Foundation Stone #2

Systems Literacy

By Dr. Robert Gilman
The Systems Perspective…

- sees **parts** and **wholes** equally
The Systems Perspective...

- sees parts and wholes equally
- sees things and the relationships among things equally
The Systems Perspective...

• sees parts and wholes equally

• sees things and the relationships among things equally

• sees a world filled with connections and patterns called “systems”
The Systems Perspective...

• sees parts and wholes equally

• sees things and the relationships among things equally

• sees a world filled with connections and patterns called “systems”

You are “systems literate” when you can see the world from a systems perspective.
The Challenge

Mysterious “Systems”
The Challenge

Mysterious “Systems”

- hOS
- Cultural History
- Turf
What Is A System?

• A mental construct

- awareness
- mind pattern
- your experience of reality

• a way of organizing our experience into conceptually useful patterns

• partial, selective, and provisional
What Is A System?

*Common language definition:*

system = a set of interacting or interdependent components forming an integrated whole.
What Is A System?

Examples that fit the definition:

You, Chart, Outline, Constitution, Ecosystem, Economy, Software code, Earth's mantle, Sun, Human body, Book, Animal, Organization, Calendar
What Is A System?

Examples that fit the definition:

You

- Witness
- Sub-personality A
- Integrator
- Sub-personality C
- Sub-personality B
- Sub-personality D
- Sub-personality E
What Is A System?

Examples that fit the definition:

Sentence
What Is A System?

Examples that fit the definition:
What Is A System?

Examples that fit the definition:
Maps And Territories

Territories are real, with one intrinsic set of characteristics and an unknowable depth of detail.
Maps And Territories

Maps are derivative, created by people using selective information about a territory to serve some purpose.
Maps And Territories

Any single territory can have many valid maps serving diverse uses.
Maps And Territories

Questions for territories:
What are your characteristics?
What do you contain?
Maps And Territories

Questions for maps:
What is your purpose?
What simplifications were knowingly made in your creation?
How accurately do you represent your territory?
How effectively do you serve your purpose?
Two Uses For “System”

• “System-as-label” – used as part of a label for a territory

• “System-as-model” – used to “map” that territory
What Isn’t A System?

An object

Bounded cohesive unit
<table>
<thead>
<tr>
<th>Used as labels</th>
<th>Objects</th>
<th>Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>Objects</td>
<td>Systems</td>
</tr>
<tr>
<td>---------------------------</td>
<td>---------</td>
<td>-----------------------</td>
</tr>
<tr>
<td><strong>Used as labels</strong></td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td><strong>Focus of interest</strong></td>
<td>boundary</td>
<td>inside the boundary</td>
</tr>
<tr>
<td><strong>Physical</strong></td>
<td>yes</td>
<td>not necessarily</td>
</tr>
<tr>
<td><strong>Cohesive in space</strong></td>
<td>yes</td>
<td>not necessarily</td>
</tr>
<tr>
<td><strong>Range of choice in definition</strong></td>
<td>small</td>
<td>large</td>
</tr>
</tbody>
</table>
Object Permanence
Definition: A System ... 

- is a **model** made up of interdependent **parts**
- has a **boundary** defined by its parts and a **context** outside that boundary
Definition: A System …

- is a **model** made up of interdependent **parts**
- has a **boundary** defined by its parts and a **context** outside that boundary
- can have **connections** that reach across its boundary
- can be part of a larger system and can have **sub-systems** within it [nesting]

Context
Next Evolution: A System …

• is an **interface** between us and the world that uses our **whole brain** to bring **useful order** to the overwhelming complexity of reality without oversimplifying

• has three primary aspects:

  * **diagram(s)** that show the overall structure of parts and connections [visual]
  * **descriptions** of the various parts and connections [linguistic]
  * **dynamics** that model how the parts and their interactions change over time [kinesthetic]
System As Interface

me and my concepts

you and your concepts

someone and her concepts

another and his concepts

System: diagram descriptions dynamics

? ? ? reality

?