and people that want to push find out that it is not always possible. Find out that negotiation is needed. Issues are being ignored how do you put that on the table? That is how we came to writing this book.
John: adds comment that he has many projects to approve that he has not been involved in at all
* First challenge is the struggle to get it on the negation table.

See slide Hydropower explosion, Irrigation and Diversions.
Some of the context of Mekong. Mekong river commission which is supposedly working all this out. It is too slow, pretty rigid, did employ some good technical people but little communication. It can't deal with complexity in its current form. Always pointing up to China but in the wrong place. Takes two years to have strategic planning process, very linear in it view of the world.

Environmental flows as Trojan horses
Good for having discussions. What is this place? What is this water? How is it used now? Undeveloped narrative is there, while there is lots of development going on.

15 years of track 1 process non of the interventions have been deliberated in the Mekong delta, every big thing they have been involved in. Big consumption of time and energy, charade that is tragic. Still quite a way to go to formulate a challenging status quo.
Big projects take up so much time and energy. The best of the push back against them is not to question what are the possible futures but to make a sensitivity analysis. What

are the possibilities? Can we turn things upside down? Progressive tools into the space has been some sort of a battle. Have a discussion before having things logged in.

* Solar example. Rural energy agency Tanzania. Potentially revolutionary. Government says no unless there is money from abroad. Illustrates different paradigms. New wave of sustainability and decentralization. Difficult to have conversation on scenarios without having an idea of what is going on on the ground. Drive and attraction of power too big. What is the alternative paradigm? Where is it taking place?
John: What is your paradigm of discussion? They're not going to change? What is a good discussion, we can demonstrate. Pull back the convening power, lost it through not using it, others opening up and pull it back. Part of the contest. Not neat state versus non-state. Its alive and pushing back and changing by the month almost. WB and ADB out of the picture before when money was easily available. The role of the Iffies to their disappointment leverage was diminishing enormously. Not a lump of money that makes the difference here. Can really misdirect major infrastructure. Having got some leverage over the Iffies , there are a whole lot of other actors that are more influential. It is one thing to draft them up but then slip in and try to hold them to it. Industry brand could be more effective, not that the version of it today is fixed. Not just about projects, scenarios as well. Lot of resistance

Slide And so to South Asia and the Himalaya…….
Dipak: South-East Asia, Delhi, Mekong envy. On surface tendency not to bring things out in public, lot of things underneath. Left picture on slide attempt to take the world commission on dams. Not enough to reject it, you've got to engage with it. 4 month exercise. Once you begin to engage, in Nepal laws had changed. 40 percent more progressive than what the world commission was suggesting. You could get there with legislation in two years. Middle one, everything about water is complex. Nepal, huge diversity in people. Different structures. This is never included in WB discussions. Somebody decides to intervene and there is a whole lot of activism saying what is wrong, so the complex issue is coming as a reaction. Complex things not necessarily complex because of details, because of issues that were totally out of somebody's mind when something was put forward. They start to come out in the process and they cannot be matched. Everybody wants something different, negotiation has to come back to ground 0. It also means that you through the original project out of the window. Coming to grips with complexity of water and what development is all about.

John: Benefit sharing needs a change in paradigm don't think it is there. Not all about win-win and that is how it is often perceived.
Dipak: Benefit sharing can work to talk about what the maximum is that can come out of a project and then share the lot. In India and Nepal there is no agreement where the benefits lie. We're back to negotiate with original values that have been ignored before. Pressing need. Good idea benefit sharing but a long way before you can get there. Need for activism, media work and peer pressure.
* Payment for environmental services, attaching other values to certain ecosystems. What is important for the one may not be valuable to another group. Especially when it comes down to basic services.
Dipak: Power structure and vision in conflict here. For small people to come aboard is a struggle of its own.
John: Abu Dhabi dialogue track 2.0. Convened by a group IISD with paradigms on terrorism, nuclear threats etc. To me demonstrated the role of a convener and the influence this has. Coming from a certain background and with certain ideas, it can really

change the whole dynamic. WB came in and decided that it can't be called the Himalayan project. It was reframed for it not to be about water sharing but on climate change. To make it more accessible for more people. You can't have everything. You have got to break some eggs to make an omelet. But person who loses out: its my eggs and your omelet.

* One of the things for me is the complexity around all that is at stake in negotiations. You also said that there is a fundamental challenge in the project itself, you have to have a fairly sure design and plan for implementation. Time scale means things are going to change before it is done. Complexity issue regarding this. Project structure as a given and how to work with complexity? Or should even that be questioned?
Dipak: Successful campaigns in S-A have been around issues of Economics. With lot of issues, what is the ultimate benefit and are those benefits available from other means of development? Even if you pursue this, how are you making sure that benefits associated are mitigated? Have come back through the back door, issues on complexity. Not pretty, not something that most agencies can deal with because it is very fundamental. Too fundamental to sort out at project level.
John: The need of some actors and their speed with which they can act. Have a conversation where different futures are allowed to be thought up, contested, discussed. Takes a long time to arise, but in mean time some actors move really quickly. Much faster than governments or NGOs.
* On the one hand there is room for conversation but on the other people are presenting their proposal. We end up talking about proposal. Way to get out of this is coming up with counterproposals. Pushing scenarios, what do we think solutions need to be based on. New paradigm. If we as proponents of sustainability, move from dialogue to models we would like to test. What are the solutions.
John: What are the 2 models that could be an alternative? What are the solutions? Working from the ground up? What kind of solutions are we talking about? Name and address. How do you get the who is who to buy into this? Who are the pioneers? Not top 2 maybe top 1.

* Challenge between urgency between issues versus time it takes to have good dialogue has got to be one of the fundamental challenges to be captured. Are there solutions?
Dipak: Collecting water where it falls is much more effective than collecting at where it concentrates. Small foundations that are popping up more capable of making up good ideas to fund projects. WB would not be able to do this. Agencies got more and more tied up with internal pressure.
* In terms of solutions, with big international water problems because dams are being built. Most about hydropower, not even for country itself but selling it on. Finding counter solutions to that perhaps is simpler because space for solutions is much wider.
* Issue of water security, overarching how do you shift a mindset.
* Well on its way. Contrast there are lots of possible solutions. Does not take away the drive for the dams themselves. What is the alternative solution.
John: There is this technical solution, but there are other drivers for bigger projects. In terms of being more strategic, these are no best option futures.

Challenges
- Open up space for fundamentlal discussion about development scenarios
- Backing alternative solutions to scale (grass roots based, decentralized, low cost, local agencies)
- Perverse economics e.g. externalization of risks/costs.
- Major interventions (dams) have relatively in fluide project cycles

- Strategic game playing by actors in negotiations
- Absence suppression of deliberation e.g. East Asia
- Lack of awareness of how small scale solutions add up to national level strategies
- Lack of nimbleness of "track-1" processes
- Make alternatives more credible by buy in actors
- Challenge 1. Severe disjuncture between local needs and possibilities with nationalinternational needs
- Speed of certain actors to move and commit in advance of making considered investment action
- Dominance of large capital high intensive projects on development paradigms
- Over bureaucratization
- Appeal

Last 2 days
- Importance of safe-fail/experimentation space
- Complexity mapping (e.g. poverty relations in a certain water shed)
- Need for market infrastructure to enable innovations to be scaled up
- Step back and re-frame processes. Government wants quick, high value income. What are alternatives?
- Complexities bedeviling water lie more in complexities of understanding between disciplines related to water.
- With mobile water we deal with the "complicated" but much less well with the "complex".
- New ideas/views of dealing with water problems are not coming from conventional sources (universities) but from outside.

Recommendations:
- Support experimentation
- Support market infrastructures to scale innovation
- Support creating knowledge and awareness about entrepreneur solutions
- "Upstream" scenarios and options exploration is vital MSPs a tool to constructively deal with complex water
- Enable fresh views from other sectors to come into the discussions, not just narrowly defined stakeholders.
- Value-based search for solutions

Final remarks
John: Very insightful. Any other remarks?
Who are in the conversations. Lots of other actors not stakeholders but still have to be involved.
* Focus on solutions, not on scenarios because easy to loose yourself into talking. Up against other speeds, you are in a race in a way for development paradigms. What are the alternatives, how do you scale them up?
* Not solution but alternative solutions that should be focused on.
* Lately shift from traditional scenario to what is the future we want? More body based, urgency is big of coming up with a changing course. No longer enough to say what are the alternatives but to pick one and work with it.

5.8. Roundtable on Disaster and Conflict Situations

Hosts: Dr. Jeroen Warner & ir. Annelies Heijmans, Chairgroup Disaster Studies, Wageningen UR (http://www.disasterstudies.wur.nl/UK/).

Challenges in disaster and conflict situations

- Also in disaster studies there are discussions on the theme 'from government to governance'. It shouldn't (only) be top-down, it's up to local people to respond. So, we should facilitate self-organization, but this also brings in complexity and unpredictability to the process.
- Complexity is also found in the issue of tipping points. What makes a crisis event a disaster? Human security can be seen like a castle with porous walls. These walls are prone to external pressures. An event can become a disaster because of local circumstances such as fragile houses and cold. We need to fix the holes in the wall to make the system less responsive to chains of vulnerability and disasters. We need to understand the challenges of what is complicated and can be changed, what is complex and cannot be controlled but can be influenced, and what situations are totally uncontrollable.
- Development organizations usually have different departments for development, natural hazards and conflict & peacebuilding. However, local people deal with all these different risks, often at the same time. It's a challenge to blur these divisions and see what the people themselves do with the adverse effects of disasters. In some situations aid plays a very insignificant role is this. We need to think of different ways of formulating policy in intervention models and different ways of financing. We all realize reality is complex and complicated. Still the policies we formulate assume simplistic linear combinations of what we do and what the outcome is.
- With disasters, often a lot of organizations come in which requires strong coordination. It's quite complex to work in such a situation, but coordination is difficult. A lot of effort has been put in improving this and there is more coordination now. There are some very powerful organizations who try to force all actors into one direction. On the one hand this is good, but on the other hand there is no more room for informal ways of action. The action is too rigorously structured. Then international machinery comes in and tries to capture all initiatives in their system. Is also a challenge, how to deal with all these actors?

Discussion

Complexity applies primarily to conflict. Conflict deals with non-linearity, unpredictability, creativity of people and unclear divisions.

There is a culture of fear, the current system is afraid to allow for more flexibility because they are held accountable. Complexity is still a very theoretical notion. When you don't control that much, things can become better, but also worse because no one is in charge. Maybe control is good because it weeds out the bads?

Often organizations enter from a certain perspective on change and solutions, but they need to find other aspects from history and local perspectives to see the monkey (the aspects you were not aware of). We need more flexibility to adapt to local dynamics and

local knowledge. At the same time we work with budgets and funders, so how flexible are we in negotiating other terms?

This can be a myopia of certain development organizations, but also of the whole system. A lot of aid is funder driven and not appropriate to how local people perceive the situation and value the different risks. How can we deal with this diversity of risks and strategies for managing the funds?
It's important to look at traditional and historical knowledge when you come in for a specific intervention. You need a participatory approach, then you can (partly) prevent mistakes. E.g. in Jordan a renovation project closed down parts of an ancient drainage system, causing floods.

We also need to acknowledge our own mistakes. We often hear about the negative role of governments in disaster areas, but this is rather arrogant. We see someone else's failures but not our own. We need to accept that we make mistakes by nature. We can't do things right since we have to deal with so many factors. Better is to find out how to manage these mistakes.

Research can also play an important role in getting a better view on these complex situations. For instance in the research of Annelies Heijmans, they became aware of how we idealize our idea of how community resilience should look like when they went to the Philippines with Indonesian and Afghan people. They noticed how everybody was looking from his/ her own perspective and therefore became more open about acknowledging that what happens in the Philippines (which has a long tradition of community response in disaster risk reduction) will not happen in Indonesia and Afghanistan. We should get away of our own theory of change, but negotiate with local people. What kind of change do they like? Do we want to support that? This is a more dialogue-like intervention. However, Policy makers and donors are not likely to change, they are very aware of how the aid system works. Should we change behavior within the system or is there sufficient energy to change the system itself?

Our system is based on the division of development and disaster. The way money flows, our evaluations and time frames are based on this division. The divisions go even further. We say that natural hazard situations are neutral, not politicized and that in conflict situations aid is politicized. This division is not real, it should be more integrated. In Afghanistan uncertainty and crisis are normality. What disaster is, depends on personal definitions. However, it's not a matter of combining disaster and development, it's a different way of looking to situations. They are different paradigms. Development projects can be used to prepare communities for a crisis, to make them less vulnerable. There have been attempts to go beyond these divisions, the vulnerability approach is an example that allows us to think over longer time frames (it should be said that local people never see themselves as vulnerable or marginalized so it might be helpful to frame in a different way). These more useful languages are used in policy, but in practice we divide again between emergency aid, rehabilitation and development. How to translate these insights into practice and to make a change in reality? Complexity offers nice theoretical insights, but how to make it practical? What can firemen do with complexity? It will take a while to make this common practice, but attempts are there.

In practice, development organizations seem to be more flexible in some cases. For instance, there was a very critical report about a project in Congo. Good things happened, but the project outcome was very different from what was aimed for.

Surprisingly the organization had no problem with this, they excepted it because they were in Congo. So in practice they're more flexible than on paper. They cling on these instruments for accountability etc. but accept things can work out differently in the end.

Possible strategies/ recommendations:

The participants came up with the following ideas/ strategies:

- Multistakeholder processes are networks with flexible boundaries and fluid structures. They don't solve complexity problems, but they can support a complex adaptive approach to crisis management. We can improve the quality of interaction in these networks through learning which will lead to innovation.
- Build flexible systems rather than creating mechanisms to control systems since we are not able to control reality. We put a lot of time, money and effort in controlling, but this is wasted energy. It takes an exceptional experience to change this controlling mindset.
- Facilitate rather than control local processes and give space to local organization.
- Shift from idealized images of change to a more iterative and reflective approach. We shouldn't impose our own visions on change to local situations but accept each locality has its own way of changing. Exchange visits can help with seeing situations from different perspectives.
- Allow for mistakes and failure and learn from these (safe fail experiments). Usually there is a lot of failure in the business, we make mistakes by nature. It could be helpful to accept we make mistakes continuously and find ways to manage these mistakes and learn from them. The question is whether safe fail experiments are ethical.
- Get rid of the development-disaster division. This distinction isn't real and is not helpful in analyzing situations.
- Use different entry points for context analysis (vulnerability is a useful entry point when you don't want to focus on either development or disaster).
- Enhance local engagement, participatory approaches. Strengthening local capacities and women empowerment.
- Make stronger links between research, governments, aid agencies and practitioners.
- Don't throw everything away. Many good things are already taking place, but they are not called that way. With a new paradigm you don't have to do everything totally different. Besides, complexity can also be seen as the flavor of the month. First we had adaptive management, then it became integrated management. We keep selling the same things under different labels.

5.9. Roundtable on Sensemaker software

Host: Dave Snowden (DS) and Irene Guijt (IG)

Some of the issues that came up in the dialogue were also discussed during the workshop on November 30, 'Cynefin framework and strategic sense-making'.

The hosts indicated that they didn't prepare a fixed structure for the dialogue. Everybody introduced themselves, and told the group what they wanted to get of it. Some reactions:

Someone dealing professionally with multi stakeholder dialogues wanted to know: 'How to measure impact?'. Several people wanted to know more about the sense-making approach. Several people were looking for examples of very practical applications of the sense-making approach and the use of micro narratives. Multiple people worked in organisations that combined research, policy making and practical interventions, and wanted to find more about how to best combine these functions. More goals of people during the dialogue were: 'getting to know useful, open access ways of M&E (monitoring and evaluation)'; 'learning more about visual learning tools'; 'looking for best ways to improve accountability in capacity development'; 'getting to know more about the use of micro narratives'.

After the sharing of expectations, Mrs. Guijt (IG) started off by saying that 'hindsight isn't foresight' and that 'we are being taught to expect the expected' and that 'people are generally not open for surprises'. One of the goals of sense-making and micro narratives is to 'to get the qualitative more robust', because qualitative methods are often not explored enough.

A question from a participant: 'how to index micro narratives?' DS: prefers the verb 'to signify' for indexing. Indexing or signifying (something more then just 'rating') the micro narratives is necessary to give meaning to the stories, by putting them into context. What they found is that analysing and making conclusions only based on the content of a story itself, is very hard and can lead to wrong conclusions. People themselves (the storytellers) are best able to index their stories, although they should be guided in the process, by constraining the options. DS: 'signifying the stories adds layer to their contributions'. This 'self- signification' is based on the question: 'What does your story mean?'.

During research on micro narratives, when people were asked to give the story a title, the words in this title were often not used in the story itself. Furthermore, when asked to highlight the keywords in their own story in one case, and to think of keywords without reading the story again in another case, it showed that in the latter case 60% of the keywords were not in the story itself. DS: 'this is proof that the content of the stories is not everything'.

IG used the micro-narratives method in South Africa, even among predominantly illiterate communities, as part of the project 'Children of the World'. The objective is to 'map the culture', and in the same time stimulating interaction between the individuals that are telling each other stories.

DS tells about the same project, but then in Pakistan, where many i-touches were brought into the country (by diplomatic mail to avoid customs regulations). Children in refugee camps were given the assignment to ask elderly, whom they thought to be leaders, to tell stories about the past, present and future. The stories were one and half minutes long on average, and the story tellers had to index it themselves.

DS: With the micro narratives, attitudes to health & safety and attitudes to moral norms were researched. The indexing or signifying of the stories can be done by making use of triangles, with in each corner core values that are considered important in the particular field of research. People have to move a big dot in the triangle in the direction of their choice. The triangles are in fact three scales in one figure, and stimulate people to really

think about the signification. Research showed that people spend a considerable amount of time more on these triangles, compared to simple two-dimensional scales.

By giving people categories (the labels on the triangles for example) the researcher semi-constrains the system, and creates a 'grammar of meaning' between the researcher and the storyteller.

One example that was dealt with in the workshop, was the museum where micro narratives were used to measure and monitor objectives. One objective was that museum employees should treat children at an appropriate level. After a museum visit and tour by one of the employees, the children were asked to tell two short stories: one for their parents saying why they wouldn't ever want to go to this museum again, and one for their best friend saying why they would definitely want to go to the museum again next Saturday. Besides giving the story (which can be as short or long as desired), the children had to score on scales with different topics, e.g. 'staff patronize children' on the one hand, and 'staff is too child like and pathetic' on the other. Extremes are chosen, to prevent the easy answer. This 'indexing' or 'signifying' gives meaning to the stories of the children.

The micro narratives have also been used in a hospital, where often a lot of targets and key performance indicators exist. The problem is often that the monitoring of these targets needs personnel as well, and the targets are often 'hard', neglecting the obvious need for qualitative measures for a health service provider. The micro narratives recorded of patients and relatives give a lot of insight into the direct impact of the hospital practice. DS: 'everybody wants to tell stories'. The objective was formulated as follows: to measure the impact of the hospital on the perception of health. Patients even contributed to the hygiene control in the hospital, because they had the time to see things the nurses might have overlooked, while they had been given a tool to mention this. At the same time, nurses, interns and residents were given honest feedback from the patients and relatives and they could see the direct impact of their behavior. Nurses got early warnings of what they called 'depression clusters', where one depressed patient would negatively influence the spirits of the people around them. Because of the ease of the system (nurses used it to its full potential after some training) and because the patients and relatives themselves have a clear voice, the impact of the hospital on the customers is measured very effectively.

Question of participant: do managers know what to do with the stories? DS: yes, they stories themselves are very powerful, and the software makes quantitative analysis very easy too.

Question of participant: do you have examples of applications with a longer term objective? DS: the system can also indicate long term trends, and the frequency of data collection is in the hands of the researcher.

Question of participant: all the core values or labels used as signifiers, and the data the signifiers produce, can you then only see correlations with the software, and no causalities? DS: do you really want causalities? The method is especially fit to complex situations (refer to the Cynefin framework). Compare it to 'dark matter' and trying to measure the impact of things we can't see. Furthermore, this method leaves room for finding hypothesis after the data collection, while usually data collection starts after making hypothesis.

Question of participant: I get totally lost how do you generate and interpret a 3D landscape like that? I don't think I can do that! (3D landscape was shown on the PowerPoint). DS: if you are the researcher using this method, you will incorporate what gives *you* meaning, and in this way it is easier to monitor and interpret results yourself.

DS: the micro narratives in combination with quantative analysis are a powerful tool to convince policy makers. Besides monitoring, it is a massive learning tool as well.

Question of participant: is there a way to correlate interventions with the results? DS: you can build in additional assumptions of intervention projects, and measure their impact accordingly. It is also a radical new method for multivariate analysis.

Question of participant: this seems very complicated, how can I use this in the average NGO setting? IG: the software is complicated, but remember the nurses that were perfectly able to use it. Question of participant: but isn't it very expensive? IG: actually, it is not that expensive.

IG: did experience a failure with the micro narratives method. In a very hierarchical organization, people were very uncomfortable to tell stories, and send her emails with the story attached, saying 'here is the official document'. The stories turned out to be PR stories. She (IG) had to change the way she asked people.

IG did a pilot in Kenya, which provided new challenges. The stories were mostly told in Swahili, and the researchers thus had to translate the filters or labels, used for signifying the stories, which turned out to be very hard because of the cultural diversity in Kenya, and the different contextual meaning of words.

Question of participant: how do you control for biases during the data collection? DS: you encounter the same problems as ordinary surveys, and often the same solutions. IG: By collecting a lot of stories, you combine qualitative data with large quantities, which is often to be preferred over just a few case studies.

Question of participant: if the impact is different then envisioned, what should you do then?
IG: remember the strength of stories, you've got to be agile, especially when the outcome might be different then the expectations.

Question of participant: is the quality of the results guaranteed? DS: micro narratives allow the voice of the population to speak for itself, in their own language. The data collection itself is influenced as little as possible by the interpretation of the researcher. IG adds: Seek surprise! IG is not going to stop using other research methods, but she finds that by using micro narratives she encounters viewpoints, questions and thoughts she didn't ever would have come up with herself. When she works with people or managers using the system, and they ask her what to do with the results, she is not going to tell them what to do. The manager himself has to make sense of it. The nice thing is that you are able to send a subset of stories when communicating with other practitioners, instead of a whole database with numbers.

IG concludes with the question what people take home after participating in this dialogue. Some responses of the participants:

'I like the idea about self-signification of contributions of people. Especially giving a title to your own story really adds layer, I think. I will use this in the future'

'This method democratizes the voices of the people; I'm looking into ways of using it for very young people, and this really gave me new ideas'

'I've always been more focused on qualitative research instead of quantitative, but I am surprised by the nice combination of the two that this method provides.'

'I am involved in impact evaluation of policy on a constituency, and this method I believe can be very useful to implement a learning strategy'

6. Implications

6.1. Recommendations from roundtables

The following recommendations emerged from the roundtables:

On capacity development

- For donors: Support innovation and experimentation. It was felt crucial to have a field/place to experiment in order to create successes or failures.
- Make complexity theory more accessible for a wider audience. Accessible and understandable. (Nicely visualised by Mark de Koning.)
- Support communities of practice who can support exchange & learning about Capacity Development and complexity, such as LenCD and capacity.org

On development policy in the face of complexity
"We made a rich picture which you will see in the report since it is too complex to explain"
"We tried to discuss the topic development policy which we found rather complex"

Recommendations:

- For development agents and in the development practitioners: Give up illusion of control and planning which we think is still very dominant. Even there are some partners who take the planning very seriously. They use log frames to make development happen. Others they just do it, for the sake of doing it. There needs something planned. Are we in a illusive world
- Collect elements of alternative approaches (promising approach) and look for patterns –> translate it in digestible messages that they eventually use in development innovations
- Organise strategic open dialogue, between key stakeholders, like development partners, civic society and the business arena to discuss about development policies in the field of complexity

On civic-driven change

- Use the complexity lens – to better understand it

- Connecting micro narratives from the individual members – scaling up horizontally
- Catalysers to facilitate interaction
- Find interface/agreement within the disagreement (collective engagement)
- Not or but and (use all the different approaches that we have)
- Social psychology: study values and how this is influencing behavioural (study it more)
- Time frame (what time frame do we need to take to have a meaningful lens). Issues of speed everything goes much faster.

On sustainable supply chains

- To actively stimulate value-driven organizations in developing governance mechanisms that stimulate drivers of change working towards sustainable chains
- To understand the effect of the internationalisation of PPP costs in reducing complexity
- Develop pilots on how to influence consumer behaviour (dc)
- Impact assessment of chain interventions at house hold / livelihood level (narratives)

On sense-maker software

"We had a detailed discussion with a potential software maker, which was a lively example. We don't have recommendations but we take the following home:

- Others said that there is no need to choose between quantitative and qualitative data. We can have both at the same time
- Social justice implications of this type of way understanding impact was huge. Super stage the notion of voice. It is about Democratising voices
- How this type of approach can reshape the dealing with the learning community. By case studies. How collective learning can happen
- Tweak (fine tuning the system); adjust/deepen there current system by current narratives through journals

On water Governance

They talked about water governance and negotiations, by bringing into the discussion examples/experiences from Asia and south Asia.
Recommendations/challenges:

- Support experimentation
- Support market infrastructure to scale innovation
- Support creating knowledge and awareness about entrepreneur solutions
- Upstream scenarios and options explorations by multi-stakeholder platforms a tool to constructively deal with complex water issues
- Enable fresh thoughts from other sectors to come into the discussion, not just narrowly define stakeholders (Yesterday we had this discussion on bringing others into the interaction)
- Value-based search for solutions (Not just only focus on difficulties, but try to bring in/work together on solutions and see how it works in practice) We can't just have dialogue but should also focus on solutions, instead of loosing energy on only discussing.

Competing Claims over competing resources

Overall conclusion of this group: Competing claims, over what was our first discussion. We decided to have those claims over natural resources, the context they took was Kruger National Park. Issues over there are about water, seeds systems, market, air, temperature (in case of climate change). We see Multi-Stakeholder platforms as a way to discuss conflict over resources. (Complicated environments, constrains and opportunities, trans-boundary issues (geographically, across areas)).
The group came up with the following recommendations

- We should try to break though institutional barriers. Everyone in the group there was a lot of existing experiences many people in the group spend 15 and 20 years in other countries, why are we not their anymore. How to work in those countries dealing with Due to the institutional barriers they had to dealt with over the years.
- On the question; What would we do, in a context of complexity? They answered, there are existing practises, that is why we should look at the existing world and try to learn from those practises.
- Dichotomies of research and development. This is putting us in boxes. We should try to break the issues of North and South.
- We, scientist and developers are people too, we are implicit/part of the problems and solutions
- Searching for coherence in our practices and in or daily life
- Breaking all the rules; relationship, how we finance things, and in the field of intelligence
- Strategic issue: Looking at catalytic opportunities issues to cut across social people geographies which helps us to digest those issues.

On education for sustainability

Challenge:
Are we developing the right competences to live with uncertainty? Do we develop the right competences to people in order to deal with the 'new' complex world?
What competences are needed:
(Gestaltungs-competence)

- to think in a forward looking manner, working interdisciplinary
- develop a sense of cooperation/collaborative learning (connect people)
- developing once participation potential
- being able to feel empathy, sympathy and compassion
- motivate others and reflect on own actions
- learn quickly and reflect on it quickly

what we need:
Gestalt switching
Put yourself in the shoes of one other; trans-geographical shifts, trans-disciplinary shifts, trans-generational shifts, trans-species (woeff)

In the current education situation we need to integrate this more. How we encourage learning should be different.
(Story telling (past, present future also local global. Find patterns and linkages)

On disaster & conflict situations

1. Build flexible systems rather than creating mechanisms to control systems
    a. Facilitate rather than control local processes and give space to local organization
2. Shift from idealized images of change to a more iterative and reflective approach
    a. Allow for mistakes and failure and learn from these (safe fail experiment
    b. Are safe fail experiments ethical
3. MSP as a network with flexile boundaries and fluid structures
    a. Improving quality of interaction through learning

On dynamic understanding of Agro innovation Systems

"You can not end with a disaster you should end with a success"
We were focussing on success stories in the Dutch agricultural sector.
We came up with a NGO type conclusion, but in business terms; how to make more wealth and money?
We did not conclude that you have to wear yellow wooden shows.
Our key outcome is that the focus should be on action research. How we can get those projects started and how we can support WUR to take a leading role in this.
We are aware that those coalitions are very slowly taking shape.
Another recommendation is trying to learn from agro innovation successes. And to get a discussion on what sustainability agro is about.

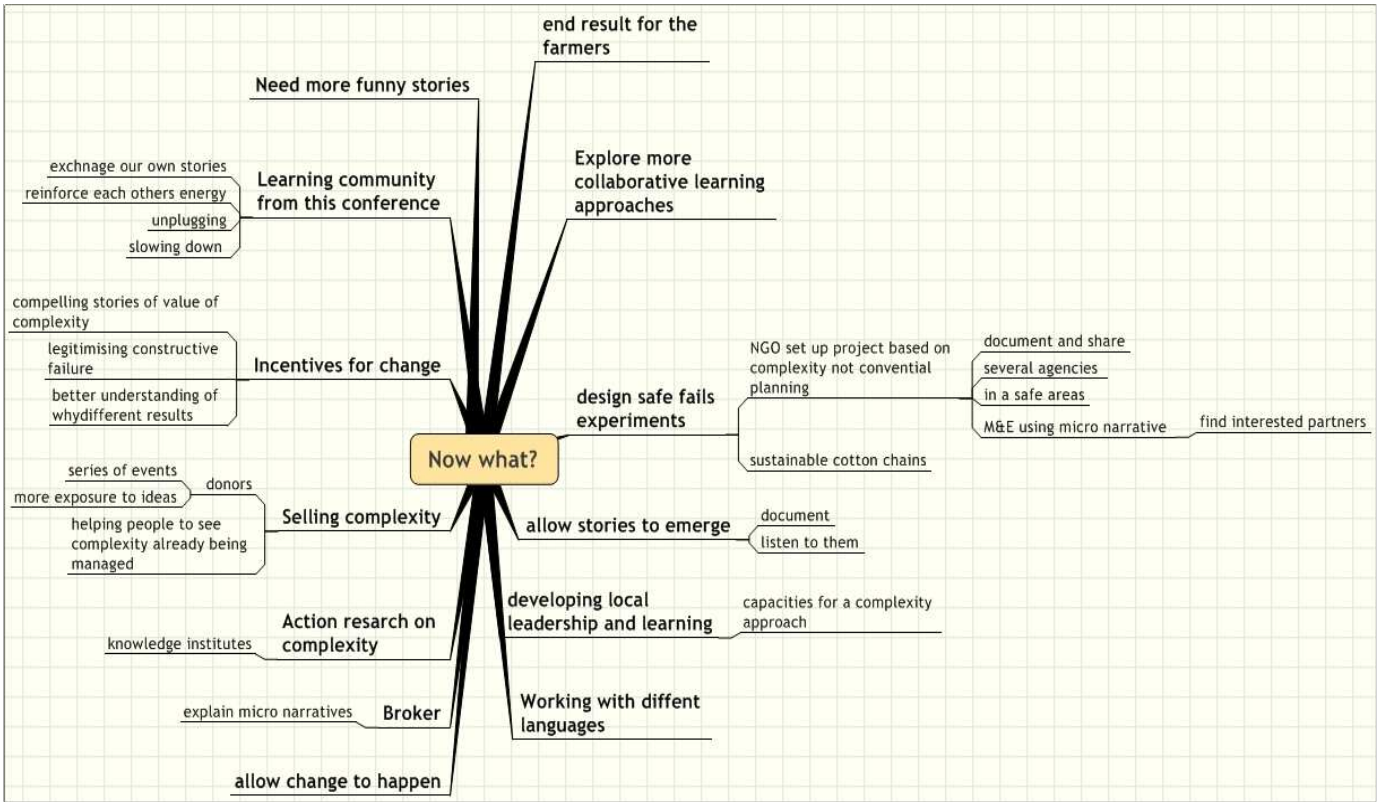
6.2. Forward looking reflections

What to do next? Think about 'so what?' or 'now what?'. What you as an individual would might to do or you in your organization. Practical ideas what you would like to happen. After some interaction between participants, the following thoughts were shared:

1. Designing safe fail experiments, who can help me to do that? For what: Sustainable cotton
2. Listen to other cultures
3. It is important to allow stories to occur, they can change the setting. Allowing change to happen gradually.
4. Very specific request: Maybe in the broker it could be explained more thorough wat micro narratives entail.
5. Focus more on action research in order to deal with complexity.
6. Idea: It should be interesting to ask NGOs if they would like to set-up and run projects based on the complexity ideas, instead of the usual projects. We can document those and share the lessons learned through websites and we can discuss those examples in the next conference and learn from those experiences.
7. Not only documenting stories and allowing them to emerge but evenly important is to listen to them, or read them
8. We talked about selling the complexity tool to a broader audience, particularly to donors. For other donors to, what kind of change would occur
9. Develop local learning and local leadership
10. Incentives for changes: developing more compiling stories, a better understanding why certain results have come about.
11. The key element is about how we can learn from legitimate constructive failures? i.e. A project can end somewhere totally different than the objective the project started with.

12. We talked about learning communities among ourselves, we could form a kind of a learning community, to exchange our own stories, to see how we can learn from others. Equally important is to restore energy and stimulate each other when you face difficulties at your own work, since this is a very difficult issue to implement.
13. Rick Davies suggestions was to use micro-narratives not only for the planning part, but using this technique also during data collection
14. Very useful is to support stronger experimentations and explore more collaborative learning approaches.
15. We also talked about promoting diversity of languages, not just work in only English, Spanish or French, but also use visible languages. And we should try to reconsider our own dominant culture.
16. Helping ourselves but help others to see complexity issues
17. "Complexity management should be more fun. We need more funny stories. The cartoons at the walls are a very strong way of communicating things. All the time when I did not understand a presentation I walked to the wall and I understood it immediately ".
18. In the end it is all about try to create an impact, to let something grow on a piece of land were nothing else grew before (to create opportunities to increase farming productivity (to give people something to eat)).
19. Slowing down, stepping out of our busy lives and think more strategically and reflect on what we do (Plug out or plug in.)

Closing thought shared by one of the participants:
"I go home with a lot of energy, I can see the potential of this and the moment is right, there is a huge need of this outside the university. I am looking forward to contribute by translating this in to practice, i.e. to the development aid community."



Annex 1: Presentations

For all presentations: the first slide is in the top left corner, the second in the top right corner, the third under the first slide, etc.

1	2
3	4
5	6

Presentation by Martin Kropff

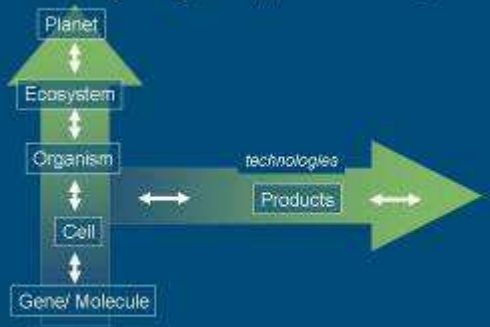
Prof. dr. ir. Martin Kropff is rector magnificus of Wageningen UR.

Wageningen UR: research

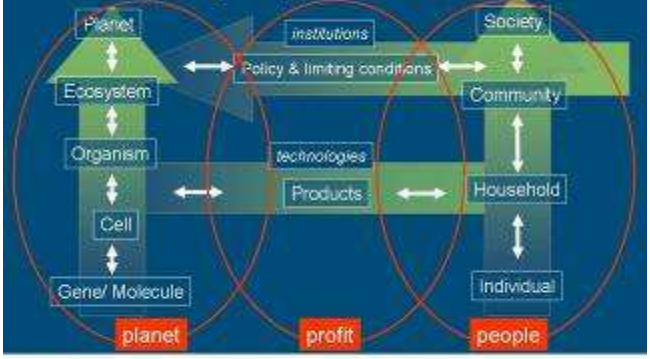
Co-innovation processes
Public private partnerships

The Wageningen UR domain

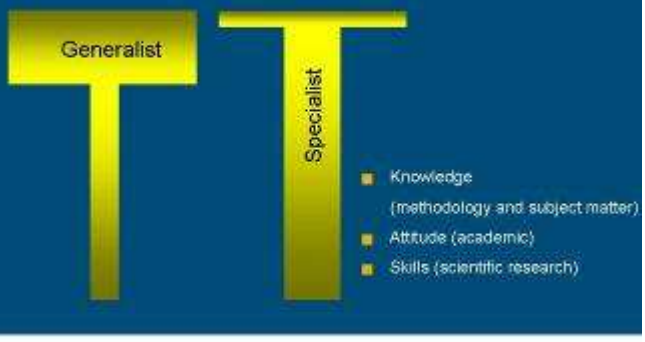
The Wageningen approach: biological



The Wageningen approach: biological and social

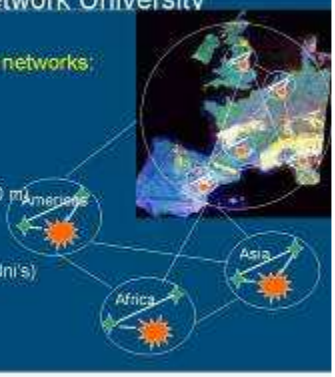


Competences: T-shaped skills



Wageningen UR: a network University

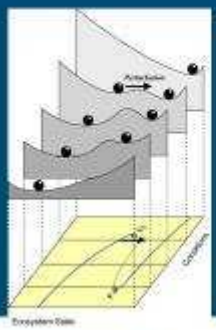
- The development of global networks:
  - Capacity building
  - Science for impact
  - Europe EU (>200 projects 30 m)
  - ARI's (ECART/NATURA)
  - CGIAR
  - NARS (China CAS, CAAS, Uni's)
  - Industry
  - NGO's

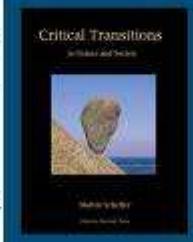


Internationalisation

Example complexity:
Resilient natural resource systems

Complexity: Resilient natural resource systems





Scheffer, Carpenter, Walker, Foley and Folke
2001, NATURE

Complex problems call for new arrangements

Strengthening link research and innovation and learning processes in society:

Center for Development Innovation
(was CD&IC in WI now in SSG)

This event with chairs:
Communication & innovation studies
Disaster studies
Education & Competence studies
Public administration and Policy

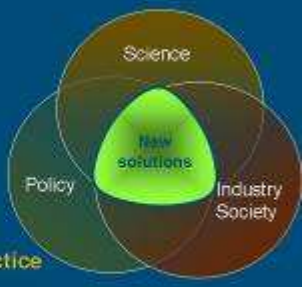
Complex problems call for new arrangements

- Next generation Research Organization

This meeting:

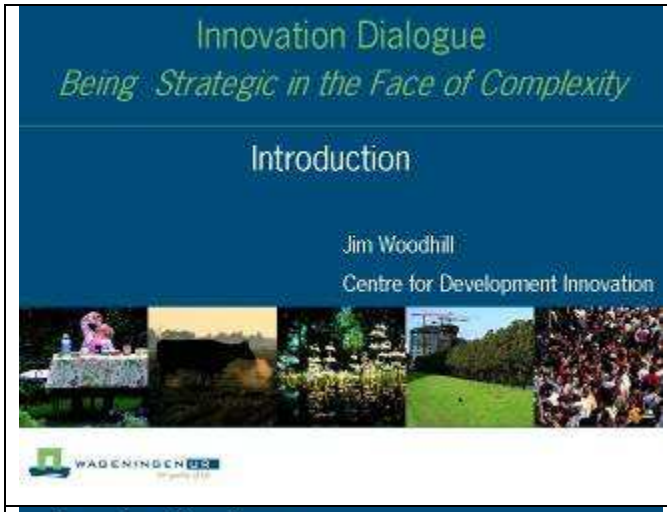
Practitioners, policy makers, Researchers
Bridging divide theory and practice

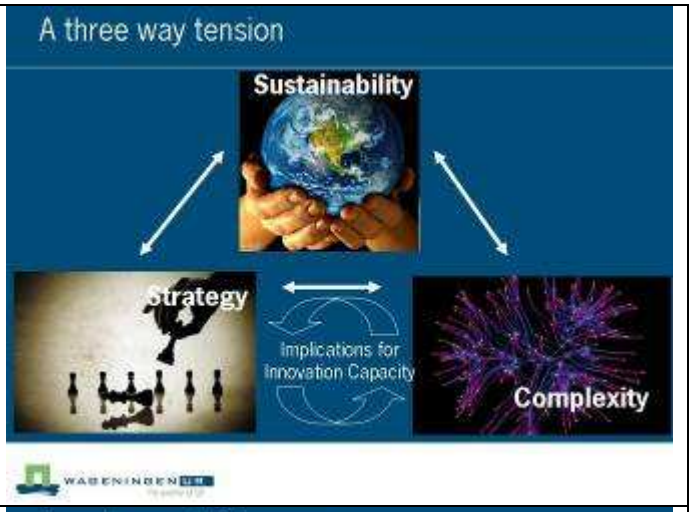
So what? How to use ideas for innovations

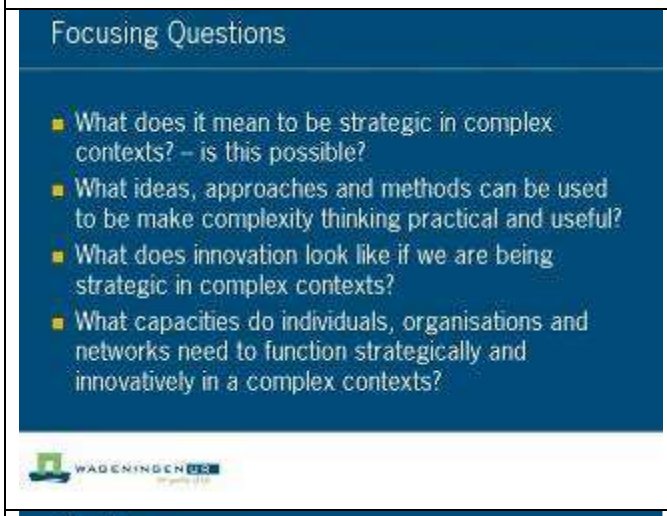


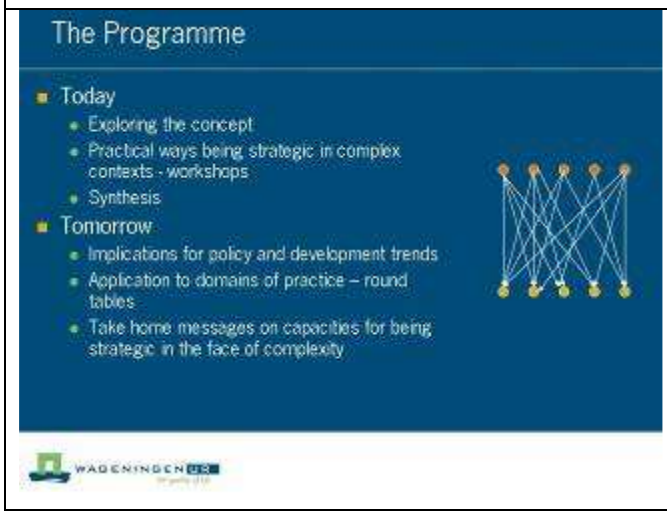
Presentation by Jim Woodhill

Dr. Jim Woodhill is director of Wageningen UR Centre for Development Innovation.









Presentation by David Snowden

Dr. David Snowden is founder of Cognitive Edge (UK, Singapore).

"Nor do people pour new wine into old wineskins. If they do, the skins will burst, the wine will spill out, and the skins will be ruined. Instead, they pour new wine into fresh wineskins, and both are preserved."

Mark 9:17

Theory informed practice

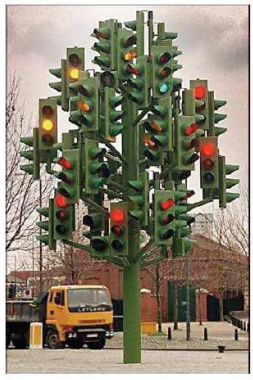
- Key language
  - A system is any network that has coherence *it may be fuzzy, it may or may not have purpose*
  - An agent is anything which acts within the system *individual, group, idea etc.*
- Three types of system
  - **Ordered**: *system* constrains *agents*, reductionism & rules, deterministic, observer independence
  - **Chaotic**: *agents* unconstrained & independent of each other ,studied through statistics & probability
  - **Complex**: *system* lightly constrains *agents*, *agents* modify *system* by their interaction with it and each other, they ***co-evolve*** (irreversibility).

Traffic Control

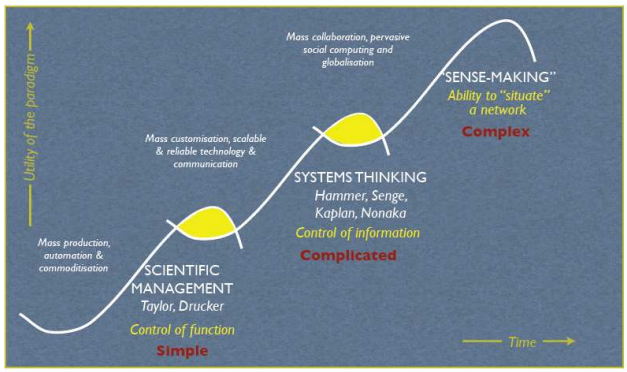
The Magic Roundabout

an aerial view

the ordered alternative



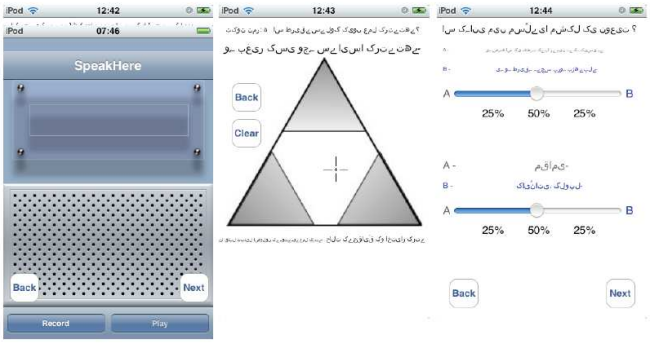
Life cycles



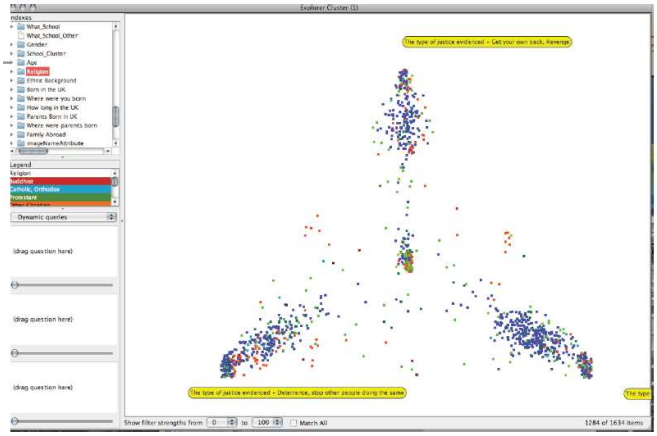
Social complexity

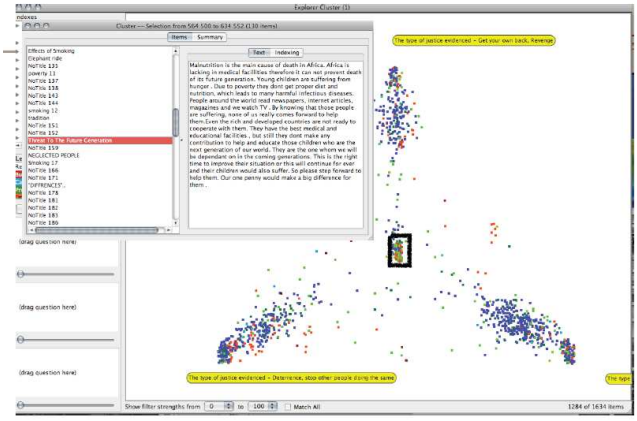
- Confusions
  - Systems thinking *(systems dynamics)*
  - Computational complexity
  - Complexity as religion, or validation of a pet theory
- Key aspects
  - Intentionality
  - Intent
  - Language
  - Connectivity
  - Metaphor
  - Narrative
- Naturalising sense-making
  - How do we make sense of the world so we can act in it
  - Utilising the natural sciences
- Essential aspects
  - Distributed cognition *human sensor networks*
  - Finely grained objects *both information & organisation*
  - Disintermediation *removing interpretative layers between decision makers & raw data*

Generation open source



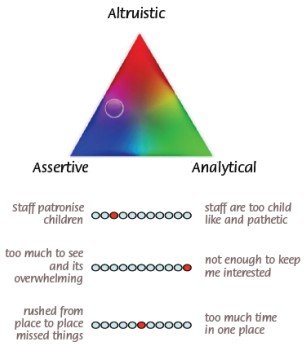
Generation open source



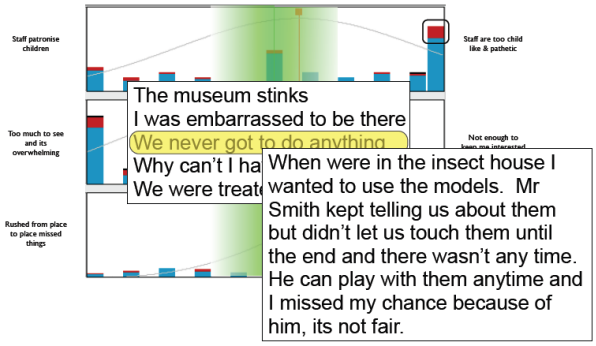


Fragments, signified

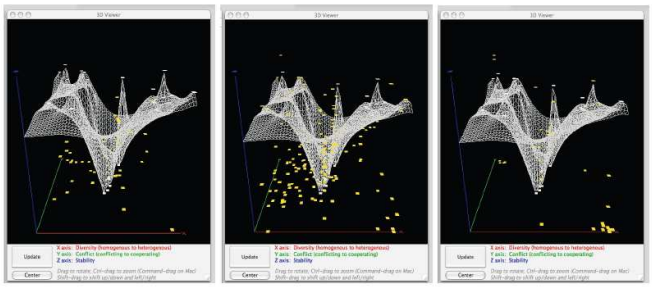
- Fragments: transcripts, audio, video clips, URLs etc
- Any language, any dialect
- Signifiers
  - semi-constrained indexes
  - serendipitous discovery of fragmented material
  - Allows for impact measurement as well as knowledge distribution & research



Impact measures & monitors



Disintermediation



Examples

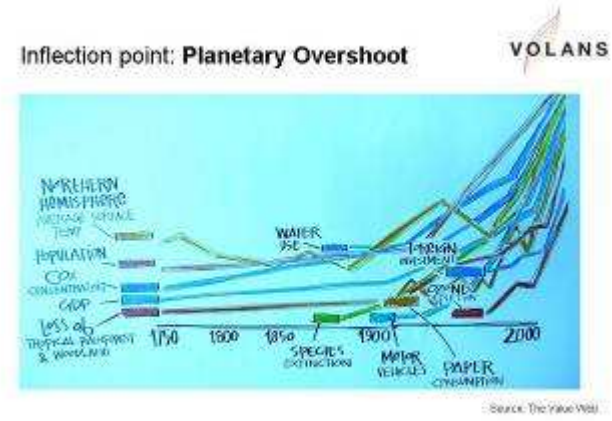
- Mapping ideation culture
  - RICU & FCO
  - Value mapping IFC
  - US Navy
- Measuring impact
  - WAO, local government
  - Liverpool museums
  - Rockerfeller Foundation
- Auditing attitudes
  - Ethical auditing
  - Leadership
  - Safety
- Developing areas
  - Child abuse
  - Impact of health care
  - Citizen consultation
  - Impact of development, including multi-agency/project attribution
  - Communication strategy & operational monitoring
  - Evidence as coherence
  - Micro-scenario planning

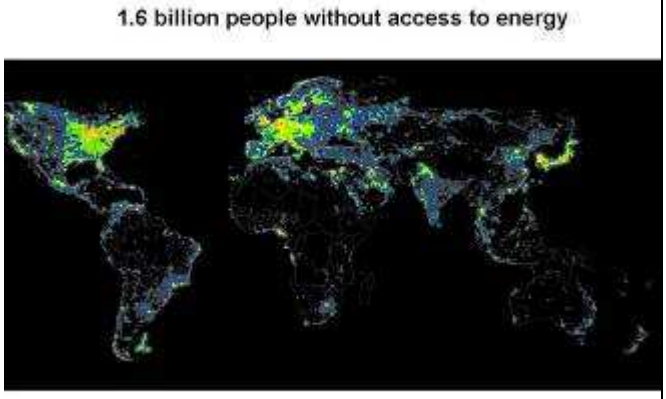
"For now we see through a glass, darkly; but then face to face: now I know in part; but then shall I know even as also I am known."

1 Corinthians 13:12

Presentation by Alejandro Litovsky

Dr. Alejandro Litovsky is head of the Pathways to Scale programme of Volans (UK).





Model: Eco charcoal production

VOLANS

Problem

- Charcoal market $240 million a year
- 330 hectares of deforestation a day

Solution

- Bio charcoal made with agricultural waste
- Briquettes burn longer and are cheaper

jet

'It's the barriers, stupid!'

Solutions are ahead of the market that can support them

VOLANS

Can they reboot the system?

VOLANS

Inception

(Vulnerability)

Dispersion

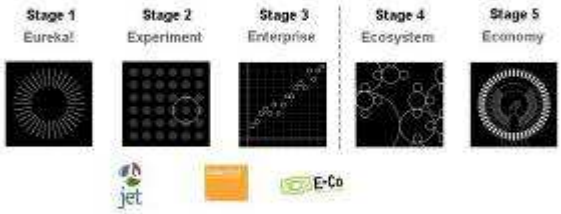
(Strength)

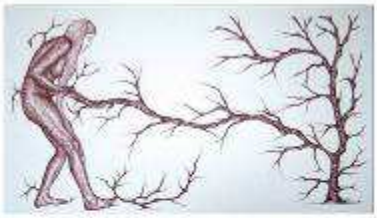
VOLANS

Solutions beyond the entrepreneur
Taking 'root' in the system

Pathways to Scale model

VOLANS





VOLANS

Leveraging ecosystems

An interplay between:

- Leverage: Business model develops *fwd* and *backward* linkages
- Influence: Demonstration inspires (or pressures) others to act

E+Co Goldman Sachs

VOLANS

"Goldman Sachs Forms Alliance With E+Co"

E+Co

- Leverage: *Forward linkage (Goldman Sachs)* to create carbon credit infrastructure
- Influence: Get financial institutions to identify opportunities - kick-start competitive juices

Figures:

- 300 more investments by E+Co
- access to clean energy for 20 million people
- 20 million tons of CO2 offsets

UNEP Finance Initiative
innovative financing for sustainability

VOLANS

"Indian Solar Loan Program"

UNEP:

- Leverage: *backward linkages (funders)* and *forward linkages (banks)* to create solar loan infrastructure
- Influence: Create new market for solar credits with commercial banks

Figures:

- $7.6 million from foundations to subsidize interest rate
- 1,700% increase in sales of solar home systems
- 19,533 loans disbursed
- 2,076 bank branches

zopa MyC4 KIVA

VOLANS

Decentralized, peer-to-peer lending

MyC4 in Africa:

- Leverage: *backward linkages (institutional partnerships)* and *fwd linkages (local MFIs)* to create virtual marketplace
- Influence: Inspire large development institutions to invest through peer-to-peer funding platforms

Figures:

- 16,309 investors from 97 countries
- €10,321,954 invested in 5,244 businesses

(Influence) "Zopa cuts out the banks and middlemen" BBC News

VOLANS

Stage 4:

Designing Ecosystems

Pathways to Scale

Unlocking solar: East Africa

VOLANS

TÄLLBERG

Barriers to solar solutions:

- Poor **distribution** infrastructure
- No **education** and awareness of customers
- Lack of **credit** provision
- Shortage of **human** capital
- Fixed **costs**

Pathways to Scale

Exploring leverage and influence:

VOLANS

TÄLLBERG

Result:

"Young Solar Entrepreneur Challenge East Africa"

- Reach 15 million people by 2013
- Create 50,0000 youth 'green' jobs for distribution
- Mass media campaign on 'solar entrepreneurs' targets 2 million people

Photos: D.light Design

Pathways to Scale

Exploring leverage and influence:

VOLANS

TÄLLBERG

'Our media platform creates awareness among young Tanzanians on HIV Aids. We have 300 distribution partnerships. We can create awareness about solar entrepreneurs.'

Minou Fuglesang,
Founder of Femina HIP
Tanzania

Pathways to Scale

Partnership blueprints

VOLANS

TÄLLBERG

The Young Solar Entrepreneur Challenge East Africa

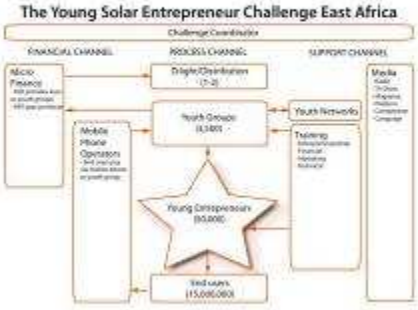


Photo: D.light Design

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Helping the Future Take Flight

- Adopt a mindset of **pioneering business models.**
- Invest in working through **barriers to scale.**
- Design **ecosystems**, seeking leverage and influence.
- Create critical mass to move solutions from **Stage 3** to **Stage 4.**

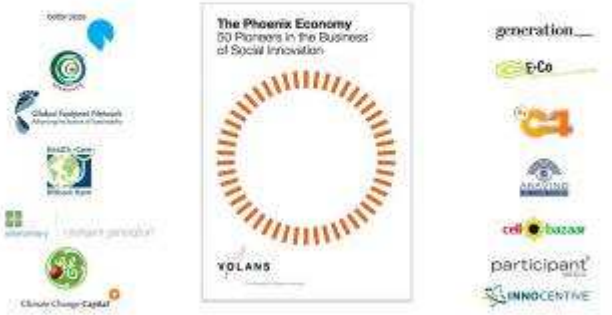
VOLANS

Thank you.

Alejandro Litovsky
Director, Pathways to Scale
alejandro@volans.com

Pioneers across sectors

VOLANS



Presentation by Katrien Termeer

Prof. dr. ir. Katrien Termeer is professor of *Public Administration and Policy at Wageningen UR.*

Complexity Leadership & Governance

Prof. Dr. ir. Katrien Termeer
Katrien.termeer@wur.nl

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Content

- Contributions of public leaders to societal innovations
- Complex governance systems
- Planned versus emergent change
- Public leadership and emergent change
- Leadership strategies
- Adaptive networks
- Conclusions

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Taddy Blecher & CIDA University Johannesburg

- Without any university buildings, courses or staff, he began faxing out a letter of invitation for the "best business education in Africa".
- This became South Africa's first free university, created to serve students from the poor black communities who could never afford education at established universities.

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Anonymous Farmer & Care farms

- Initiative of a farmer and a psychologist
- Combining care of the land with care of people
- Partnership between farmers, participants and health & social care agencies

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Complex governance system

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Complex governance systems

- Many public, private and civil society actors involved
- Operating from the local up tot the global level
- Influencing the use of public and natural resources
- Complex relationships with non-lineair feedbacks
- Bottom-up processes of innovation are started creating new solutions and new cooperation
- Simultaneously, top-down initiatives enforcing environmental goals are continued

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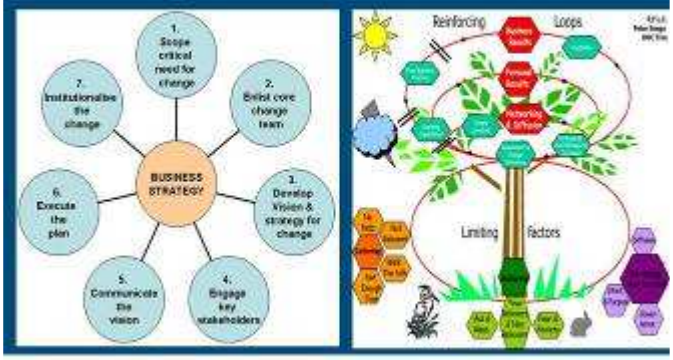
Public leadership and innovations?

- Societal innovations cannot be understood as the result of central governmental policy
- Adjusting to complex processes a wiser strategy than trying to get a grip on them
- Radical idea: assumption of controlling change is dominant
- Tension with New Public Management
- Complexity can also paralyze
- Public leaders overwhelmed by complexity

Planned versus Emergent Change



Planned versus emergent change

- Organizations are inertial
- Change is infrequent
- Requires outside intervention
- Logic of replacement
- Change agents use position power in steering change

- Organizations are self-organizing
- Change is continuous
- Small adaptive changes can amplify and generate large institutional change
- Logic of attraction
- Change agents are sense-makers who recognize and redirect change

Leadership Strategies

Public leaders participating in processes of social innovation through:

- Creating organizational conditions in which innovations can flourish
- Making sense of innovative practices and redirecting change that is already underway
- Intervening to unblock stagnations and to restore disrupted adaptive processes

Starts with seeing what others may not see

Deficit-based	Possibility-based
Problem driven	Vision led
What's wrong	What's right
We must "face realities"	Find signs of life and hope
Mobilizes resistance	Mobilizes energy
Scarcity of resources	Abundance of resources
Money	Meaning
Professionally-directed	Self-directed

1. Creating organizational conditions

- Organizing minimal structures and maximum flexibility
- Connecting
- Offering resources

2. Redirecting change already underway

1. Keying: rearranging existing routines to make things happen
2. Improvising: taking initiatives and risks
3. Certifying: seeing, reframing and telling the world how important it is
4. Integrating: connecting new stories of innovation to customary procedures and identities

3. Intervening to unblock stagnations

- Situations in which there is no willingness or possibility to adapt and learn
- Fixations arise: taboos, vicious circles, exasperating delays, escalated conflicts
- Intervene to revitalize learning processes and restart blocked adaptive processes

Adaptive networks

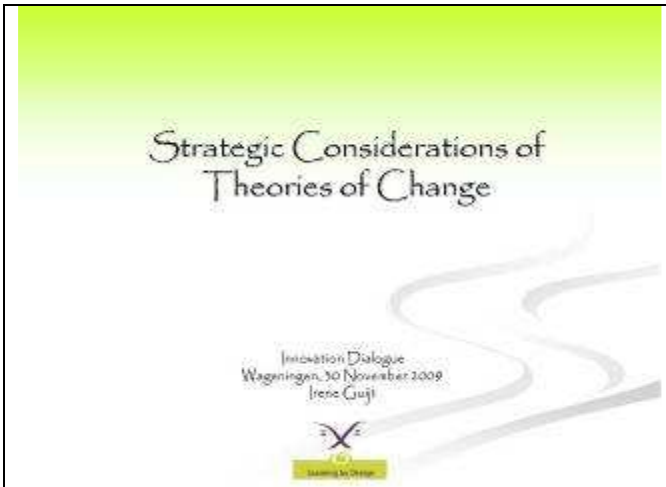
- Single public leader's efforts might not be enough
- Adaptive networks are the hosts of complexity leadership
- Invisible, informal, close to power
- Exchange of ambitions, observations and risks
- Enable change that threatens the regime

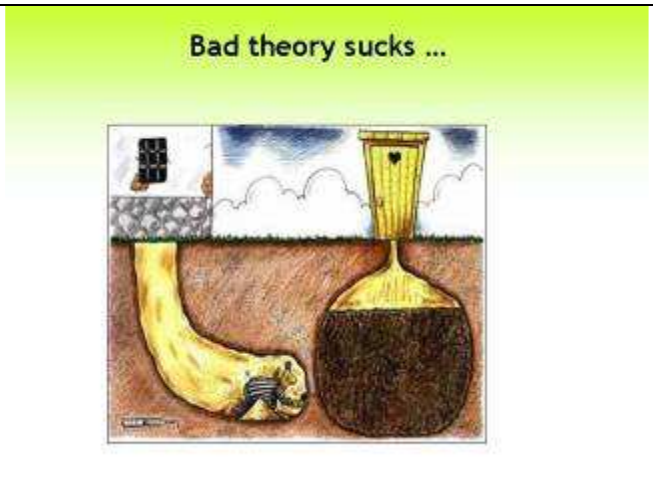
Complexity Leadership: conclusions

- Observing emergent processes of change
- Participating
- Organizing interventions in the case of fixations
- Being selective in new policy
- No big heroic acts
- Making sense of small wins
- Passionate humility
- Member of adaptive networks

Presentation by Irene Guijt

Dr. ir. Irene Guijt is consultant at Learning by Design.





Fundamental theories about life

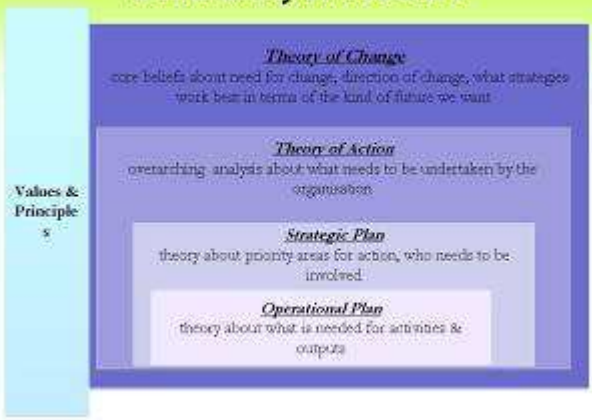
- We all have theories (assumptions) about:
  - How history (change) happens
  - Human nature and social interaction
  - Specific cause-effect relations
  - Politics and power
  - The motivational strength of 'faith'
  - People's beliefs and motivation ….. *etc, etc, etc*

And these theories strongly influence how we understand or claim success/failure and make decisions en route

What *is* a ToC?

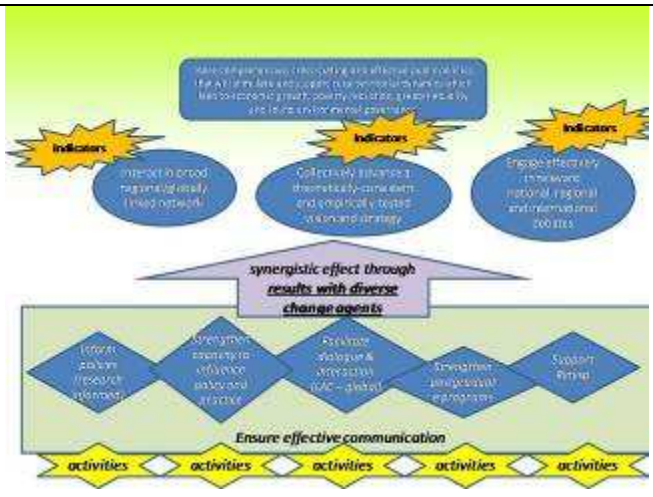
- Representation of pathway(s) through which a vision of change is envisaged to occur
- Many variations!
  - Includes: activities, results, context, values
  - Linearity of pathway: logframe vs freeflow
  - Focus: on actors, stakeholders or actions
  - Detail of assumptions / pre-conditions
  - How developed: *inductive* (idealised discourse; idealised mental models); *deductive* (actual); *stakeholders' mental models* (mix of ideal and real); *abductive*
  - Ownership: *experts, stakeholders*

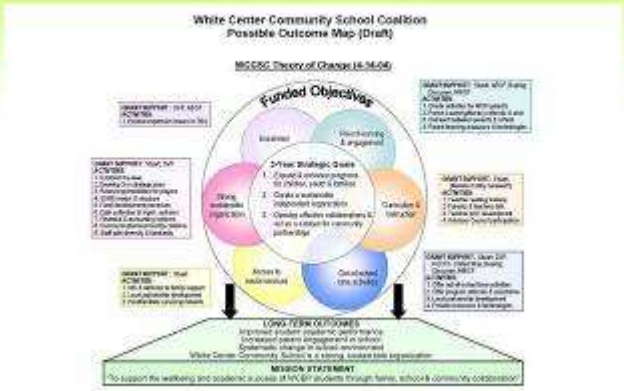
A Hierarchy of Theories



Objective Hierarchy

Theory of Change - Pathway of Change



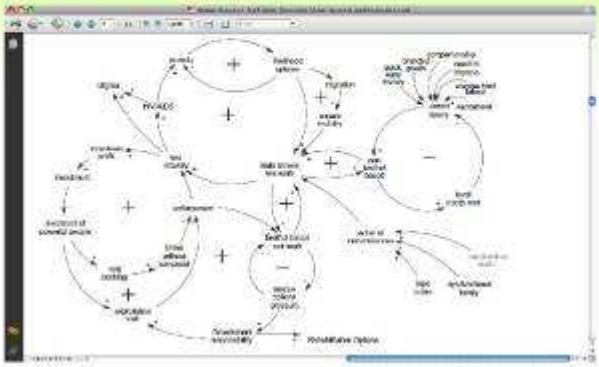


Working with Assumptions

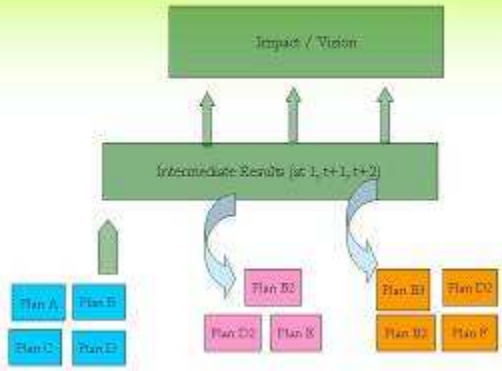
- Operational and strategic assumptions
- Focused risk management

	Mild CONSEQUENCES	Serious CONSEQUENCES
Low RISK	Don't worry	Can consequences be mitigated?
High RISK	Can risk be reduced?	Watch out! Will hit us

Human Trafficking - Soft Systems (Sam Joseph)



'Life is a path you beat by walking' complex impacts



Diversity is Key: Horses for Courses

Differentiating Expectations (Rogers 2009)

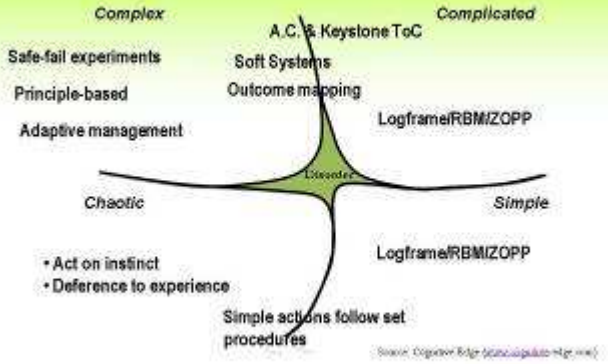
	Simple	Complicated	Complex
Intervention	Discrete, standardized, based on best practices	Same basic idea but variation due to context, based on good practices	Emerges in response to changing needs, opportunities, understandings of
needed		situations	generation (ongoing)
Metaphor for planning	Google directions	Transport map and timetable	Topographical map and compass

HEALTH WARNING

1.Any problem, context, intervention is a mix. Life is not ALWAYS COMPLETELY complex. …

2.What is considered 'simple', 'complicated' , 'complex' are socially constructed.

Locating ToC Options



How 'Complexity' Makes a Difference

Key Phenomena

- Non-linearity
- Unpredictability
- Multiple social actors & their interdependence
- Long term institutional transformation
- Working towards attractors/patterns that work
- Ensuring boundaries with constraint framework
- Hindsight doesn't help foresight

- So....

Assumptions at Odds with Reality

"...in decision-making at both policy-making and operational levels, we are increasingly coming to deal with situations where these assumptions [of order, rational choice and intentional capability] are not true, but the *tools and techniques which are commonly available assume that they are*." (emphasis added)

Kurtz and Snowden 2003

Core Challenge

- Trying to intervene sensitively and successfully in complex situations/ on complex problems with:
  - little time
  - few resources
  - weak analytical capacities
  - many competing demands
- and
  - a largely linear and inflexible aid system
  - hyperinflation of expectations

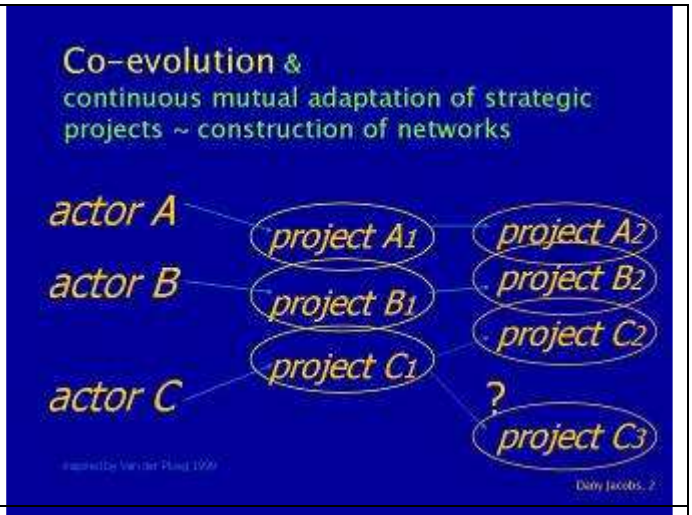
Discussion

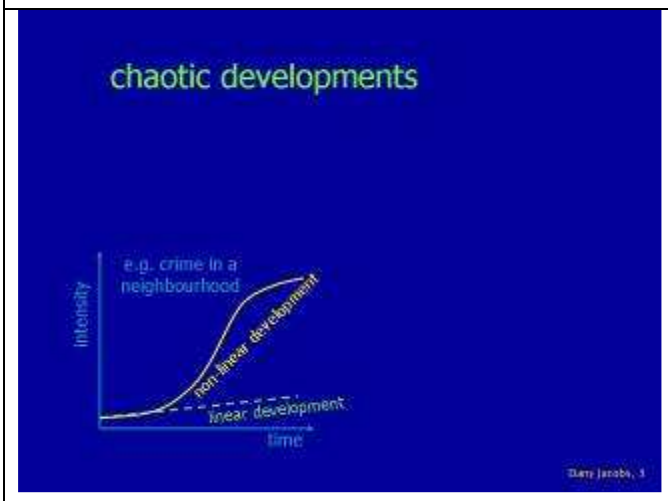
Is it a problem to represent reality as a simple causal model of boxes and arrows, or should the logic models we use address the complexity of life – and if so, how? (Rogers 2008)

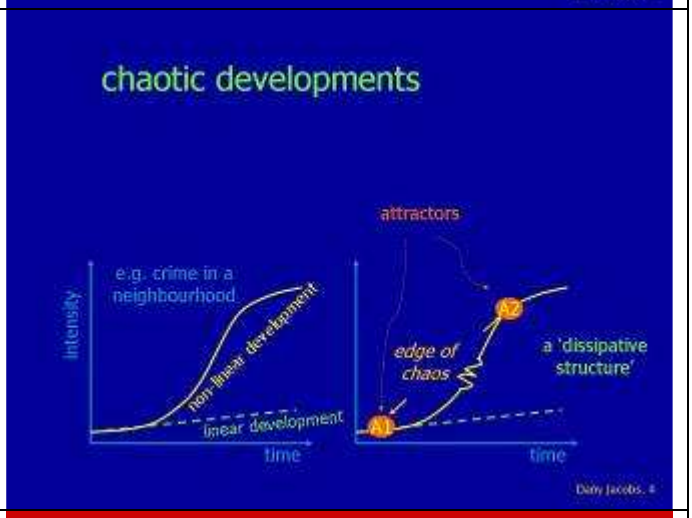
- How does a ToC need to be different from mainstream program logic models to be useful under conditions of complexity?
- Is this feasible? Will it be tolerated by 'the system'?

Presentation by Dany Jacobs

Prof. dr. Dany Jacobs is professor at the University of Amsterdam and ARCCI, Arnhem Centre for Creative Economy and Innovation.





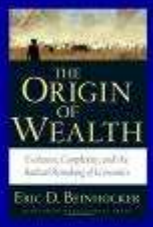


Chaos & complexity theory

- chaos ~ self organisation, order
- systems are complex and learn at all levels of aggregation ~ positive and negative feedback ('complex adaptive systems' = CAS or 'complex evolving systems' = CES; 'fractals')
- systems develop between different 'dynamic equiibria' (held together by different 'attractors') through revolutions, non-linear developments ('punctuated equilibrium')
- complexity theory: combining elements of evolutionary and open systems theories

Four strategic approaches

"Long term strategy is hopeless"



- Scenario analysis
- Networking and rapid learning
  - guerilla
  - innovation as co-evolution
  - strategy as co-evolution
  - understanding tippy markets and information cascades
- Providing a recognizable, stable beacon
- Thoroughly understanding your selection environment

1. SCENARIO ANALYSIS

THINKING THE UNTHINKABLE !?

Scenarios and the paradox of thinking the unthinkable

We can only see what we want to see

Peter Drucker

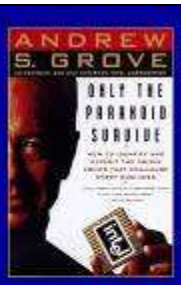
(1909-2005)

"I never predict. I just look out of the window and see what is visible but not yet seen"

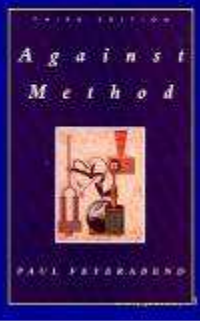
Survival of the Misfits

the importance of real diverisity and a place for independent thinkers

chaman jester berdache hijra



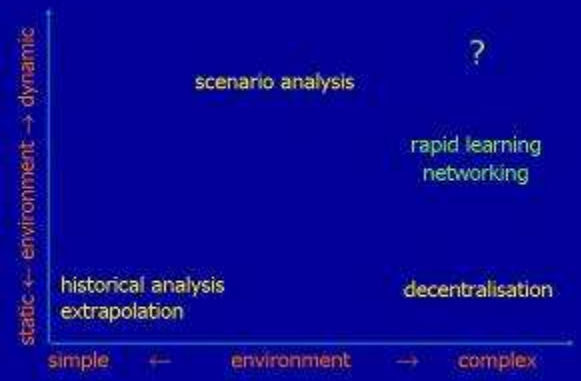
- Watch for strategic inflection points, when 'strange things' happen.
- At least have an ear for the Cassandra's in your organization.



"Anything goes"

2. NETWORKING AND FAST LEARNING

+ RECOGNIZING TIPPY MARKETS AND INFORMATION CASCADES



Guerilla ~ hypercompetition

- 'hit and run'
- a radical version of the evolutionary and the entrepreneurial schools
- in hypercompetitive situations no sustainable competitive advantage is possible
- incumbents are too slow to react

D'Aveni's new 7 S-model (1994)

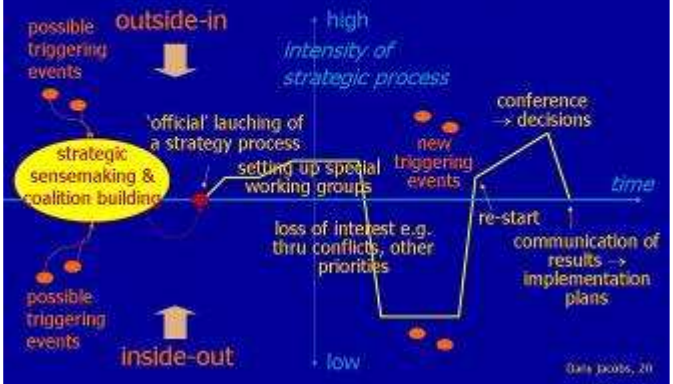
- Superior stakeholder satisfaction
- Strategic soothsaying: self-fulfilling prophecies
- Speed
- Surprise
- Shifting the rules
- Signaling: showing your preparedness to fight
- Simultaneous end Sequential Strategic Thrusts: attacking on many fronts

Discussion

- the idea of surprise is one of the oldest in the history of strategy, but in modern literature somewhat neglected (e.g. ploy = smallest of Mintzberg's 5 P's for strategy)
- optimistic, entrepreneurial flavour,
- also guerilleros need quite a few competences
- not all situations are hypercompetitive
- never underestimate incumbents (cfr. Laurus ↔ Ahold) [d'Aveni himself changed camp in the direction of sustained strategic dominance and the strategic defense of incumbents!]

Innovation as co-evolution

Strategy as co-evolution

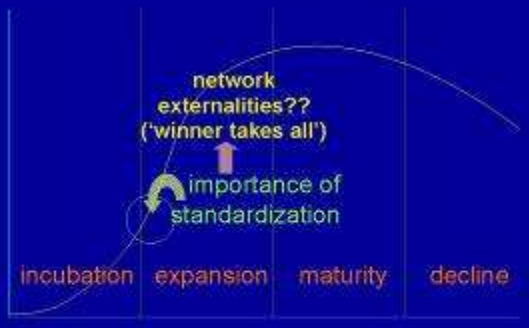


Understanding information cascades, tippy markets

- network externalities ~ technical standards, uniformity
- bandwagon effects: imitation, information cascades = social and cultural aspects of innovation

Losers may become winners

tippy markets and network externalities

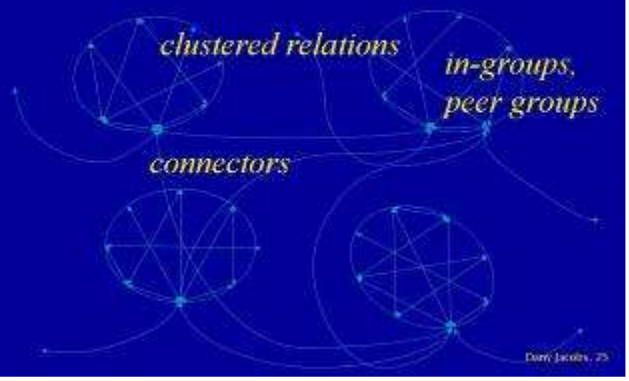


Network externalities

- importance of standardization
- plus possible complementors
  - e.g. Microsoft Office
  - e.g. Wintel: Windows + Intel microprocessors
- plus possible economies of scale

  (What's the use of 1 telephone?)

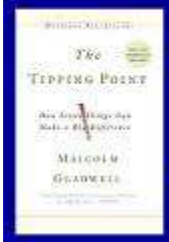
Information cascades in a networked world



Information cascades in a networked world

- relative stability within the clusters (in-groups, peer groups)
- 'the strength of weak ties': you learn most from outsiders, mostly mediated by connectors
- sometimes: 'information cascades', hypes, fashions

Malcolm Gladwell about 'social epidemics' (= information cascades)

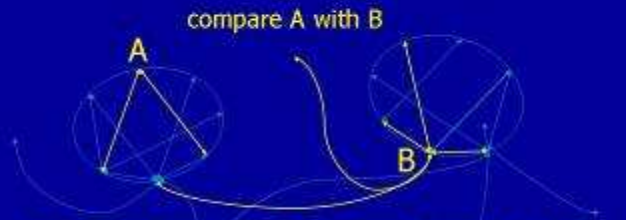


- The Law of the Few: only a small amount of people matter: Connectors, Maven (yiddish: experts who like to talk), Salesmen (persuaders).
- The Stickiness Factor: holding the attention; e.g. games, suspense, structure, practical information, active engagement + repetition.
- The Power of Context: people are very sensitive about their environment: peer and community influence.

A network view of the world: consequences

the dynamic of a 'self organising' network is determined by the amount of units (N), the amount of connections beteen these units (K) and the strengths of these (P)

A network view of the world: consequences



- the more people you know and respect, the less influenceable you are
- if everyone would be a connector, nothing would change

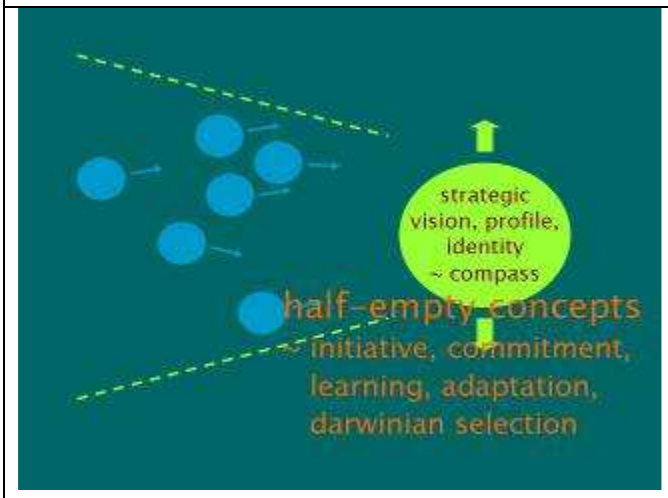
Key assets ~ bandwagon effects

- cfr. Gladwell's sticky communicators
- endorsement by superstars
- connections with subcultures
- having a feeling for fashions, value changes
- reputation and branding, visualisation

3.
PROVIDING A RECOGNIZABLE, STABLE BEACON

→ STRATEGIC COMPASS
→ BRANDING

ceci n'est pas une pipe



McDonald's consistency

some of McDonald's best-known dishes (like the Big Mac) have been developed by its franchisees

4.
THOROUGHLY UNDERSTANDING YOUR SELECTION ENVIRONMENT

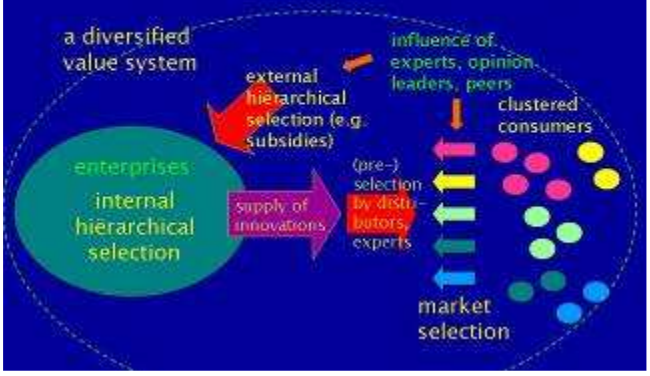
Selection systems

- Selectors and their preferences
- Norms and regulations
- Culture in general and of this system

- Hierarchical
  - Internal
  - External
- Market selection
  ~ consumer preferences
- Hybrid selection
  All kinds of combinations
  e.g. experts selecting

Influences
- Experts
- Opinion leaders
- Peers

valuation and selection through a combination of selection systems



value systems and co-selection in fashion

DISCUSSION

Discussion

- the issue is organized complexity
- understanding self-organisation and non-linear developments
- importance of learning and networking ~ external orientation
- management as feedback on self-organization
- thinking in paradoxes, fields of tension
- but: most developments remain linear

Three metaphores of strategy domain

clockwork	snakepit	rainforest
▪ rational design	▪ rational politics	▪ gut feeling, co-evolving
▪ cockpit approach	▪ process-oriented	▪ process oriented
▪ bureaucratic structure	▪ internal networks	▪ external networks
▪ analysis and planning	▪ strategic compass	▪ strategic compass

inspired by, but not identical with Dawn et al. 2002

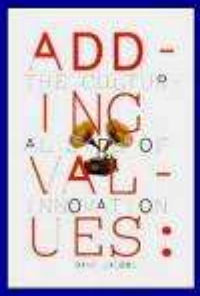
Consequences from complexity theories for (strategic) management

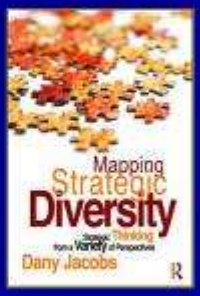
- manage through positive and negative feedback on emergent patterns (i.e. self organisation)
- beware of killing self organisation through overcontrol (especially in a knowledge-based economy where we need intelligence and entrepreneurship at all levels)
- learning and networking in order to follow closely and 'sense' non-linear developments
- limited value (in time) of most opinion surveys, when complexity is organized (i.e. interactive)
- what are the 'attractors' of a system? ~ thinking in paradoxes

Conclusions

- understand your environment thorougly
- you cannot plan and foresee everything; so think chaos & co-evolution
- importance of diversity, curiosity, tolerance and rapid learning ('strength of weak ties', 'new combinations' on the edge of your world)
- co-evolution ~ commitment and trust through daily practice and a 'relational contracts

Stay tuned!





Thank you!

Presentation by Cees Leeuwis & Steven Sherwood

Prof. dr. ir. Cees Leeuwis and dr. ir. Steve Sherwood of the Communication and Innovation Studies Group at Wageningen UR.

Workshop
Science, Complexity and Innovation
Cees Leeuwis & Steve Sherwood
chairgroup Communication and Innovation Studies

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What do we mean by 'innovation'

- An **invention**
  - a new principle (e.g. making electricity from sunlight)
- A **product innovation**
  - A principle packaged in a product (0-5 years)

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Solar calculator

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What do we mean by 'innovation'?

- A **system innovation**
  - Innovations which transcend organisations, and change the relations in a network
  - Involving changes in product and process (5-15 years)

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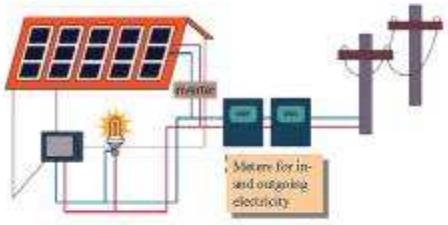
Gridconnected PV system (photovoltaics)



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What do we mean by 'innovation'?

- So:
- 'Innovations' do not consist of technical devices only but of new 'hardware, software and orgware' at multiple levels
- Innovation happens in societal networks
- Meaningful innovation requires integration of knowledge and insight for various sources
- Innovation involves politics, struggle and competition

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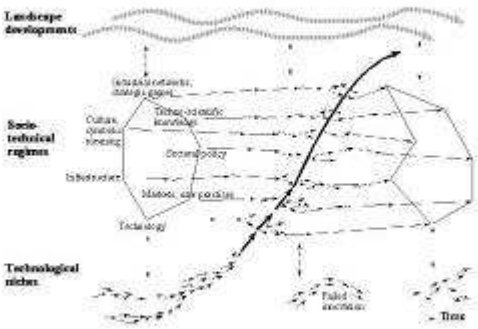
System innovation according to Geels (2002)



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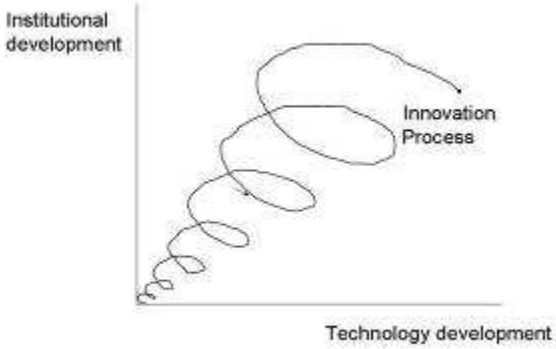

What do we mean by 'complexity'?

- A situation/variable is influenced by many factors
- All factors are dynamic – the only constant is change
- There may be multiple positive/negative feedback loops

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Feedback loops (including virtuous / vicious circles)

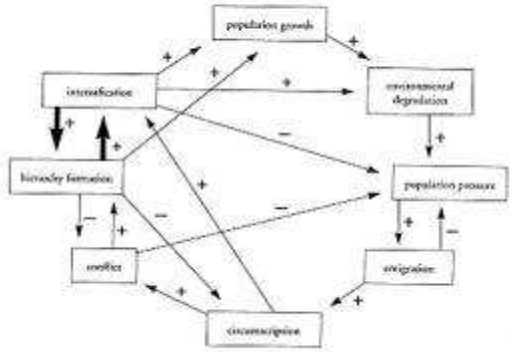
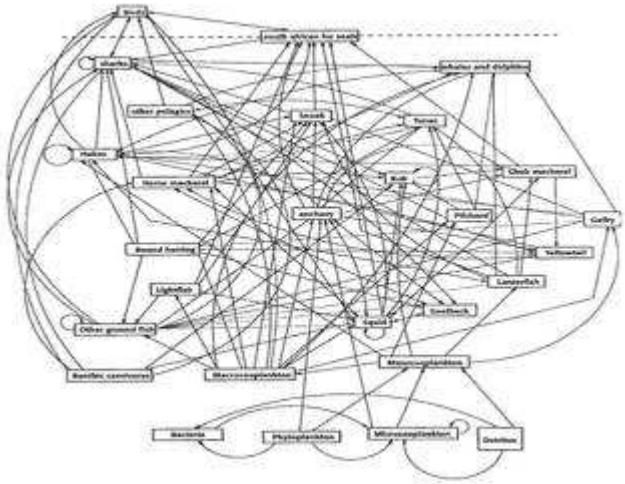


FIGURE 6.1 The Population Pressure/Intensification/Hierarchy Formation Model



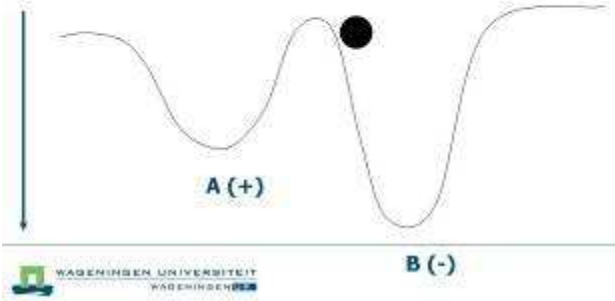
What do we mean by 'complexity'?

- Systems are not (cannot be) controlled centrally – order emerges without external control (self organisation)
- In many situations we cannot predict the consequences of what we do
  - social processes (and struggle) are capricious
  - unintended consequences
- 'complex systems' may change in non-linear ways- sudden shifts may occur

What do we mean by 'complexity'?

- at given moments systems are 'attracted' to a relatively stable (but dynamic) system state
- An 'attractor' is:
- "a state or a reliable pattern of changes (e.g. periodic occillations) toward which a dynamical system evolves over time and to which the system returns after it has changed" (Coleman et al, 2007b: 5)

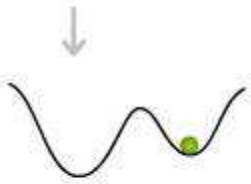
A Dynamical System with Two Attractors (Coleman et al, 2007)



What do we mean by 'complexity'?

- multiple attractors exist – many of which are 'latent'
- triggers / interventions may change: 'system state' and/or 'attractor landscape'

Not only the state of a system changes, but also the 'landscape' – i.e. the potential for change



Example of an emerging 'latent attractor' or 'window of opportunity'

- Simultaneous developments:
- (1) rapid population increase in China
- (2) China increases 'development aid' to Africa
- (3) rapid increase in Internet and ICT facilities in both China and Africa
- (4) China recently signed WTO agreements
- Potential scenario (but far from automatic): African farmers gain access to the Chinese food market

What do we mean by 'complexity'?

- **But:** Complexity does not only arise from lack of understanding about 'causes and effects'
  - as emphasized in Cynefin framework
- Also from: inter-dependence between different networks and spheres with different logics / rhytms
- Also from: diverging interests / conflicting goals

Innovation as a process – in the context of complexity

- Network building (& destruction)
  - opening up space in which solutions can be found
- Conflict management / negotiation
  - overcoming / managing inherent conflicts
- Social learning
  - the process of arriving at complementary 'mindsets' ('reasons for action') in a network of interdependent stakeholders

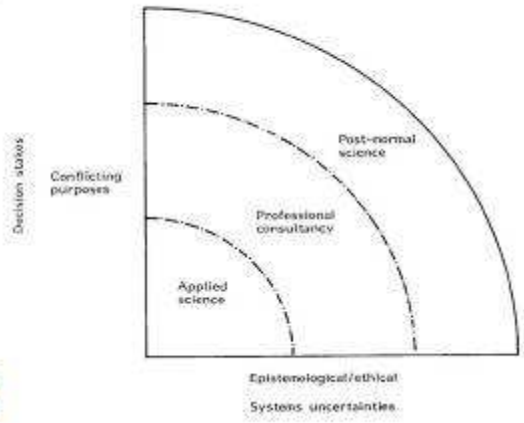
What about the role of science & research?

- The typical response at the CGIAR Science Council:
  - More research needed **on** complexity
  - Let's model complexity!
  - If we understand complexity, then we can move forward
- In essence: let's reduce complexity and bring it under control!

What about the role of science & research?

- This approach is not going to help much
  - It is impossible: conditions change continuously
  - It is too slow / inflexible to adapt to ongoing dynamics
  - It is too slow / inflexible to support decision making
  - It is too isolated to be influential

Funtowicz & Ravetz (1993)



In complex situations

- Science cannot usefully operate in (only) an isolated, linear and 'puzzle solving' mode
- Science may/must become 'embedded'
  - improve the quality of societal negotiation
  - in term of e.g. transparency, levelling the knowledge playing field
- In negotiations research questions are not politically neutral

What can scientists do **in** complexity? (besides becoming a process facilitator)

- First of all: Become engaged / connected to 'local' contexts
- This may be in more and less conventional role positions:
  - critical outsider
  - consultant / advocate
  - action researcher
  - knowledge broker
  - explorer
  - reflexive monitor

Critical outsider

- Provide critical feedback based on 'conventional' research
  - maintaining distance, ones own research agenda
  - from ones own (non-neutral) problem views
- Setting agenda's for societal debate
- Make timely contributions to the societal debate

Consultant / advocate

- Working for specific stakeholders or coalitions.
- Address questions and uncertainties from a particular viewpoint
  - E.g. stakeholders / interests that are relatively weak
- Providing 'ammunition': arguments and counter-arguments

Action researcher

- Gaining knowledge by attempting to change the system
- Collaborative research and joint fact-finding in a multi-stakeholder setting
- Carrying out and evaluating 'niche' experiments with stakeholders

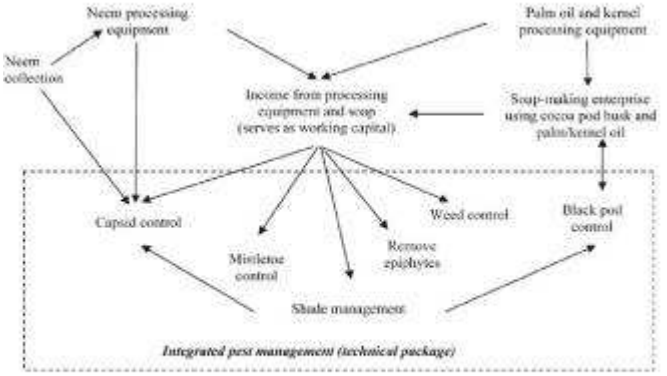


Figure 2. Overview of social-organizational, economic and technical arrangements which together formed the innovation in Achiansah

Knowledge broker

- Eliciting explicit and implicit uncertainties that stakeholders experience in view of options for change
  - organising quality interaction to articulate knowledge demand
- Translating these into researchable questions
- Identify relevant experiences elsewhere
- Connecting people to relevant expertise, experience and resources

Explorer

- Support vision development / enlarge solution space through e.g.
  - Trend analysis
  - Scenario analysis
  - Analysis of positive deviance & emergent innovation
  - Modelling
- In essence: identifying / forming 'latent attractors'

Reflexive monitor

- Study intended / unintended consequences of ongoing action
- Monitor progress in innovation networks
  - from stakeholder and theory perspectives
  - including process indicators (in the absence of pre-defined outcomes)
  - e.g. changing network configurations, discourses, etc/
- Monitor changes in the wider environment

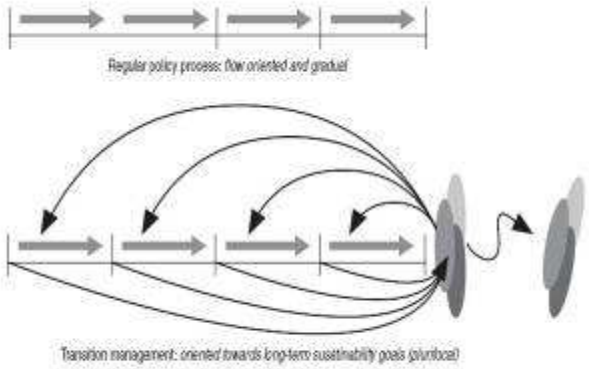


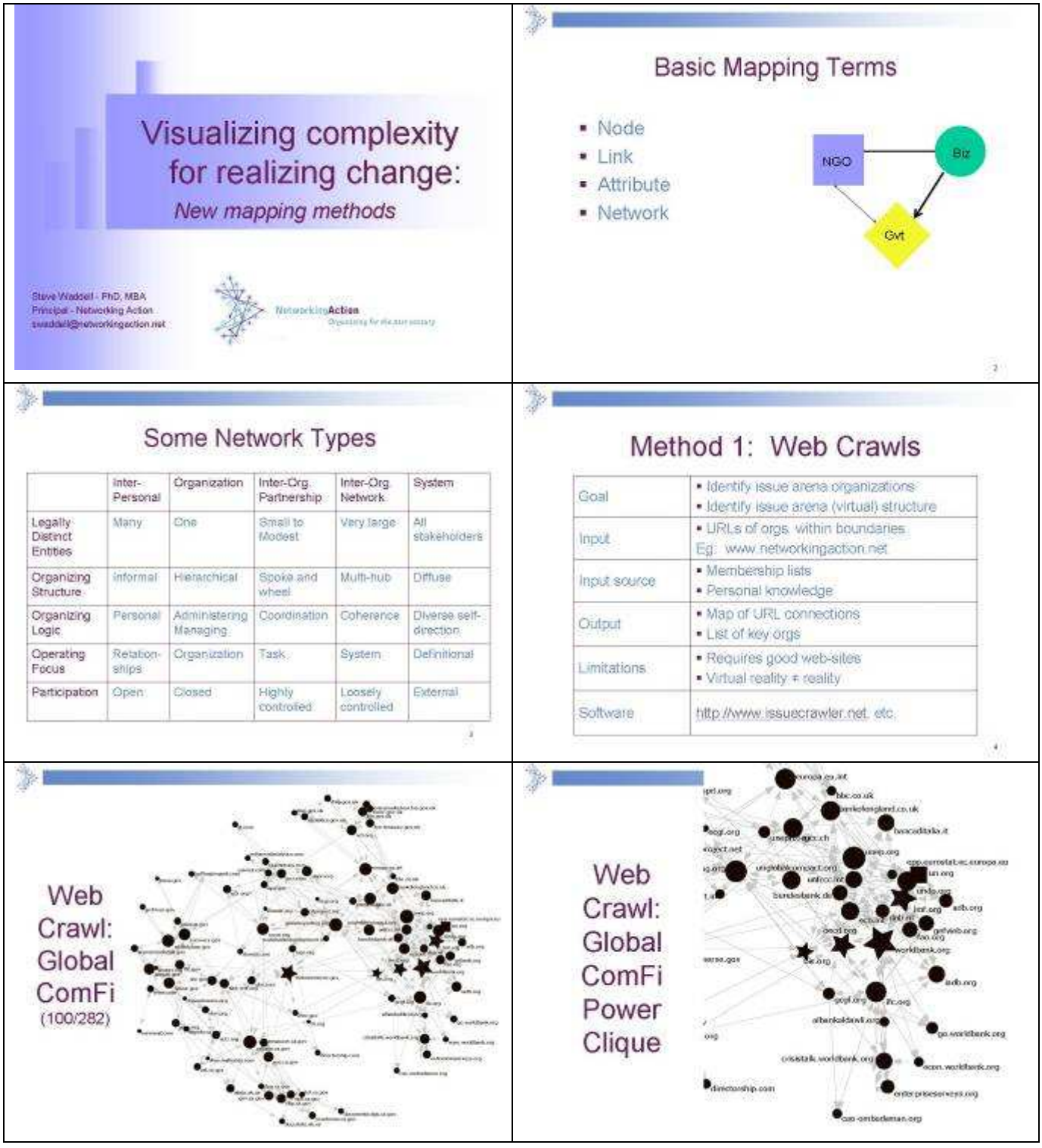
Figure 4.2 Regular policy versus transition management process

Possible areas for discussion in smaller groups

- Deepen specific roles – what are critical principles?
- Can facilitation and research tasks be usefully seperated?
- How can researchers come in a position to play such roles?
- How can challenges (e.g. incentive structures, dominant science rhetoric) be overcome?
- Other topics?

Presentation by Steve Waddell

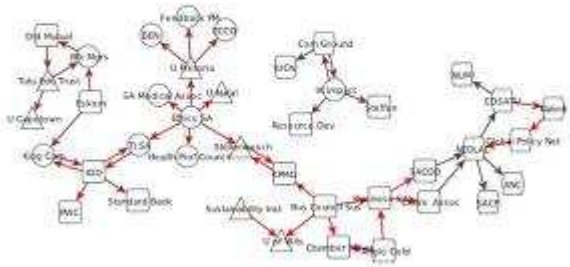
Dr. Steve Waddell is principal of Networking Action.



Method 2: Social Network Analysis (SNA)

Goal	▪ Describe issue arena individuals'/organizations' structure ▪ Identify work flows of individuals/organizations ▪ Identify strategic leverage points		
Input	▪ Nodes ▪ Links	▪ Attributes	
Input source	▪ Interviews ▪ Surveys	▪ Web sites ▪ Lit reviews	▪ Workshop data
Output	▪ Map of links and attributes		
Limitations	▪ Challenge of identifying boundaries and roles ▪ Requires good starting list ▪ For org. analysis, data extrapolated from individuals		
Software	▪ Ucinet, NetMiner, Visone, orgnet.com, etc.		

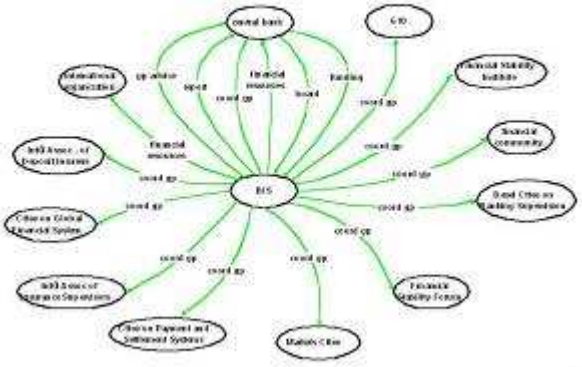
SNA: Global Reporting Initiative South Africa



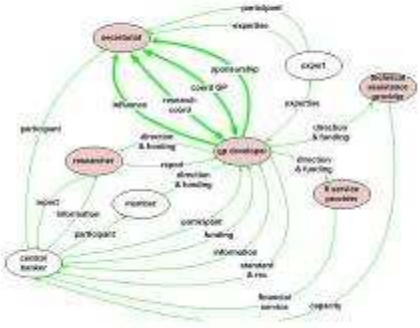
Method 3: Value Network Analysis (VNA)

Goal	▪ Describe issue arena individual/org. structure/exchanges ▪ Identify network roles and role relationships ▪ Identify strategic leverage points		
Input	▪ Nodes ▪ Links	▪ Attributes ▪ Roles	▪ Exchanges
Input source	▪ Interviews ▪ Surveys	▪ Web sites ▪ Lit reviews	▪ Workshop data
Output	▪ Map of links, attributes, exchanges and roles as either (1) participant-based or (2) role-based analysis		
Limitations (SNA plus)	▪ Institutional mindsets get in the way ▪ Maps may initially appear more complicated		
Software	▪ valuenetworks.com		

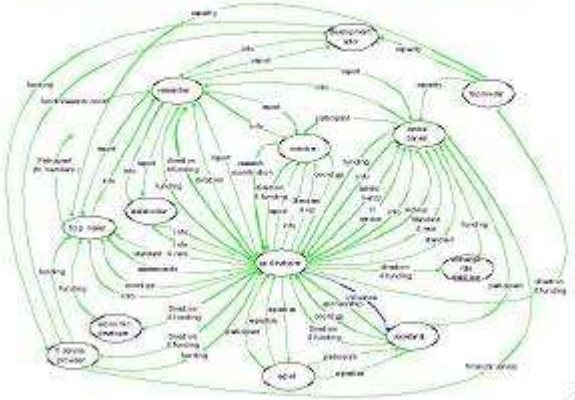
Participant-Based VNA: BIS



Role-Based VNA: BIS



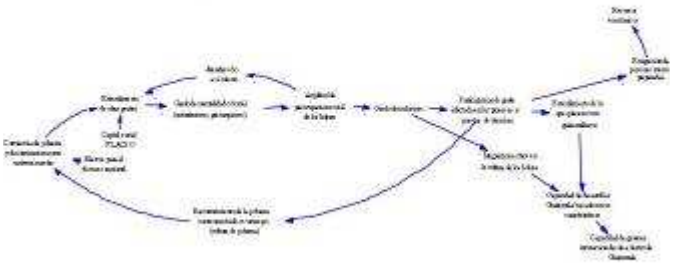
Role-Based VNA: Global Finance



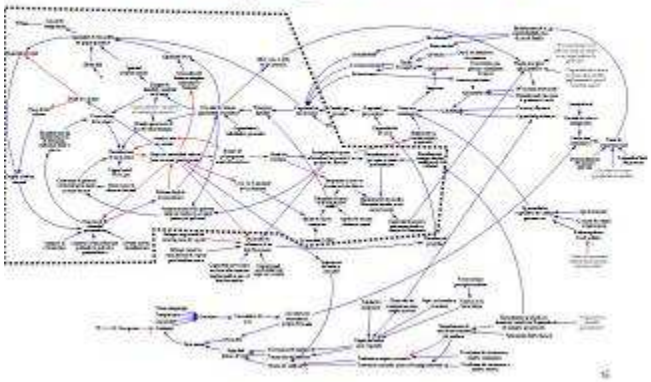
Method 4: Strategic Clarity Analysis

Goal	• Describe how stakeholders think the system works/ToC • Create common stakeholder vision • Identify strategic leverage points
Input	• Individuals /groups' view of how the system works (cause-effect)
Input source	• Interviews • Workshop data
Output	• Map of mental models of how a system works
Limitations	• Creating maps requires significant expertise • Maps initially appear complicated
Software/ref	• www.vensim.com; instituteforstrategicclarity.org

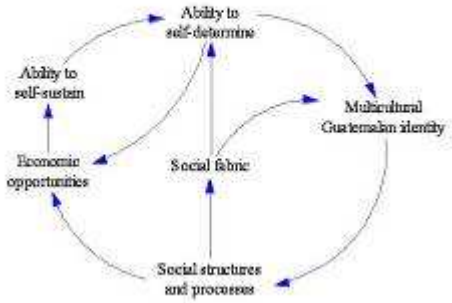
SC Mapping: Describing the Dynamics of Poverty



SC Mapping: all variables



SC Mapping: System Dynamics of Guatemalan Poverty

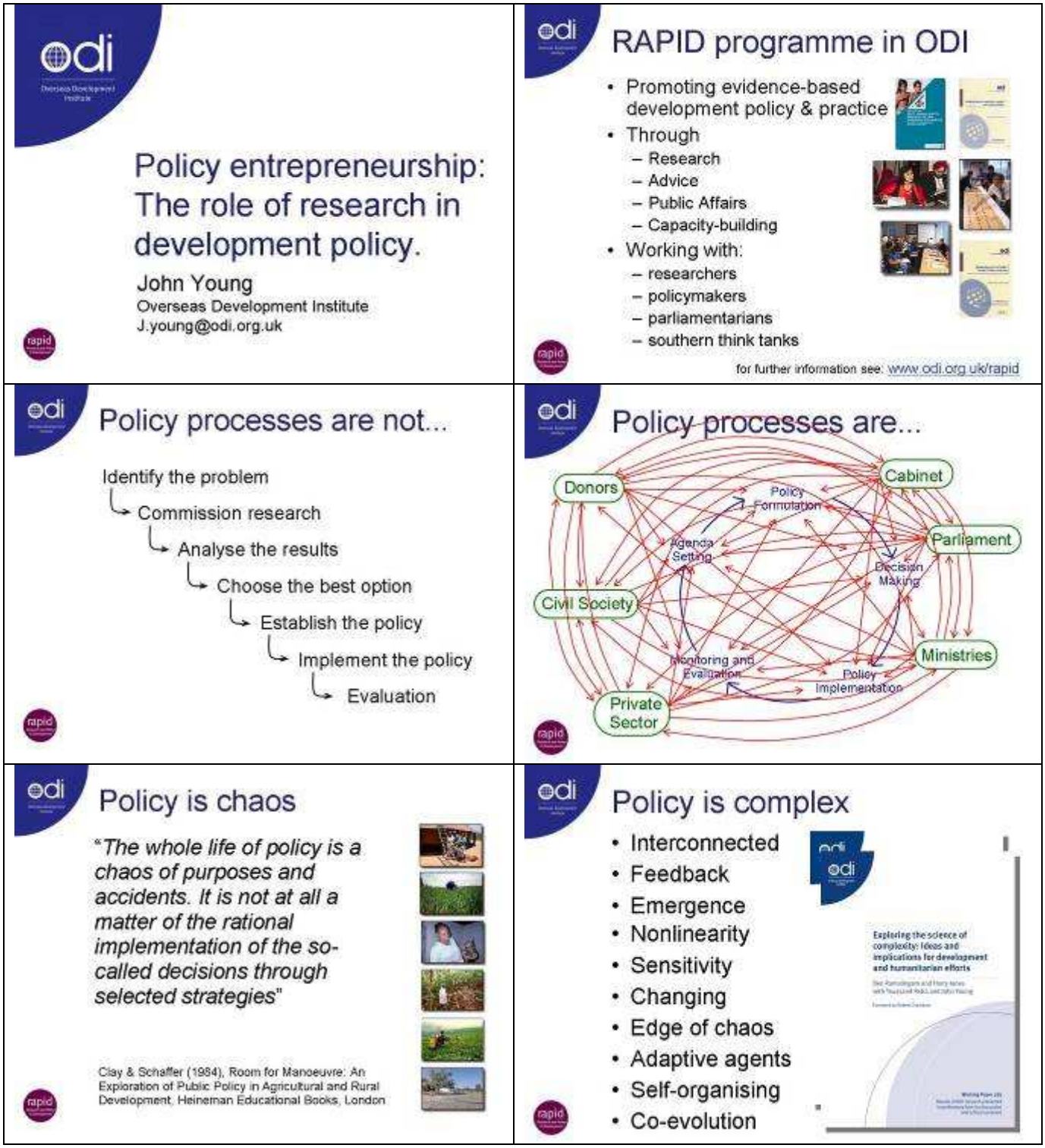


Characteristics of Mapping Approaches

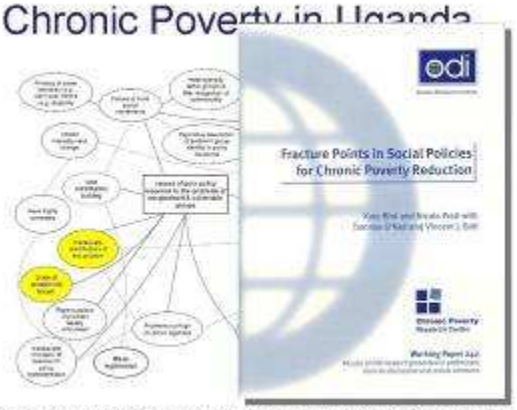
	Complexity it clarifies	Required knowledge of who	Required knowledge of relationships	Increase in knowledge of value created	Increase knowledge of sustainable value-creation
Web crawl	Stakeholders relationships in a system	low	low	low	low
Social network	Structure of relationships	medium	low	low	low
Value network	Value creation among relationships	medium	medium	high	high
Strategic clarity	Leverage points for dynamic, collective value creation	high	medium	high	high

Presentation by John Young

John Young, M.B., is Director of Programmes on Research and Policy in Development at the Overseas Development Institute (ODI).



Chronic Poverty in Uganda



Kate Bird et al. Fracture Points in Social Policies for Chronic Poverty Reduction, ODI WP242, 2004
(http://www.odi.org.uk/publications/working_papers/wp242.pdf)

Policy makers are…

…practically incapable of using research-based evidence because of the 5 Ss…

- Speed
- Superficiality
- Spin
- Secrecy
- Scientific Ignorance

Vincent Cable – Lib. Democrat MP & Shadow Minister of Finance
More at: www.odi.org.uk/RAPID/Meetings/Evidence

There are many other factors

Source: Phil Davies Impact to Insight Meeting, ODI, 2005

Different notions of evidence

Researchers' Evidence	Policy Makers' Evidence
• 'Scientific' (Context free)	• Colloquial (Contextual)
• Proven empirically	• Anything that seems reasonable
• Theoretically driven	• Policy relevant
• As long as it takes	• Timely
• Caveats and qualifications	• Clear Message

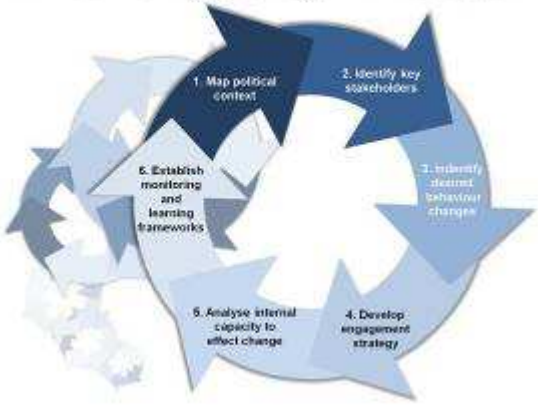
Source: Phil Davies Impact to Insight Meeting, ODI, 2005

Health Care in Tanzania

"The results of household disease surveys informed processes of health service reform which contributed to a 43 and 46 per cent reduction in infant mortality between 2000 and 2003 in two districts in rural Tanzania."

TEHIP Project, Tanzania: www.idrc.ca/tehip

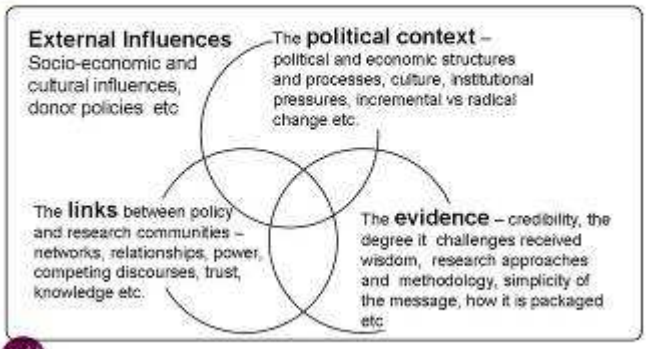
Influencing policy in 6 steps



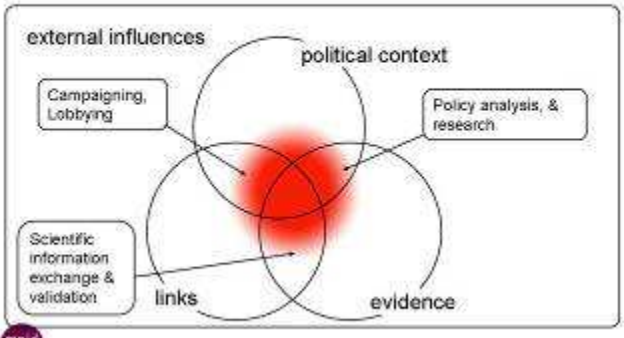
1. Define policy objective

- *Discursive:* Client-focused services
- *Attitudinal:* Farmers have good ideas
- *Procedural:* Participatory approaches to service development
- *Content:* UU20, UU25. New guidelines
- *Behavioural:* Approach adopted for other sectors

2. Understand the context



2. Understand the context



2. Understand the context

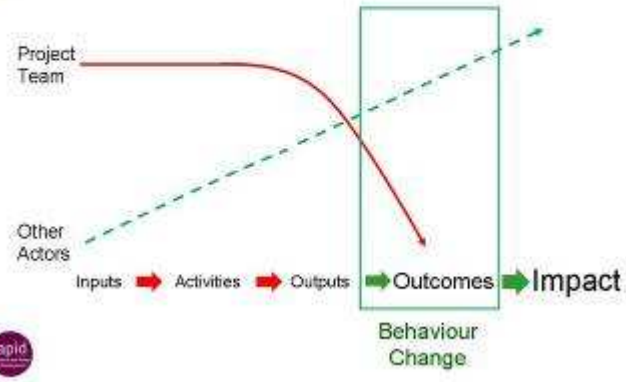
- **The external environment:** Who are the key actors? What is their agenda? How do they influence the political context?
- **The political context:** Is there political interest in change? Is there room for manoeuvre? How do they perceive the problem?
- **The evidence:** Is it there? Is it relevant? Is it practically useful? Are the concepts familiar or new? Does it need re-packaging?
- **Links:** Who are the key individuals? Are there existing networks to use? How best to transfer the information? The media? Campaigns?

3. Identify the key actors

Use the Alignment Interest Influence Matrix (AIIM) to identify the critical stakeholders

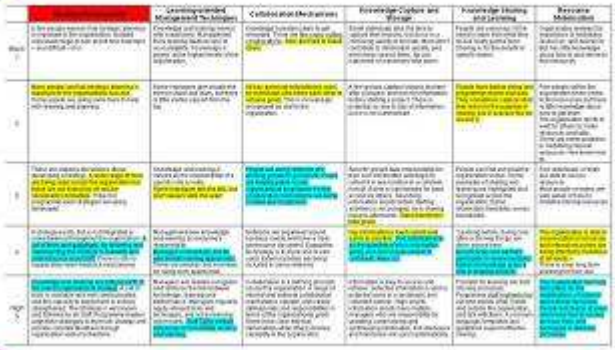
1. Map actors on the matrix
2. Identify which are the most influential
3. Who do you work with directly?

4. Develop a theory of change

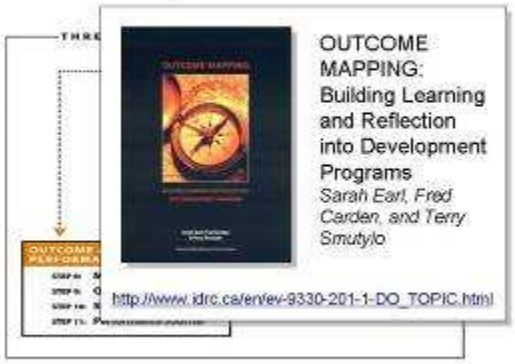


5. Develop a strategy

6. Assess competencies



7. Develop an Action Plan



8. M&E & Learning

1. Strategy and direc
   Network Analysis; Im
   Matrices
2. Management: 'Fit f
   Touch' Quality Audits
   Appreciative Inquiry
3. Outputs: Evaluating
   research reports; Eva
   papers; Evaluating w
   After Action Reviews
4. Uptake: Impact Log
   Analysis; User Surve
5. Outcomes and imp
   Assessment; Most Si
   Histories; Episode St

Policy entrepreneur

Groundwater in India

- to maximise impact of DFID forest/ ground water research project in India
- Researchers, policy makers and activists
- Used framework to analyse factors in water sector in India
- Developed strategy for final phase:
  - Less research
  - More communication
  - Developing champions in regional and national government
  - Local, Regional & National advocacy campaign

Practical T

Overarching Tools
- The RAPID Framework
- Using the Framework
- The Entrepreneurship Questionnaire

Communication Tools
- Communications Strategy
- SWOT analysis
- Message Design
- Making use of the media

Policy Influence Tools
- Influence Mapping & Power
- Lobbying and Advocacy
- Campaigning: A Simple G
- Competency self-assess

Further information

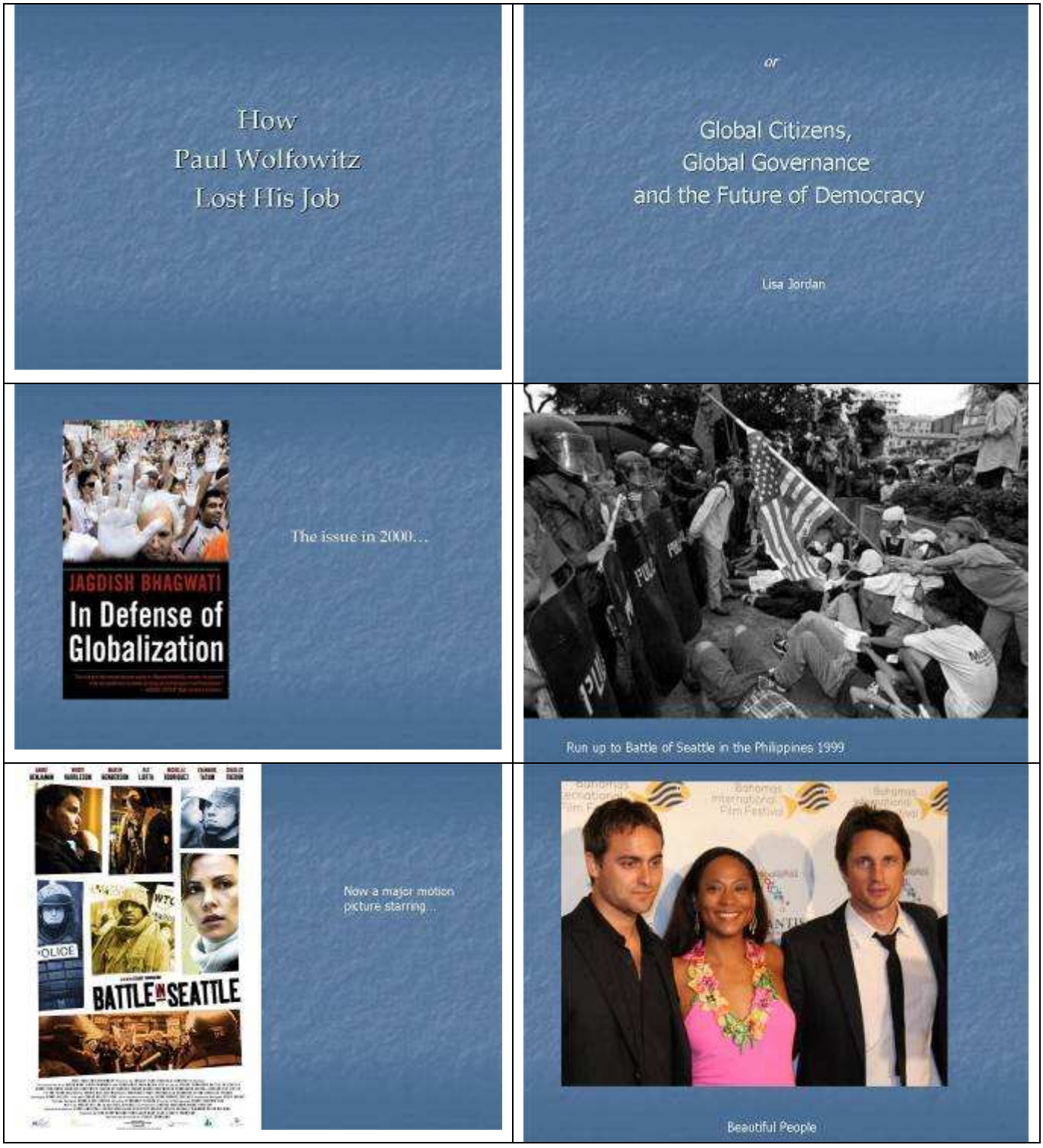
ODI – www.odi.org.uk

RAPID - www.odi.org.uk/rapid

Me: j.young@odi.org.uk

Presentation by Lisa Jordan

Lisa Jordan is executive director of the Bernard van Leer Foundation.



Didn't make the film version

Global Governance

- Governance can be defined as the making and implementation of rules, and the exercise of power, within a given domain of activity. 'Global governance' refers to rule making and power exercised at a global scale, but not necessarily by entities authorized by general agreement to act (Keohane 2003 in Held).

2000 Context

Growing Unregulated Global Market
Market Led Growth
The Washington Consensus
Structural Adjustment
Free Trade
Public Private Partnership
Small Government
Shrinking Sovereignty

Powerful Global Political Arena
Market-State-Civil Society

INGOs, BINGOs, QUANGOs
Summits (WSSD, Beijing, Racism and Xenophobia)
Increasing Disparities between Rich and Poor Everywhere

What is global civil society?

What is Global Civil Society

Global civil society is the sphere of ideas, values, institutions, organizations, networks and individuals that are based upon civility, located between the family, the state and the market and operating beyond the confines of national societies, polities and economies. (Anheier 07)

Global Forms of Civic Associations

INGOs:

Global South Networks

Movements

National NGOs

Campaigns

Networks

Faith Based

Global Membership Based Organizations of the Poor

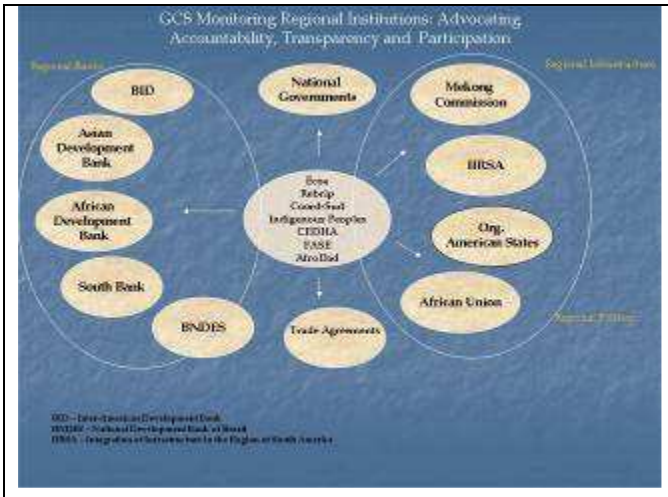
Federations/Confederations

Business Groups

Ethnic, Clan, Kinship Groups

Promoting Civic Engagement in Global Governance

Advocating for Accountability, Transparency and Participation



Research Questions

- Is global civil society a democratizing force on global governance arrangements?
- Have we reached the democratic tipping point in global governance arrangements?

Research Parameters

- 23 global civic associations queried
- Top 5 outcomes of work reported
- 104 outcomes collected
- Sorted and analyzed for transparency, accountability and participation dimensions
- Reviewed for democratic manifestations of each principle

Sample: Outcomes of Global Civic Action

- Resignation of Wolfowitz and cronies
- Whistleblower policies in all MDBs and UN
- Transparency policies in 12 global governing institutions
- Public oversight of internet governance arrangements
- Consultation and transparency at G8
- Ombudsman and social assessments at IMF
- End to Doha Round at WTO
- Transparency in selection of high level UN officials
- Beginnings of a UN parliament
- Do-no-harm policies extended to IFC/IMF

Impacts of Global Civic Action

1. Defining Governance Arrangements.
2. Contributing to subsidiarity, the organizing principle that matters ought to be handled by the smallest, lowest or least centralized competent authority.
3. Clear trend of appreciation for civic engagement in global governance is emerging.
4. Global civil society has also forced global institutions to develop accountability mechanisms that hint at the right to redress when basic human rights have been violated.

Presentation on Capacity Development

By Heather Baser, consultant (co-author of major study on capacity development by ECDPM (www.ecdpm.org).

Capacity Development

What does it mean to be strategic in complex times?

Status of capacity development?

- "key to development"
- Paris Declaration
- Accra Agenda for Action
- Many commitments to strengthen capacity development

Challenges

- Wide range of understandings about capacity and CD
- Little academic legitimacy - scepticism
- Focus usually on CD, not capacity

Key Capacity Concepts

- *Individual competencies* -mindsets, skills and motivations of individuals
- *Collective capabilities* - day-to-day skills of a group or system to carry out a function or process

Individual competencies – skills, mindsets, motivations of individuals

Collective capabilities – skills of a group to do things

Key Capacity Concepts

- *System capacity* – overall, higher order ability of an org or system to perform and make a contribution such as legitimacy, resilience, sustainability

System Capacity – overall ability of an organisation to perform

Key Capacity Concepts

- *Capacity Development* – the process of enhancing, improving and unleashing capacity; involves competencies and capabilities interrelating with context to produce higher-level change

CD – process of enhancing, unleashing & improving capacity

Five core collective capabilities

- To commit and engage – empowerment, motivation, attitude, confidence
- To carry out technical, service delivery and logistical tasks –implement core functions
- To relate and attract – manage relation-ships, mobilise resources, network

More collective capabilities

- To adapt and self renew – learn, strategise, re-position, manage change
- To balance diversity and coherence – manage complexity and stability, control fragmentation

Complexity and the design of CD strategies

- Understanding the context
- Identifying energy for change
- Defining broad goals of change
- Defining competencies and capabilities
- Understanding how participants think about theory of change
- Developing a shared understanding of theory of change
- Developing wide range of interventions

Complexity and the design of CD strategies(2)

- Agreeing on most appropriate planning process
- Developing sense of staging
- Encouraging dynamic processes
- Helping organizations to position themselves
- Identifying windows of opportunity
- CD as on-going
- Going slowly, experimenting
- Choosing interventions carefully – small ones can have large impacts

Complexity and the design of CD strategies (3)

- Staying engaged for the long-term

Challenges

- Pressure for tangible results
- Few methods for M&E
- Vested interests
- High level of analysis
- Expanded level of effort

Presentation on Civic-driven Change and Complexity

By prof. dr. Alan Fowler (ISS/Erasmus University).

EXPLORING CIVIC DRIVEN CHANGE AND COMPLEXITY

Alan Fowler

1st December 2009

THE CDC INITIATIVE

To identify, debate and advance a story of change in societies stemming from peoples' actions as citizens.

THE CDC INITIATIVE

- One year
- Ten people: academics, practitioners, activists.
- Multi-region, multi-disciplinary, multi-ideology, gender balance.
- Open agenda, no log-framed deliverable.
- Consensus not required – differences matter.
- Remit beyond 'aided-change'.
- Self-perpetuating momentum

MAJOR CONCLUSIONS

CDC has the DNA of many existing ideas, but expressed in another way

Citizenship Matters

Civic Values are Vital

Language is Critical

Civic Agency is the Focus

Civic Agency

- Is citizen action towards society as a 'political project'.
- Is about changing the way society works
- and to what image.
- Is about people exerting control over those who have the power to influence their lives.

FEATURES OF CDC

1. Is directed at the interface between citizen and (party) politics
2. Is sensitive to all forms of power
3. Operates within and across institutional boundaries
4. Questions divisions between public and private arenas, responsibilities
5. Is risk-sensitive
   - to 'globalizing' trickle down of risk to those most vulnerable: economic growth is not the core issue
   - to risk distribution in the promotion of change by 'external' actors' goals, values and principles
6. Seeks equity of political agency rather than equity of economic opportunity or incentives
7. Premised on contention as well as collaboration
8. Confronts uncivic agency wherever located
9. Relies on citizen self-organization with connectivity of the 'local' to gain scale and rebuild political systems

CDC AND POWER

The promise of certainty attracts power.

(Barak Obama, Dreams of my Father)

COMPLEXITY = UNDERSTANDING UNCERTAINTY

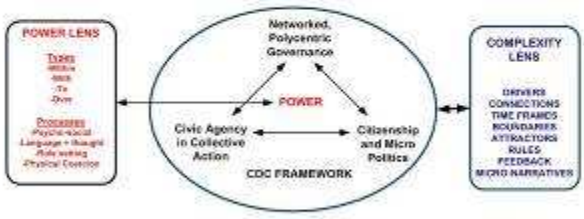
Characteristics:

- Connected social processes
- Multiple agents
- Adaptive iterations/adaptations
- Feedback, patterns and emergence

Navigation

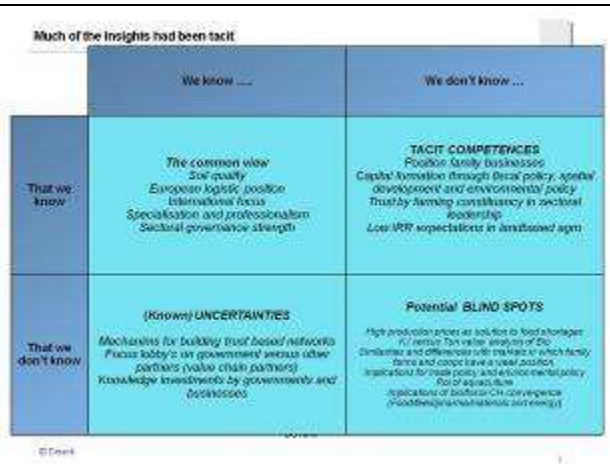
- Boundaries
- Probes and attractors
- Micro-narratives
- ?

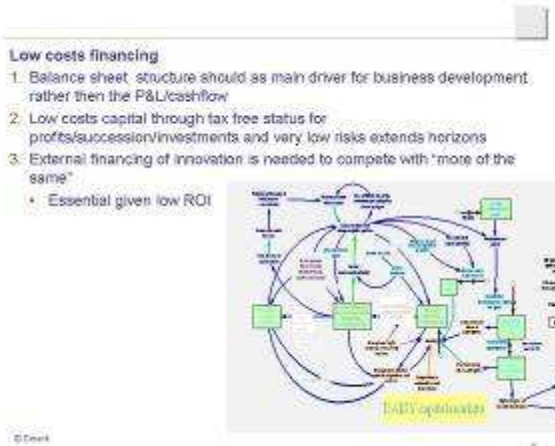
CDC AND COMPLEXITY



Presentation on Agro Innovation Systems

By Dr. ir. Tom Bakker (Wageningen UR/LEI).





Testing hypotheses -

Trust based influence

- Influence through trusted insiders enabled by vertically integrated systems (rather then through confrontation) were critical for success of Agro innovation by allowing for relatively complex, nuanced solutions
  - Trust based because representatives come from the production sector rather then from the companies in the value chain
  - Trust based alliances can be build and need rebuilding
  - Farmers speaking the language of politicians and businesses
  - Among others
    - Tax policies
    - Spatial planning
    - Permits conditions for production, new businesses
    - Regulations on smells, environment,
    - Tradepolicies and restraints, e.g. on meat imports, sugar etc
    - Access to know how and technologies – what is being done? How do they do it, coaching
    - Subsidies for new technology development : transforum/fes/...
    - Subsidies for leavers/managed exit

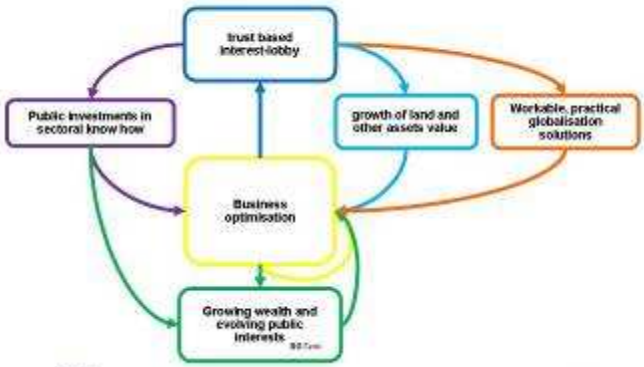
Fit with Sustainability

1. DAISY is essential for sustainability because
   - Multi business long term focussed landvalue developer
   - value of sustainability to end up with the owner/operator
     - green services, land and water quality
     - Sustainability markets CO2 compensation/windmills,
     - Healthcare , recreation, arts etc.
     - Advisory/management services
2. Asset option development drives sustainable value creation, e.g. by building value around the ability to manage constraints
   - Cap and trade as asset builder/tradeable vergunningen etc
   - Asset options can be influenced
   - Long term horizon through low IRR

Area's of further work

Action learning programs integrating a diversity of learning techniques:	Status
➢ BAISY: soy credit in Bolivia • Action: seed financing for 2000 plus farmers. • Functions as model for other countries and regions • Decision path combines actor analysis ; SD models and scenario's	Project proposal
➢ Competing claims: • Technology development program for Soy family farms • Competition with GMO soy programs of monsanto • Multistakeholder analysis (IA) • SD program: innovation (kim warren)	Project idea
➢ LEADinc: Building strong networks of farmers, value chain partners etc. • High potentials • Partners with: foodlab/MIT • Building innovation competences for producers • Network mapping (Steve waddell)	Project idea
➢ Innovative financing of farming (IFC workshop)	Concept
➢ City agro/metro agro: Boston etal	concept

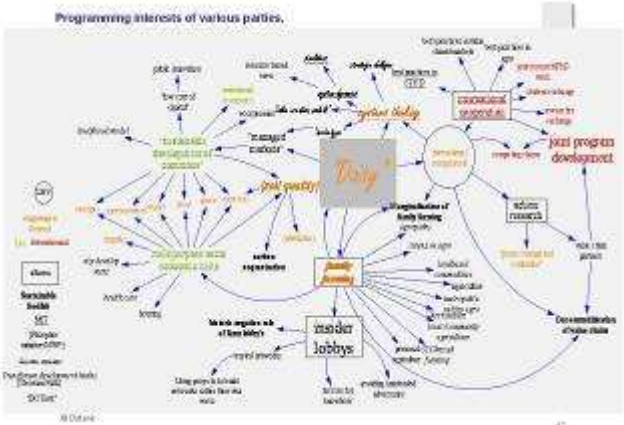
DAISY high level view – an analytical framework



DAISY high level view – an analytical framework

Value chain model with the positioning of DAISY combining the agro business model with impact of national policy frameworks

Programming interests of various parties.



Rond praten:

Daisy onderwerp. Agro innovatie en wat hebben we daarover geleerd.
Gebruik van methode sd wat is het.

Wat hebben we gemist/wat is verrassend/

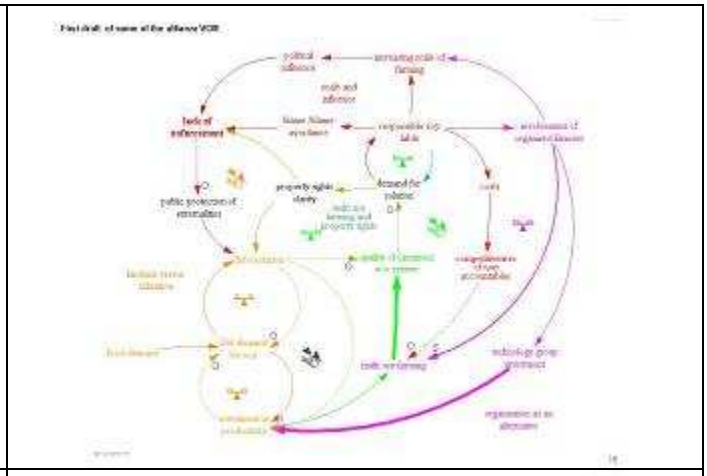
Volgende stappen: project definities.

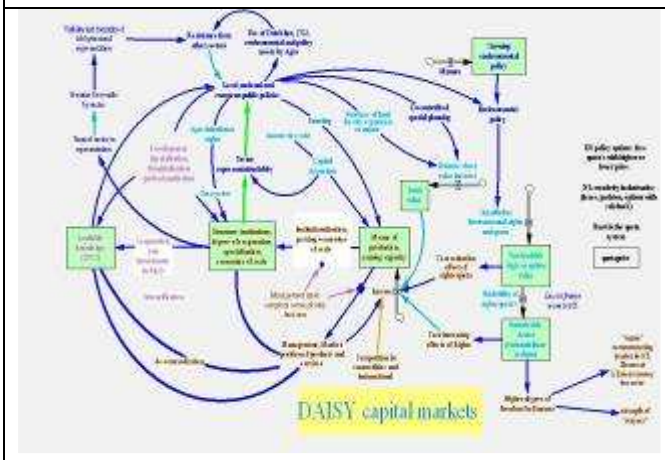
- Action learning for x AISY's, Fair trade, competing claims, city farming/metro agro,
- ; soy fam, Farming Baisy – key variables for family farming success – wat is daisy resultaat – wat missen we. City farming, fair trade labeling.
- leadinc
- Fit met andere programma's

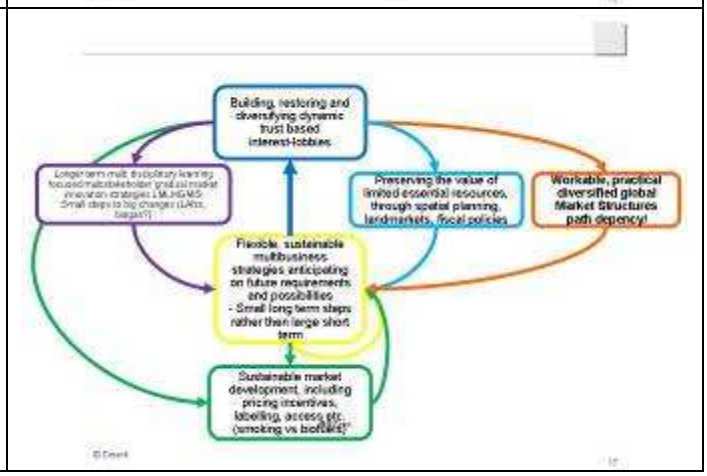
Interactief stuk

Wie doet er mee?


Label market and sustainability demand
Label manager manages label market to optimize sustainability potential
Sustainability suppliers, often multipurpose landmanagers (also known as farmers).
Labels as intermediaries to identify and measure sustainability performance
Highly segmented sustainability market based on cap and trade and other mechanisms




DAISY capital markets


Building, restoring and diversifying dynamic trust based interest-lobbies
Preserving the value of limited essential resources, through spatial planning, land markets, fiscal policies
Workable, practical diversified global Market Structures path depency!
Flexible sustainable multibusiness strategies anticipating on future requirements and possibilities
- Small long term steps rather then large short term
Sustainable market development, including pricing incentives, labelling, access etc. (smoking vs biofuels)

Annex 2: Conference blogs

The following blogs were posted at http://www.thebrokeronline.eu/en/regulars/blogs/Strategy-and-Complexity

Reflections on day one

Lena Mueller *works as a programme and knowledge management officer for Oxfam Novib and has just completed the Advanced Master in International Development at the CIDIN.*

Complexity theory is the hottest new thing in town. For the longest time, development organizations have triggered the public to donate money for good causes by posting simplistic stories on large billboards all over town: 'With one Euro a month, you can help Boubacar go to school and help him out of poverty'. Unfortunately, many children in developing countries are still not attending or finishing school. Despite sixty years of development aid, poverty is still a fact of life. No wonder that criticism of development work is mounting. If it is as easy as the advertisements make the public believe, why is there still so much misery in the world?

Dave Snowden's complexity thinking approach seems to provide a suitable answer. Development does not happen in a linear and pre-planned manner. One Euro from a willing benevolent will not automatically lead to the education of an African child because this child lives in complex systems. This means that local contexts differ and so should the answers to development problems. Every micro-level problem might need different solutions, and solutions are the great unknown. Instead of pre-planning interventions and outcomes, non-governmental organizations should set up safe-fail experiments to test possible ways of tackling a problem and aiding development. So instead of planning change, an organization should focus on the pockets of society where change has already started and support these local change agents. Those experiments that lead to impact should be scaled up, while those that fail should be abandoned for good. This is quite similar to William Easterly's idea about the planners and the searchers: the planners who pretend to know how development is brought about (take for instance the MDGs) and the searchers who, as the name implies, are searching for the answer through trial and error.

Nevertheless, even with this new complexity paradigm that Dave Snowden advocates very eloquently and convincingly, a number of obstacles need to be surmounted. During the Innovation Dialogue organized by the University of Wageningen (30 November and 1 December 2009), several participants raised the question of whether the current development system is ready to loosen its grip on planning and monitoring for outcome. This is a paradox in itself and shows how NGOs appear to see themselves as victims of the current system instead of, to put it in Snowden's words, change agents that interact with the system. This also exemplifies the stark link between Dutch development organizations and the government, and might warrant asking whether 'NGO' is still the correct term to use.

Another dilemma of complexity thinking lies in the multitude of theories of change. Desirable change from the viewpoint of Northern (N)GOs might be undesirable and contested by segments of the society in question. Development interventions are political choices and even though organizations might be supporting local change agents, the choice of change agents is laden with the value judgments of donor organizations. So whose change are we talking about? It also has to

be remarked that complexity thinking seems to have a number of similarities with Alan Fowler's concept of Civic Driven Change (CDC), in which many processes of change are endogenous projects or actions initiated by the people concerned (the pockets of society where change is possible). However, Fowler makes a clear distinction between aided and non-aided change, thus implying that at times (N)GOs simply might not have a role to play. Take for instance the situation in Iran and the many brave Twitter users who challenged this year's elections. It was a truly local process, but might have been undermined if supported by northern money that might easily have been seen as illegitimate.

Finally, Dave Snowden warns that complexity thinking should not be treated as a religion. (N)GOs might be tempted to argue that the reality is too complex to truly grasp which intervention is needed to induce change. While this is true in a way, an organization arguing for complexity should not try to treat the patient with old cures that have not worked, but instead become a searcher for new, experimental and small-scale solutions. This, however, might have to come hand in hand with an overhaul of the way (N)GOs currently work.

Getting practical

Pepijn Jansen *is currently employed at the Wageningen UR Centre for Development Innovation (CDI). He is coordinating the Strategy and Complexity blog on The Broker.*

As the second – and last – day of this conference is coming to an end, people are discussing in small groups how to practically deal with complexity. What will they take home? What will they be doing with all the ideas that emerged, the recommendations given and the questions raised?

That was today's main theme – getting practical. We started off with an interesting keynote from John Young, who gave us some insights into how policy processes can be seen through the complexity lens. First of all, policy is not linear and not based on rational processes. Rather, policy makers and politicians like to make things simple, because simplicity and certainty sell (I can easily think of a number of politicians right now…). Young used some of the models that ODI has been developing over years of practice to gain insights in these complex processes. He actually got some comments that 'things are not that simple' and cannot be put into nice, neat models. Well, if you try to analyze how and why people make certain decisions, it might be useful to think the same way they do. After all, we do have a tendency to simplify.

During the rest of the day, similar comments emerged. People find it difficult to grasp what complexity could mean in practice. How can you, as a development practitioner (or anyone else for that matter) simultaneously act, try to please your donor, be accountable to your beneficiaries, and keep track of the complex world around you?

Interestingly enough, others came up with examples of how complexity is already used in real life. Or rather, real life is complex (always was and always will be) and people are constantly dealing with that. 'Complexity,' one participant commented, 'is just the flavour of the month. A few months ago we had to do integrated management'.

Now, the 'old wine in new bottles' argument might be a bit easy here. But donors, practitioners and policy makers out there are already changing their attitudes. People do realize that not everything is straightforward and linear, and outcomes can be a bit different from what was originally

intended. Just get your story right, explain why things happened. Do we really need to change the entire system, or can we change from within the system?

Complexity and outcome mapping

Jan van Ongevalle *works at the Higher Institute of Labour and Society (HIVA) at the University of Leuven, Belgium.*

As I went through the first day, I was trying to relate the various ideas that were shared about being strategic in the face of complexity with the outcome mapping methodology. A good number of these ideas seem to be well accommodated by outcome mapping; others are still a bit out of tune.

In tune
The need to set flexible boundaries when dealing with complex systems, since the actors involved co-evolve. Flexibility is one of the important characteristics of the intentional design in outcome mapping, where boundary partners and progress markers can change during the course of a programme. Also, the need for continuous experimentation – to learn what works and discard what doesn't work – is catered for by the learning-centred monitoring system in outcome mapping.

Out of tune
Impact was referred to as 'changed experiences in society'. This, I feel, is problematic for many development programmes, which are often very far from the ultimate beneficiaries in the society at large. Also, some of the changes at that level are very long term and a result of many actors and factors beyond any one intervention. It then becomes difficult to learn fast enough from these changes in order to adjust your intervention. Outcome mapping deals with this problem by focusing on outcomes (i.e. observable changes in behaviour at the level of its boundary partners). I didn't hear much about monitoring outcomes within the sphere of influence of a programme during the first day of the workshop. I am concerned that if we leave out the outcome level, we will again close the black box that allows us to learn how we contribute to downstream impact. That's one of the things I would like to explore during this second day. It would be great to hear the ideas of others about this.

Break through your barriers

Pepijn Jansen *is currently employed at the Wageningen UR Centre for Development Innovation (CDI). He is coordinating the Strategy and Complexity blog on The Broker.*

In the train, on my way back home, I reflected on today's keynote speeches. Somehow, I found them a bit contradictory while, at the same time, they matched perfectly. Perhaps it's mostly the 'setting the boundaries' by David Snowden that caused my confusion, as Alejandro Litovsky was talking about breaking through the barriers that withhold us from change. So what are we supposed to be doing? Creating new boundaries or breaking through the old ones?

I discussed this briefly with Litovsky and we came to the conclusion that they were not actually talking about the same things. But I'm not entirely sure anymore. The boundaries Snowden was referring to are those that people create through interaction, learning and repetition – our

'cognitive frameworks'. These are also the ones that keep us from really changing, being innovative, thinking 'outside the box'. Only a few people truly dare to not only *think* outside, but also *act* outside this box. We feel comfortably safe within the frameworks our surroundings and we ourselves have created.

However, that's the point both were making. Dealing with complexity means finding the right points for entry – those actors that truly have possibilities for positive change within, or even beyond, the system they are part of. This left some participants with the question: what is positive change, and above all, who defines what is positive? This is a rather normative question of course, and it reminded me of another emergent idea within the development sector: civic driven change, which is also partly based on normative assumptions (and luckily they are willing to admit so). It also very much relates to the idea of finding the right actors to bring positive change.

Some of today's workshops also ended with rather normative questions. While some took the bottom-up perspective as very important, others questioned whether complexity really calls for bringing in so many actors. Constantly having to justify what you do as a politician heavily reduces your capacity to rapidly adapt to unexpected change. Accountability and democracy restrain innovation.

Setting the boundaries

Pepijn Jansen *is currently employed at the Wageningen UR Centre for Development Innovation (CDI). He is coordinating the Strategy and Complexity blog on The Broker.*

Reflecting on the first day of the conference, it might be easy to say that the main message is rather complex. But then, as both of the keynote speakers agreed, not everything is complex because we, as human beings, create order. So let me try and create a little bit of order in the story so far.

David Snowden started by trying to take away some of the confusions and maybe even wrong assumptions people have regarding complexity theory. According to him, many people try to put complexity in the 'old' inductive scientific reasoning scheme, while 'you can't take new things and put them into old structures'. So he sent the audience on a tour through some of the key aspects of complexity thinking, and ways to analyze complex adaptive systems. (And I was quite happy to see that I didn't get it all wrong in my previous blog).

To keep it short and simple, one of the aspects of human complex adaptive systems is distributed cognition. That is, if I got it right, people create and share their realities together. There is no central mediation point holding the exact truth. 'The wisdom of the crowds,' as Dave called it. Although he quickly added that most people behave rather stupidly when in a crowd. I hope we'll get back to that issue later.

So, when finding a way to make change happen, it makes no sense at all to centrally plan and execute a plan and then expect it to happen in the way you planned. Things are constantly changing, happening, adapting, people creating new ways of thinking about issues, etc. And even then, most people do not rationalize everything they see or how they react. This is mostly based on the cognitive frameworks that have been set by the same context you react to. So, most of the time people fall into certain patterns, which might be hard to change. An equilibrium is hard to

change, and needs a big push to fall into the next equilibrium, as Martin Kropff already showed at the beginning of the day.

Now, I could go on and on about these issues, involve some more cognition theory and paradigm thinking, but I promised to make it simple. One of the main things that was really illustrative was a simple example of how complex situations might be managed: a children's party.

One way of dealing with the children is to set their learning targets, set indicators, let them reflect, and, if you really want to have fun, let them develop a logical framework – the simple linear way of managing. Another way might be to let them run totally free and act individually, which might end up in lots of alcohol and having your house burned to the ground – the chaotic way of not managing at all but letting the system work itself out. The most reasonable way, when dealing with these complex adaptive systems, would be to set clear boundaries ('don't cross this line!'), search for the things they like and amplify these attractions.

'Allow local emergence within a constraint framework'

Okay, you might think, but is this really practical? Some people might just need some simple solutions instead of being constantly reminded of how complex the world is. Maybe the workshops tomorrow will shed some light on this.

Visualizing Complexity

Steve Waddell *supports organizational, network, and societal change and development, through consultation, education, research and personal leadership. His workshop 'Visualizing complexity to realise change' is one of the workshop being held at the conference this afternoon.*

In my work, I find thinking of complexity in four dimensions is useful:

- temporal complexity...referring to the time lags (and variety of length) between taking action and seeing impact;
- dynamic...referring to the interplay between large numbers of factors/actors/actions with respect to any issue of interest;
- cultural...referring to ethnic/linguistic/sectoral (business-government-civil society) differences;
- geographic...referring to local-regional-global interplays.

We need more tools to handle these forms of complexity...with simplicity! Books of description are very hard to hold and share. One helpful alternative is network mapping in various forms, which can put complexity on single pieces of paper with nodes and arrows, to make it much easier to hold and share. I work with various types of mapping that do this, including social network analysis, value network analysis, strategic clarity mapping, conceptual mapping, web crawls, web scrapes, geo-mapping and mind mapping.

These approaches help make complexity visible, in terms of underlying relationships between people, organizations, places and ideas. By making complexity visible, more effective conversations take place for problem-solving and strategy-setting.

The workshop will focus on the following:

Every change initiative involves 'systems' – internal production systems, ones relating to how work gets done, issue systems relating to the topic that the NGO is working to address, and mental model systems about strategy. Clearly, 'seeing' those systems is important for success. This workshop reviews new forms of 'mapping' that can vastly enhance and speed understanding of the systems. The maps are diagrams of arrows and nodes that can communicate tremendous amounts of information visually, much more easily than volumes of text.

Within a system are stakeholders that include individuals, organizations, networks of organizations, the range of their actions, their ways of thinking vis-à-vis the issue, and the natural and human-created environmental factors that influence the system. Stakeholders may or may not identify themselves as participants in the system. One of the challenges of developing an issue system is to build participants' identity with it; this is critical for creating effective action to respond to change opportunities, needs and challenges.

Different mapping approaches have different strengths and weaknesses.

'Production system' maps – exemplified by inter-individual social network analysis (SNA) – help an organization to understand how work actually gets done, in comparison to formal org charts. This analysis can assist in bringing greater alignment between the two, which in turn reduces conflict and enhances productivity.

Issue mapping – exemplified by SNA and value network analysis – builds understanding of key leverage points in the bigger system it is trying to influence. These are points that, when focused upon, have a large ratio of amount-of-effort to desired-change. The focus can involve the application of resources, or actually reducing resources.

The mental model mapping – exemplified by strategic clarity mapping – can uncover conflict, make it discussable, and enhance effectiveness. People can understand why someone else is doing what they are doing. Often this helps people understand that their mental model may be important, but incomplete vis-à-vis the change goal – and therefore help people's respective efforts connect much more effectively.

These maps can include hundreds of nodes and arrows, or very few. Experience working with people around the world proves that even relatively complex systems, with even a couple of hundred nodes, can be understood by people with very limited education. A participatory development process is key.

Results can be impressive. Mapping was undertaken by a couple of dozen people in Guatemala to support CARE to vastly enhance its impact. An evaluation a year later showed that the process was transformational from two perspectives: people had significantly changed their relationships (who they were working with) and they had significantly changed how they understood their work vis-à-vis others.

What is complexity anyway?

Pepijn Jansen *is currently employed at the Wageningen UR Centre for Development Innovation (CDI). He is coordinating the Strategy and Complexity blog on The Broker.*

Looking forward to this conference about complexity, it might be useful to get back to the basic and simple questions. We are talking about complexity, everything is complex, and we need to be strategic to deal with complex issues, and so on. What, then, is complexity? Where does this notion of complexity come from? That was one of the first questions I raised when I heard about this conference. To me, it seems logical that, for example, social systems are rather complex. But the system itself might not be logical at all. Or at least, (anti-)social behaviour within a system might not be logical. I for one do not always understand why people, say, kill other people. So, does complexity mean we do not, and cannot, understand or comprehend entire systems?

Complexity theory is mostly set against linear thinking, or the deterministic Newtonian notion of science and reality. Some scientists came to the understanding that nature might not follow a deterministic pattern, or linear way of evolving. Although time is irreversible, as Ilya Prigogine nicely points out, order, or disorder, is emergent rather than determined. To put it simply: things come into existence or they don't; events either happen or don't happen; and there is no way of saying what will and what will not happen. It just, well, happens.

However, even complex systems can be reduced and related to their less complex parts. *Irreducible* complexity is often used as an argument by proponents of intelligent design, for example. They claim that some complex organisms are irreducibly complex, which means that the separate parts of a system (an organism in this argument) do not have a function at all. So the system cannot be reduced to simpler parts: somehow, it is designed as it is now. This argues against evolution, as evolutionary theory would imply that the separate parts already had a function before the new organism came into being. Nature, of course, did not have a pre-determined plan to make an organism out of otherwise useless parts. Not the way humans make machines. Arguing against intelligent design, Ken Miller shows how organisms are made up of different parts that all did have a function before. So, the new organism emerged from its separate parts, intelligent design was wrong and evolution did happen. There was no way of telling how it would happen, but it did. Would the same account for social phenomena?

In this conference, we will mainly be talking about social complexity. This would involve some sort of social evolution, where specific social events or functions emerge from their contexts without anyone able to really tell what will happen. However, some more recent applications of power law mathematics might imply the opposite (that is, as far as I understand this rather complex methodology; for an explanation, click here). A team of researchers from different universities set about to study violent, asymmetric conflicts. To their surprise, they found a pattern, even with predictability in it. Somehow, violent insurgent groups seem to have come to a form of 'best practice' in realizing maximum damage and casualties (or whatever their goal might be). And this is independent of the context, be it an ethnic conflict on a faraway mountain or a one-time terrorist bombing in a crowded city.

Even when emergent instead of pre-determined, social, biological, natural and human phenomena will thus form a certain pattern. One that is discernable into different parts and can be somewhat predicted beforehand. Perhaps there could be a way of strategically 'navigating' such a complex environment, if one is able to recognize the right patterns and follow the strings.

Complicated and Complex

Posted by: Sushil Bajpai, Tuesday 01 December 2009

Dave's explanations and metaphors about complicated and complex have pushed me into ever more complex labyrinth.

I am almost convinced that their might also be continuum of sorts – particularly when attemtpting to visualise the metaphor of phase change from solid to liquid to gas.

The question that intrigues me is what happens at the boundaries of phase change.

The aircraft design might be complicated but there would certainly be elements within this design that could be as easily described as complex.

I get an instinctive picture of complexity, but it still defies a concrete definition.

Being ethical in the face of complexity

Seerp Wigboldus *is working with Wageningen UR Centre for Development Innovation (CDI) and is coordinator of the Strategy and Complexity event.*

What does 'strategic' mean to whom? This is an essential question to ask when discussing what 'being strategic in the face of complexity' involves. Is 'strategic' synonymous to 'good' and 'ethical'? 'Strategic' may sometimes be considered as merely being opportunistic, such as in the case of being politically correct.

Being strategic refers to an objective. This is not 'dealing' with complexity itself, but what is beyond that: the motivation for seeing an aspired future become reality. We may then ask 'whose aspired future?' This question relates to stakeholder interests, power issues, (corporate) responsibility, etc. What some will consider to be 'strategic' may not be in the interests of certain groups of people. Also, in relation to activities, there can be a difference in what is considered to be 'strategic' due to differences in ideas about how (we think) change happens and ought to happen. And then, the goal does not justify the means: being strategic cannot be reduced to simply achieving *your* objectives, which is unfortunately the focus of quite a few management books on dealing with complexity.

We may argue that in complex situations in particular, ethical concerns are the first to be pushed overboard when making so-called 'strategic' decisions. It will be interesting to see whether this could be confirmed during roundtable dialogues on issues such as situations of conflict and competing claims.

Let's take the impressive movie 'Amistad' by Steven Spielberg as an example. The question of how to be strategic in deciding the fate of the group of captured 'slaves' was, for some, answered from a strictly political and economic perspective. For others, it was basically an ethical issue. The same difference in perspective and attitude can be seen in last year's movie 'Amazing Grace' about William Wilberforce's fight against slavery. It is good news that in the above examples, ethical concerns prevailed. I suppose similar differences of opinion about what 'being strategic' means can be found in current debates.

There is much more to be said about this, but one of my arguments is that if the desire to be strategic is not governed by a desire to act ethically, we will be in serious trouble. Yes, that does leave us with the question 'what is ethical?'. And that is where we will need to work on finding shared values and principles and apply these towards virtues (such as prudence) in being strategic in the face of complexity. We will then also need to address another question, one that has often shifted out of focus because of a dominant concern with *knowledge*: how to be *wise* in the face of complexity?

In view of the above reflection, I would therefore suggest to take 'being strategic' in this event as a *'pars pro toto'*, which then includes notions such as being wise, ethical and responsible in the face of complexity.

COMMENTS

Ethics, politics, practice

Posted by: Riff Fullan, Friday 27 November 2009

This thread reinforces in my mind the need to think of various dimensions in considering complexity. It is not only a matter of designing, working with and refining conceptual frameworks which help us better understand - and presumably better cope with and influence - the contexts within which we work.

It is also about placing work in the political environments where it takes place (e.g. relationships and roles of different actors along the development 'value chain'). And about understanding how established practices and procedures (e.g., project/program development cycles, reporting requirements, etc.) might help or hinder change processes.

If I try to be less obscure about my point, it is that I think sometimes we get lost following conceptual lines which do not grapple with the hard reality of entrenched systems and worldviews. These systems and worldviews are crucial challenges to attempts at promoting change processes, and one must enter into dialogues with their defenders if there is much hope of influencing them (at least in the short-to-medium term).

Mad as hell and not taking it anymore

Posted by: Irene Guijt, Friday 27 November 2009

Just saw a great blog that really relates to this topic/blog. WELL worth a read! http://www.theroadtothehorizon.org/2009/03/shrinking-digital-divide-and-other.html

modesty, above all - realism based on vision

Posted by: Irene Guijt, Friday 27 November 2009

Yes, Nils, I agree, particularly on the notion of more modesty in development. There is major overinflation of development promises and no wonder that there is much discontent. Promising to deliver the impossible 5 years from now in post-conflict zones, for example, is bound to fail. Not only is it unrealistic but it simply cannot be known.

Being ethical also means being open to failure and explaining why. Today's TROUW (Dutch newspaper) carries an article heckling development organisations for never 'fessing up to mistakes. Or not whistleblowing on their peer organisations. Two questions on 'ethics' - is a mistake or a strategy that turned out pear-shaped the same as a failure? And is whistleblowing more or less ethical than allowing the organisation to run its own 'I'm guilty' show?

However, to be fair, which sectors do do that - confess to mistakes without fear of unfair retribution? And whistleblowing is notoriously difficult. And then what would be society's, parliaments, politicians reaction to mistakes or 'didn't go as planned'? They are not interested in the subtleties of complexity. They want to know what their tax money is paying for and some are calling to a stop to all aid. Would that be ethical?

The debate on aid has turned increasingly nasty and superficial in the Netherlands over the past year or so. The subtleties about ethics in development as related to not/under delivering on promises is increasingly needed and increasingly tough. 'Fessing up to mistakes could not just imply a sharp rap on the knuckles but a beheading.

On wisdom, complexity, development..and ethics
Posted by: Nils Boesen, Tuesday 24 November 2009
Wisdom is in the aid business not least recognizing that by pretending that we can deliberately reduce poverty a la the Millenium Development Goals we have pushed the complexity of the issues as far to an extreme as nearly possible. This is not only complexity, this is very complex complexity!
Wisdom would thus first and foremost include a significant modicum of humility and modesty in our endeavours: complexity science will not give us simple tools to achieve over-ambitious, voluntaristic goals, but rather teach us to accept that we can at best have a marginal influence - because pretending that we can handle complexity risks leading to unforeseen - and potential big-scale - negative effects.
- Grappling with complex development situations thus require wisdom in analysis, modesty in ambitions and very careful use of the powers of the purse,the preachers and the practitioners. Hard to deliver for aid agencies of all kinds, but maybe quite ethical?

Strategic optimism

November 13, 2009 Jim Woodhill

Jim Woodhill *is director of the Wageningen UR Centre for Development Innovation (CDI) in the Netherlands. CDI is organizing the 'Strategy and Complexity' event.*

Welcome to the first blog in the lead up to our Innovation Dialogue on 'Being Strategic in the Face of Complexity'. Much interest has been shown and we have expanded capacity to cope with the high number of registrations – now well over 100.

I recently spent a thought-provoking afternoon at 'Accelerating Sustainable Trade', a conference organized by the Dutch Sustainable Trade Initiative. Some 600 people attended, the majority from the business sector. A good number of the larger Dutch corporations were there, pointing out that sustainability is rapidly becoming a core business strategy. In many of the presentations, the message was blunt. The world is heading at high speed towards a brick wall of overusing resources and our very survival depends on turning things around – and quickly. This is business – not environmental NGOs – talking. Alongside this apparent recognition of the risks for humanity of 'business as usual', the mood was optimistic – a confidence that strategically directed entrepreneurial spirit has a good chance of making the necessary change possible. There was also

a strong message that such change does require new forms of collaboration between business, government and NGOs.

But let's not take this too easily at face value!

How will such change really happen over the coming decades? The recent financial crisis well illustrates strategic weaknesses in the capacity of the private (or at least the financial) sector to look out for itself and the ordinary person in a complex global economy. Meanwhile, the world's governments tackle climate change as if they could be successful in putting out a raging fire with a few thimblefulls of water. Tackling sustainability and equity demands purposeful action with much strategic insight and strategic influence. Yet this needs to happen in a world with a totally unprecedented level of interconnectedness – ecologically, economically, socially and politically. Deeper questions of how to be strategic in complex and high risk situations are clearly unavoidable and perhaps even critical to our very survival.

I find that people either love or hate the notion of complexity. 'Great, this is just what we need to be talking about to make a difference' or 'what a lot of abstract and academic blah blah blah, I don't see the practical use'. Many of you coming to the Innovation Dialogue may well be of the first camp. Hopefully we will also have interested skeptics to add some spice to the dialogue. The task is to sharpen our own understanding about the practical implications of a complexity perspective and to find better ways of communicating its relevance.

Coming back to the Sustainable Trade meeting, speakers frequently talked explicitly about a new paradigm for sustainable business: eco-efficiency; pre-competitive collusion; total cost of ownership; accountability and transparency; triple P governance and so on. The dominant paradigm of our recent centuries has been one of control. A belief that with enough knowledge we can control our destiny. With that comes very hierarchical ideas about how to organize ourselves. Knowledge, control and hierarchy have been at the heart of what it has meant to be strategic. Are there totally different ways to be strategic? Ways better suited to the realities of the highly interconnected world we have created for ourselves? Any paradigm about sustainable business must, it would seem to me, be part of a wider paradigm about being strategic in complex contexts.

There are no guarantees in a complex system, but as I tuck my two young girls in to bed at night I desperately want to be optimistic about their future. And, if I am going to be true to my optimism, I have to try and act purposefully and strategically. But how? What capacities do I need, what capacities does my organization need, and what capacities do those we work with need if collectively we are going to try and tackle change with insights from complexity thinking?

To help tackle these questions on Nov 30 and Dec 1, a diverse and very interesting group of people have signed up, including a significant number of international participants. I'm very much looking forward to the discussions and hope that blog postings over the coming two weeks, along with your responses, will help to catalyze and frame the dialogue.

COMMENTS

Reduction natural way of coping with complexity

Posted by: Seerp Wigboldus, Sunday 29 November 2009

I suppose that one of the key ways of coping with complexity, is trying to understand it in elements or generalized overviews and by doing so bring it back to manageable/comprehensible

proportions. Moreover, I think we will never be able to describe or even visualize complexity fully anyway. Necessarily, we have to work with something we call 'reduction'. Nothing wrong with that, as long as you realize what you are doing and as long as you realize its limitations and from there the implications for strategizing. Modeling is (just) one way of doing this. I guess we are talking here about two possible extremes: One extreme approach is to say that everything is so complex anyway, so what can we do?! The other extreme approach would be to reduce reality to a presentation of mere elements of complexity and then work with this as if it does represent reality entirely. There are more options than only the choice between these two extremes, I would say.

what is strategy

Posted by: Frans, Saturday 28 November 2009

promising blog posts... I am looking forward to the seminar! Hope that it will bring us some new answers to dilemmas we are facing.

As I wrote in my blog post today (http://www.thebrokeronline.eu/en/regulars/blogs/Frans-Bieckmann/What-is-strategy) I think it is quite urgent to operate much more strategic. Biq question: can we create tools that help us to be strategic in increasingly complex environments?

Simple rules, as mentioned by Berghman

Posted by: rick davies, Friday 27 November 2009

Bollocks!> "Modelling complexity may give the false and even dangerous impression of controllability"

Creating and testing models is one way of improving our understanding. That is what meteorologist have been doing for years. That is what climate change researchers are trying to do.

It is from experimenting with simple models, like cellular automata and multi-agent simulations, that so much evidence has been found that simple rules can generate significant complexity. These findings are not just the province of " Organization scientists"

Simple rules

Posted by: Liselore Berghman, Monday 23 November 2009

I fully agree with Alejandro Litovsky's comment in two ways.
Firstly, I agree with Alejandro's critique on complex models of complexity. Modelling complexity may give the false and even dangerous impression of controllability. Organization scientists are becoming more and more convinced that complex environments paradoxically ask for simple rules (some kind of semi-structured mechanisms that specify goals but leave enough flexibility in the execution). My own findings on rule-challenging innovations in the corporate world strongly confirm this idea. A devil's advocate may argue that modelling complexity maybe adds to the confusion and to the difficulty of translation to practice instead of providing handles to solve/cope with it?
Secondly, I see much potential in "blending" public and private efforts, and not only for practical and financial benefits. From my own research on innovative partnerships in the corporate world I could observe that such a multi-stakeholder approach may also fuel sensemaking on a sector level. It may help to challenge and overcome taken-for-granted assumptions about typical roles of actors and the ways they (should) operate. Such a sensemaking process may in itself become a platform for further and still more innovative ways of operating.
I am looking forward to discussing whether and to what extent mechanisms and principles that

companies use to “institutionalize flexibility” in the corporate world might translate to the development sector.

Optimism vs. Pessimism

Posted by: Seerp Wigboldus, Monday 23 November 2009

'Strategic optimism' or 'strategic pessimism', I don't think that is the question. But those who are optimists will usually have a greater interest in being strategic than those who are pessimists. Hence the significance of being an optimist in complex situations in which you want to make a difference. Or so I presume.

Wanted: Simple responses to complexity

Posted by: Alejandro Litovsky, Saturday 21 November 2009

The more the models for 'capturing' complexity proliferate in academic and practitioner circles, the more intrigued and fascinated I become by the non-scientific.

I recently took part in organizing a meeting in Delhi, India, where we brought together investors (banks, venture capital funds and philanthropic foundations), with top government decision-makers and leading social entrepreneurs.

The task: To explore how to catalyze and accelerate social investment to help scale some of the most promising models in India, driven by organizations such as Barefoot College or Development Alternatives. In scaling solutions to some of India's social and environmental challenges, complexity feels like an understatement.

The barriers are everywhere: The politics, the established mindsets and cultures, the different language between social entrepreneurs and profit-minded 'professionals' about what counts as value, are among many of the issues that hinder opportunities for change.

The highlight of the meeting: The frank dialogue between participants. The insight: That catalyzing social investment to scale up some of today’s solutions is not only about ‘deal flow’, profitable models, or match-making, as social investment is usually conceived, but also about enabling a strategic conversation on how to 'blend' public and private investment and finance, and how to distribute roles within a social ecosystem. A re-negotiation of social contracts.

Enabling strategic conversations that focus on barriers to scale and on the collective action needed to overcome them, are key elements in our Pathways to Scale work – and some of what I look forward to share with others when we meet face to face, soon.

More on the India work: http://www.volans.com/2009/11/catalyzing-social-investment-in-india/

Visualizing complexity Posted by: Steve Waddell, Friday 20 November 2009

Posted by: rick davies, Friday 20 November 2009

I agree with Steve on the importance of being able to adequately represent complexity. That is why I have been advocating (for about 7 years now) wider use of socal network analysis (SNA) tools. There is now an abundance, almost a "pre-cambrian explosion", of software for representing complex network structures, in a way that was not possible a decade or more ago. The challenge is to find what is most useful, for the purpose in mind. And to ensure that one's network data can

be transferred between different software in use (this is still a challenge. Some is great for on the spot drawing of networks, some is great for using imported data sets, but not many do both well.

It is worth remembering that the structure of networks has a close linkage to complexity concepts. Stuart Kauffman showed how the density of connections in a network made a difference to the aggregate structure that resulted: order, complexity and chaos. Similar findings came from the earlier studies of cellular automata

Visualizing complexity

Posted by: Steve Waddell, Friday 20 November 2009

One of the reasons people "hate" the concept of complexity is that it needs more definition. I commonly work with four dimensions:

- temporal complexity...referring to the time lags (and variety of length) between taking action and seeing impact
- - dynamic...referring to the interplay between large number of factors/actors/actions with respect to any issue of interest
- - cultural...referring to ethnic/linguistic/sectoral (business-gvt-civil society) differences
- geographic...referring to local-regional-global interplays

We need more tools to handle complexity...with simplicity! Books of description are very hard to hold and share. I'm very interested in different mapping and modelling approaches that can put complexity on single pieces of paper with nodes and arrows, to make it much more easy to hold and share.

Desperately!!

Posted by: Dany Jacobs, Thursday 19 November 2009

Dear John,

You title is 'strategic optimism', but I prefer your way of saying a bit furher: '[for my two young girls] I desperately want to be optimistic.' It's true that every strategist to some extent has to be optimistic, because when you think you can't change anything, you don't even start thinking about strategy.

But in my opinion most strategists are too naively optimistic, which makes them underestimating possible obstacles. That's the reason why in my book on 'Mapping Strategy Diversity' I advocate strategic modesty together with the need for ambition. Some dose of pessimism will make you smarter!

Conference blogs that were partly posted on the blogspot at The Broker and partly released as part of the pre-conference information package for participants.

All blogs by Seerp Wigboldus who *is working with Wageningen UR Centre for Development Innovation (CDI) and was coordinator of the Strategy and Complexity event.*

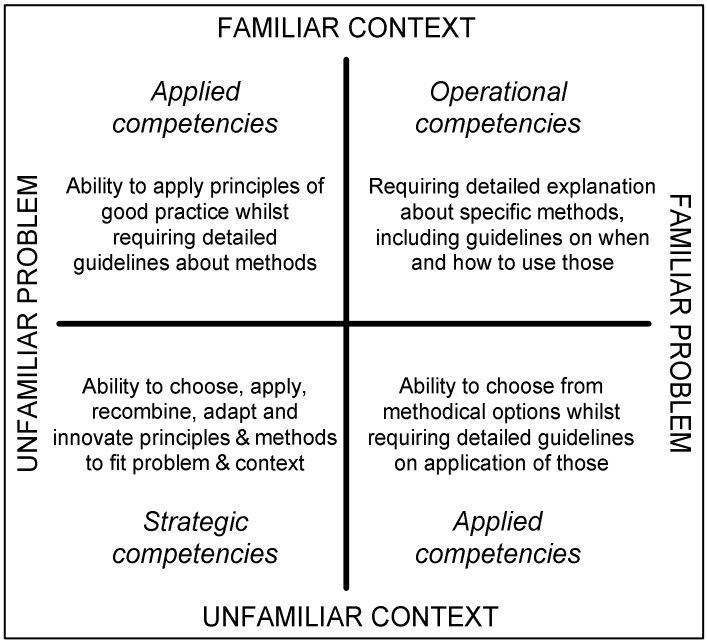
Strategic competencies

Being strategic may mean something different than acting strategically. The latter relates more to what we do and the first relates more to what we are capable of. In terms of 'what we are capable of', a view on 'strategic competencies' becomes an interesting perspective.

Strategic competencies equip people and organisations for taking position and move in a highly dynamic context that poses constantly changing challenges to the realisation of their aims. Lacking such competencies undermines the ability to adapt to such changing environment leading to increasing marginalisation. Strategic competencies go beyond a "how to" approach. They can be compared to the game of chess. Winning the game involves much more than mere application of the rules of the game. There is no fixed course of action that can be planned beforehand, because of multiple uncertainties about the other player's moves. Playing the game does involve knowing the rules of the game, but also the ability to apply relevant experience, the ability to develop and constantly adapt scenarios, and more.

Strategic competencies play a crucial role in our ability to think and act strategically. With strategic competencies in place, managers, planners and policy makers will be able to make contextualized decisions tailored to the dynamics of a specific situation. In spite of that, strengthening strategic competencies is not a common approach to capacity development in international development. There is a tendency to strengthen compliance with external standards and train people how to do the 'trick'. The figure illustrates the difference between these approaches[9].

Strategic competencies strengthen independence, which empowers people to contextualize decision making by navigating the multifaceted specifics of the situation in which they are involved.



I consider strategic thinking to be a kind of umbrella concept for a range of strategic competencies. Strategic thinking at the organisational level provides the context in which individual strategic thinking can occur and be led to effect the organisation. Organisations need to create the structures, processes and systems that foster ongoing strategic dialogue and take advantage of the ingenuity and creativity of every individual employee/ stakeholder.

[9] Adapted from Stephenson, J & S. Weil (1992). Quality in Learning: A Capability Approach in Higher Education, London Kogan Page.

The following simply lists a number of strategic competencies[10]. The overview is not meant to be complete and there is evidently overlap between different categories, but it gives an idea about what I am talking about:

- Conceptual and visual thinking competencies
- Metacognition competencies
- Historical thinking competencies
- Hypothesis thinking competencies
- Systems thinking competencies
- Intent-focus competencies
- Intelligent opportunism competencies
- Strategic leadership & liaison competencies

Strategic competencies in part relate more to art and attitude than to skills and expertise. This makes it less tangible in terms of capacity development. It may be part of the reason why we observe a tendency to focus capacity development on helping people and organizations in the process of fulfilling certain tasks. Including a focus on strengthening strategic competencies broadens perspectives on capacity development processes. It underscores the understanding of capacity development as being much more than mere training.

Strategic leadership competencies

Relationships are essential in being strategic in the face of complexity. Successful organisations depend on the ability of leaders to establish, cultivate, and manage meaningful human relationships. The more complex situations are, the more need for adaptation along the way.

The bigger the picture and the more complex the environment, the less one can know about all elements that make up the big picture. This rules out the option of predefining a whole course of action towards achieving goals. Not being able to know everything you need to know, the more the need for activating and combining the knowledge, expertise, and (adaptive capa-) abilities of those who can make a significant contribution. It requires leaders to support cultivating an environment of learning and innovation opportunities.

"Your proposal is innovative. Unfortunately, we won't be able to use it because we've never tried something like that before."

[10] Adapted from: Liedtka (1998) Strategic thinking: can it be taught? In Longe Range Planning.

Therefore the ability to support good human relationships stands out as a key strategic competence. This involves developing, maintaining, and cultivating relationships, inspiring trust in others as well as correctly judging the character of those you will come to rely on. Motivation is a keyword in strategic leadership.

Next, vision makes up a critical element for anyone in a leadership position because it is closely aligned with future-directed goals. A vision is a view of how one would like the future to be. It will be a description, in reasonable detail, of a desired situation in two, or five, or more years[11]. This vision, when communicated to others through leadership, gives people the inspiration and understanding needed to enable them to position and adapt the numerous tasks that will contribute towards transforming this vision into reality.

Leadership does not necessarily mean "being in charge". Field staff may not be developing the strategic framework of an organisation, but if they are to make those around them understand the importance of e.g. collaboration as community members, they will need to communicate, act, and inspire as leaders do.

In the above leadership is understood as being distinctly different from management. We are not talking about management competencies. This argument can be read in more detail in John Kotter's book 'A Force for Change. How Leadership Differs from Management'[12].

The need for an integrative outlook

It has been argued before, but being strategic means something different than acting strategically. Moreover, being strategic in the face of complexity means more than strategic action in isolated cases. Facing complexity in strategic ways will require an integrative outlook.

The following model is just a try-out to see how it could help in structuring an overview of what would be needed for being/becoming strategic in the face of complexity.

In the model I distinguish between two main axes:

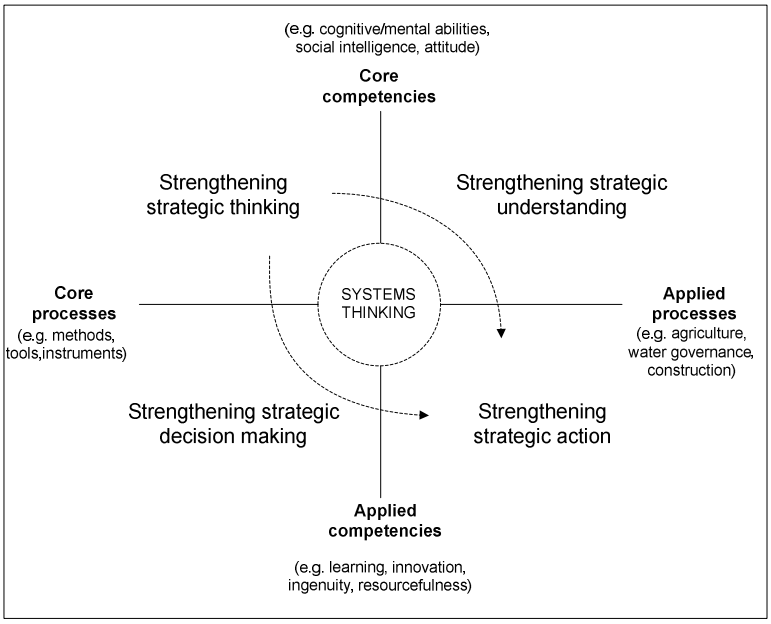
- The axis of competencies
- The axis of processes

I distinguish between "core" and "applied". It seems to be a helpful distinction.

Combining the two axes provides an interesting outlook on areas of required capacities for being strategic and acting strategically in the face of complexity. Just focusing on one area will not

[11] Orndorff, Keith (2002). In: Information Management Journal. Developing strategic competencies: a starting point; behaving, thinking, and becoming strategic is not easy, but it is critical for increasing the value to your organisation. Association of Records Managers & Administrators.
[12] Kotter, J. P. (1990). A Force for Change : How Leadership Differs from Management. New York, London, Free Press; Collier Macmillan.

suffice. An integrative outlook on capacities and processes involved in being/becoming strategic in the face of complexity is represented in the following figure.



For strengthening strategic thinking, education may be a key arena of practice. For strengthening strategic understanding, science/research may be a key arena of practice. For strengthening strategic decision making, management may be a key arena of practice. Strengthening strategic action relates to integrating strategic thinking, understanding and decision making and applying it towards in real work situations.

I am cutting corners here, but then I think one of the ways of facing complexity is to arrive at an acceptable reduction of reality to make things comprehensible and not get lost in complexity.

Being strategic in the face of complexity in brief

Over the past few weeks I have been browsing about 50 books and hundreds of articles on the wider subject area of 'being strategic in the face of complexity'. Slowly, a pattern is starting to emerge in terms of how various authors seek to be strategic in addressing complex issues.

Quite a few authors work with more than one of the following approaches (and some approaches overlap), but surprisingly many seem to be looking for a silver bullet. I would suggest to take a situational approach, which means considering the characteristics of a specific situation and then see what requires the focus of attention.

There is much more to be said about the following, but I'll stick to this quick overview for now. I am inclined to believe that understanding these approaches basically means understanding the essence of over 90% what is written in relation to being strategic in the face of complexity.

More fundamental approaches focus on:

- Learning to think strategically to be able to adapt and find position in unknown situations with unknown problems (including what is called adaptive or resilience thinking)
- Understanding interconnectedness, synergy and coherence (thinking in systems) to be able to comprehend complex dynamics
- Ability of empathy, meta-cognition and other ways of looking beyond oneself and one's own perspective to arrive at shared values and purpose
- Learning and understanding about how change (actually) happens
- Intuition, practical wisdom, sense-making and other ways of tapping into core functions of life
- Chaordic thinking and 'sensing' as alternative ways of 'getting in touch' with complex realities

More applied approaches focus on:

- Activating scenario thinking to get a feel for the direction in which complex dynamics may go
- Establishing simplicity – activating thinking in metaphors and stories to reduce complex issues to digestible/comprehensible proportions
- Communicating complex matter in a clear format to establish shared understanding.
- Learning-orientated monitoring and evaluation to allow for receiving critical guidance along the way to be fed back to (adaptive) management decision making.
- The essential role of leadership and managing through basic principles

Very pragmatic and practical approaches focus on:

- Creating visual representations of complex issues to create overview of and insight into what is involved in those issues and how subsets relate to each other.
- Being on top of critical information to know what needs to be considered in addressing complex issues (incl. use of 'dashboards')
- Creating an enabling environment to bring out potential for addressing complex issues
- Algorithms, modeling and simulation techniques for creating abstract understanding into the future.

I would be interested in getting some response here as to the question whether the above covers the scope of approaches sufficiently, whether it is phrased properly, what may be missing, what basically comes down to the same thing, etc.

A next step may be to present a visual representation of how these approaches relate to each other.

Intuition, practical wisdom and spiritual capital

Today I received a few more books in the mail that are meant to help me in exploring the scope of issues to consider in relation to 'being strategic in the face of complexity'. They approach the

subject from quite a different angle than the majority of books on 'complexity'. Or, rather I should say that I consider this to be a different angle, because the authors often do not write with 'complexity' specifically in mind.

One book is on 'spiritual capital'. On the back cover it reads, "Human beings have the capacity and intelligence to live a worthy life, but we allow ourselves to be controlled by greed, anger, and other harmful motivations. Why do we run businesses today to such a low end – a self-interest, short-term gain, isolationist thinking – instead of a one driven by fundamental values and a deep sense of purpose?"[13]

Another book is about the role of practical wisdom in organizations. On the back cover it reads, "The ancient concept of practical wisdom provides a framework that can guide managers as they balance ethical demands with demands for practical effectiveness. (…) By cultivating practical wisdom, the authors argue, people in organizations can develop the 'everyday strategic preparedness' needed to deal with a complex and uncertain world."[14] Another attempt in this direction is found in a book on 'Management by proverbs"[15].

Yet another book dwells on the subject of the role of intuition.[16] These are all areas that we tend to leave untouched when we think about strategy and complexity. However, they relate back to core drivers of motivation, sense-making and decision making.

Indeed, the more complex situations are, the more we will need to rely on such abilities as intuition and practical wisdom as we will be faced with unknown problems in unknown situations for which we have no ready-made frames of reference. A good question would be to ask how we can equip people for activating such abilities appropriately.

One may say that this means including questions on "being" when aiming for being strategic.

Complexity: the problem is within

When we look at the main challenges in the world, they often relate back to greed, self-centeredness, abuse of power, hatred, jealousy, lack of restraint, etc. What is difficult, or even complex, is to make people change from a focus on greed to a focus on need, and from self-centeredness to a focus on what would be good for others. Moreover, we need to face up to the fact that we bear traits of the same within ourselves.

[13] Zohar, D. and I. N. Marshall (2004). Spiritual capital : wealth we can live by. San Francisco, Berrett-Koehler.
[14] Statler, M. and J. Roos (2007). Everyday strategic preparedness : the role of practical wisdom in organizations. Basingstoke [England] ; New York, Palgrave Macmillan.
[15] Zigarelli, M. A. (1999). Management by proverbs : applying timeless wisdom in the workplace. Chicago, Moody Press.
[16] Duggan, W. R. (2007). Strategic intuition : the creative spark in human achievement. New York, Columbia Business School Pub.

Being strategic in the face of complexity must include a serious consideration of where we stand in relation to those core drivers of people's behaviour, including our own. Neglecting this will lead to shallow strategies that may even reinforce the very drivers of a large chunk of what we call 'complexity'.

Being strategic is therefore not about finding quick or less quick answers for that which is standing in our way when attempting to gain control or change people's behaviour. I would want to go deeper than that and not shy away from the difficult questions about drivers of my own and other people's behaviour. That is where a fundamental and lasting difference can be made.

This is why we can see that what we consider to be the pillars of a good and just society are based on ethical decisions, rather than strategic decisions. Most of that which we consider to be "good" and "right", which have been documented as human rights, have emerged from ethical debates, not strategic debates. Indeed, it may not solve everything in terms of complexity, but it may fall in the category of 'first things first'.

In recent history we have seen the example of Nelson Mandela.. His ethical stance in a historically and ethnically complex situation finally worked out strategically, but it started with standing for that which is good and right **and** doing so in a ethically high-standard way. By doing so, he inspired many to follow the same route, leading to fundamental change. So, he can be considered to have been ultimately strategic.

Try to inspire people to follow 'strategic' examples, and you will find people motivated by the low-standard ethics of greed, self-centeredness and all the other traits we referred to above. Just read the popular management books. Fortunately, there are also some good examples documented[17] of e.g. CEOs who made ethically high-standard decisions in crisis situations in their companies, which from a short-term perspective did not seem to be 'strategic', but that did work out towards the well-being of a large group of people (employees). And should that not be the ultimate purpose of being strategic?

[17] E.g. Zigarelli, M. A. (1999). Management by proverbs : applying timeless wisdom in the workplace. Chicago, Moody Press and Statler, M. and J. Roos (2007). Everyday strategic preparedness : the role of practical wisdom in organizations. Basingstoke [England] ; New York, Palgrave Macmillan.

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