“We can't solve problems by using the same kind of thinking we used when we created them.”

*Albert Einstein, Physicist, 1879-1955*
“One who looks for mud cannot see jade even when they find it.”

*Chinese proverb*
What do you see?
When you first look at this, do you see an old man with ivy leaves around him, or do you see a couple kissing?
Perception and ways of seeing

- We tend to work on first impressions, what seems obvious or preconceived ways of seeing.
- We have difficulty looking at everything at once.
- We tend to deal with a small part of the whole picture.
- Different people see differently – this means they are looking at the same world and seeing different things.
- A systems view or ‘lens’ requires us to see from multiple points of view or perspectives – to try and see the whole picture.
Learning to see the whole as well as the parts
“Systems thinking is a discipline for seeing wholes. It is a framework for seeing interrelationships rather than things, for seeing patterns of change rather than static 'snapshots'...

Today systems thinking is needed more than ever because we are becoming overwhelmed by complexity. Perhaps for the first time in history, humankind has the capacity to create far more information than anyone can absorb, to foster far greater interdependency than anyone can manage, and to accelerate change far faster than anyone's ability to keep pace.”

Peter Senge, *The Fifth Discipline*
### Mechanistic versus systems thinking

<table>
<thead>
<tr>
<th>Newtonian or mechanistic analysis</th>
<th>Systems thinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanistic analysis focuses on <strong>separating the individual pieces</strong> of what is being studied – in fact, the word ‘analysis’ actually comes from the root meaning ‘to break into constituent parts’</td>
<td>Systems thinking, in contrast, focuses on <strong>how the thing being studied interacts with the other constituents</strong> of the system—a set of elements that interact to produce patterns or behaviour—of which it is a part.</td>
</tr>
</tbody>
</table>

Adapted from ZA Bin Zainudin, ‘Intro to Systems Thinking’
'In modern physics, the image of the universe as a machine has been transcended by a view of it as one indivisible, dynamic whole whose parts are essentially interrelated and can be understood only as patterns of a cosmic process.

At the subatomic level the interrelations and interactions between the parts of the whole are more fundamental than the parts themselves. There is motion but there are, ultimately, no moving objects; there is activity but there are no actors; there are no dancers, there is only the dance.'

Fritjof Capra, *The Turning Point*
Capra on systems thinking

• Nature does not show us isolated building blocks, but rather a complex web of relationships between the parts of a unified whole.

• The importance of each component of a system is tied to its relationship to the whole. And the essential properties of a living system (whether an organism or community) are properties of the whole.

• By looking at just one component in isolation (for example, an atom), we would not have realistic picture of its importance.
MECHANISTIC VIEW

• Universe as a **machine**
• Analytic method leads to **reductionism**
• Very effective when change is slow

SYSTEMS VIEW

• Focusing on **principle of organization**, particularly interdependent relationships
• Dealing with **detail complexity** and **dynamic complexity**
• Seeing **processes of change** rather than snapshots
Newtonian versus systems approach

- Simplicity
- Control
- Separation
- Uniformity
- Certainty
- Linear cause and effect
- Either/or thinking
- Empiricism
- Complexity
- Influence
- Integration
- Diversity
- Enquiry
- Multiple/circular causes
- Both/and thinking
- Intuition

Vanessa Sayers, Reos Partners, 'Seeing Systems,' Nov 2010
Dividing a cow in half does not give you two smaller cows
A focus on structure

• The power of systems thinking comes from a focus on **systemic structures**, which is where the greatest leverage for problem solving and positive change lies.

• A systems approach can help shed light on current problems—especially those that seem to continually repeat—by viewing them from a different perspective.
# Events, patterns and structure

<table>
<thead>
<tr>
<th>Events</th>
<th>Action Mode</th>
<th>Time Orientation</th>
<th>Way of Perceiving</th>
<th>Questions to Ask</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>React!</td>
<td>Present</td>
<td>Witness event</td>
<td>What's the fastest way to react?</td>
</tr>
<tr>
<td>Patterns</td>
<td>Adapt!</td>
<td></td>
<td>Measure or track patterns of events</td>
<td>What trends seem to be recurring?</td>
</tr>
<tr>
<td>Structure</td>
<td>Create Change!</td>
<td>Future</td>
<td>Systems Thinking</td>
<td>What structures are in place causing these patterns?</td>
</tr>
</tbody>
</table>
Systems thinking...

*Helps us to understand feedback structures that change systems over time.*
What is a system?

A collection of people and/or parts which interact with each other to function as a whole
Three kinds of systems

Engineered or designed systems
- Such as cars or computers
- Perform predictably, meet performance criteria
- Sometimes known as ‘hard systems’

Natural systems
- Collective eco-systems, not built, constantly changing, adapting, and regenerating
- Behaviour of the whole cannot be explained by linear cause and effect relationships

Purposeful human systems
- All organizational forms – governments, businesses, orchestras, CSOs, regional institutions and communities (like SADC and AU)
- Have characteristics of both of the above – purposefully designed to perform a function but also made up of natural adaptive systems (i.e. human beings)
- Sometimes called ‘soft systems’
The Regional Civil Society Terrain and Priority Countries

our primary target groups

Note: This chart is a draft map of how civil society organizations, defined broadly, are organized in the southern Africa region to engage with key regional policy making institutions and other policy relevant influencers in the region. It is intended to assist in strategic thinking and planning of the Trust’s programmes and not for any other purpose.

Key:
- Relationship should be strengthened
- Membership relationship
- Indirect/Unofficial influence
- Primary focus for the Trust’s civil society platform development support
- Recognized official relationship
- Primary focus for the Trust’s institutional strengthening support

Angola, Botswana, DRC, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe
Systems principles/paradigm

• Systems thinking is a way of thinking about the world
• Systems behave as a whole
• Systems understanding is observer or perspective dependent
• A systems approach requires multiple perspectives
• Where we draw systems boundaries effects the system
• We need to be aware of what is going on inside the system but also outside
• Systems are ‘nested’ we should always think about the system we’re looking at as being made up of smaller systems and being part of larger systems

Dan McCarthy, Intro to Systems Thinking, Jan 2009
Systems principles/paradigm

- Being alive is being in relationship – with everything!
- ‘Truth’ is subjectively defined, requires a diversity of opinion and perspectives
- Understanding is to enquire, examining connections, interdependence and polarities
- Use research and ‘feedback loops’ to collect and constantly renew relevant information so that learning and adaptation are possible
- Demands flexibility and capacity to invent
- Values creativity, spontaneity and innovation
- Embraces complexity and values diversity
- Traces cycles and looks for underlying structure and patterns over time
- Anticipates unintended consequences

Vanessa Sayers, Reos Partners, 'Seeing Systems,' Nov 2010
Systems thinking is...

• About **understanding and dealing with complexity** (all social systems and social problems are highly complex)

• About **significant shifts in culture** at different levels of society and institutions
  ➢ Large-scale systems change or transformation is often defined as ‘**a fundamental change in dominant social paradigms**’.

• **A way of seeing** (‘a lens for seeing the whole as well as its parts’)

**Systems thinking is...**

- A tool for revealing the **multidimensional and layered nature of social systems** and social problems
  - i.e. we may consciously choose to tackle different dimensions of a problem at different levels of the system

- An iterative (repetitive) process because social systems are in a constant state of change and reconfiguration
  - As a result, systems change work is non-linear, adaptive and sometimes counter-intuitive
Why is this important to ‘Leadership for Change’?

- We can **cultivate and apply a ‘systems lens’** to social challenges and problem solving

- Systems thinking allows us **to be more strategic** about how, where and with what resources we intervene in social issues

- It can help **to identify and name the kind of systems shift, systems change, or broader paradigm shift/ transformation we want**
  - This it helps to set appropriate goals, indicators, time frames, etc., commensurate with the scale of the change that is desired and achievable

- It is **a tool to develop a root cause analysis**, including the multi-causal patterns that underlie complex issues of poverty and equity.
Why is this important to ‘Leadership for Change’?

- It is **critical for finding common ground and forging common purpose** between stakeholders around a shared, articulated vision of the particular end result or ‘systems change’ that we seek.

- Systems thinking is **a key tool for ‘bridging leadership’** and a critical capacity or competency for bridging leaders to:
  
  - **Shift individual and collective mindsets, recognizing interdependence** (‘we all need each other’)
  - **Own the issue or social injustice** (‘I am part of the system, thus I am both part of the problem and part of the solution’)
  - **Create co-ownership** (‘we all own the problem collectively’)
  - **Co-create change** (bringing diverse actors in the system together in alliances and coalitions for collective action to shift the institutional arrangements and policies that sustain poverty)
What does this suggest for our practice?

- Nurturing the habit of **applying a systems lens**

- Developing a **systems analysis or map, visualizing the parts and their interconnections that make up the whole**
  - This is an iterative process – the analysis is always evolving and being amended by new perspectives, information and experience

- **Mapping poverty, social inclusion and exclusion**
  - Identifying the diverse dimensions of poverty, injustice, social divides and levels for possible intervention

- Surfacing and illuminating **underlying causal patterns**
What does this suggest for our practice?

- Getting used to ‘owning’ or ‘holding’ complexity and constant change

- *Convening multi-stakeholder processes* to form common purpose and a shared articulation of the end result, systems shifts or systems change we seek
  - Convening stakeholders who form a microcosm of the system (‘identifying the right people at the right time’)

- Taking account of other actors in the system (even when they are not at the table) and trying to see through their eyes

- *Forming strategic alliances, networks and coalitions* for collective action
Examples of systems tools and practices

- Stakeholder mapping
- Systems landscaping and visualization
- Consciously renewing our systems map as the work proceeds
- Mapping our own leadership assets and relationship capital
- Personal reflection and transformation (‘connecting with the system of ourselves, connecting with personal purpose, renewing our energy’)
- Research (high-level empirical research, attitudinal and perceptions studies, community-level research)
- Engagement on the ground and ‘learning journeys ‘(getting out in the field and seeing through the eyes of the poor and those most affected by policy
- Deeper listening
- Peer learning
- Dialogue interviews
- Multi-stakeholder convening and dialogue
- Creating safe spaces and convening trust-building processes
- Asset-based approaches and methodologies
- Mapping social inclusion and exclusion
Examples of systems tools and practices

- Identifying diverse dimensions, social divides and levels for possible intervention
- Analysis of cultural practices and belief systems
- Tools to surface and analyse power relationships
- Locating our work in a systemic poverty analysis (including how people live with poverty, how they see and experience it)
- Analysis of the social determinants of poverty and inequity
- Developing and articulating a ‘theory of change’
- Acknowledging the system stakeholders who are not at the table or in the room
- Analysis of multiple dimensions and levels for strategic intervention
- Identifying levers for change at different levels of the system as well as different stages of the process
- Facilitating experimentation, prototyping and learning through trial and error
- Developing strategies for engaging different parts of the systems and convening customized processes for key stakeholder groups
Understanding the Divide: Rich Picture

Where’s my handprint?

Manish Srivastava
Stakeholder Mapping & Analysis

What’s my social capital?