

PADM 5781
Speaking Notes
Week 6

WHERE WE ARE

- We are in chapter 3 of the Stroh textbook.
- You have the second Discussion Forum (2A) now. You also have the midterm exam now.

QUICK REVIEW

We have been introduced to the reinforcing loop and the balancing loop. I think these two are the post primal (basic) elements of all the systems archetypes (patterns). In this way of thinking about public policy, *everything* moves -- like objects in the solar system or the universe. Social events don't just sit there. They are in the news and are evident in people's lives every day. Policy is an attempt to change patterns for the better, without creating additional problems in the process.

NEW MATERIAL

THE POWERS OF STORIES

The point is that STORIES are the "data structures" of human brains/minds. And to understand anything of potential policy significance involves knowing stories around and about it.

The left hemispheres of the brains of most people specialize in linear patterns. The right hemispheres of most people specialize in the whole, sometimes called the gestalt. Stories are special because they work across both hemispheres and they also tap into the older parts of human brains that appear to specialize in emotions.

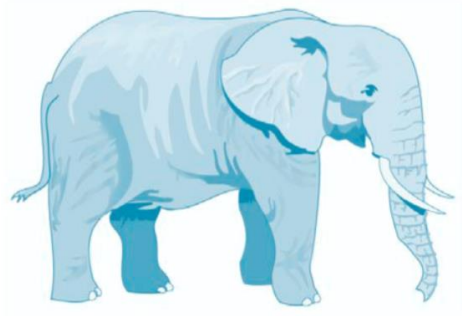
(To me, consciousness regards the human capacity to make connections across different parts of our brains that are physically distant from one another within our heads. I am thinking of the scene in the movie *The Miracle Worker* about Helen Keller and Anne Sullivan, when, I believe, Helen became conscious -- discovering the association between the feel of water and sound of the word, "water."

<https://www.youtube.com/watch?v=IUV65sV8nu0>

The STORY associated with a public policy is not one story but many. And all those stories need not involve the policy area (as traditionally defined) alone. People's lives are not neatly divided into multiple policy area. The demarcations among different policy areas are convenient -- and not always helpful.

THE POWER OF METAPHORS

The blind men and an elephant cartoon is often used to help represent the meaning of systems thinking. Different people are aware of only different parts of the elephant. But to perceive the entire elephant requires the communication and collaboration of all, "the blind men."

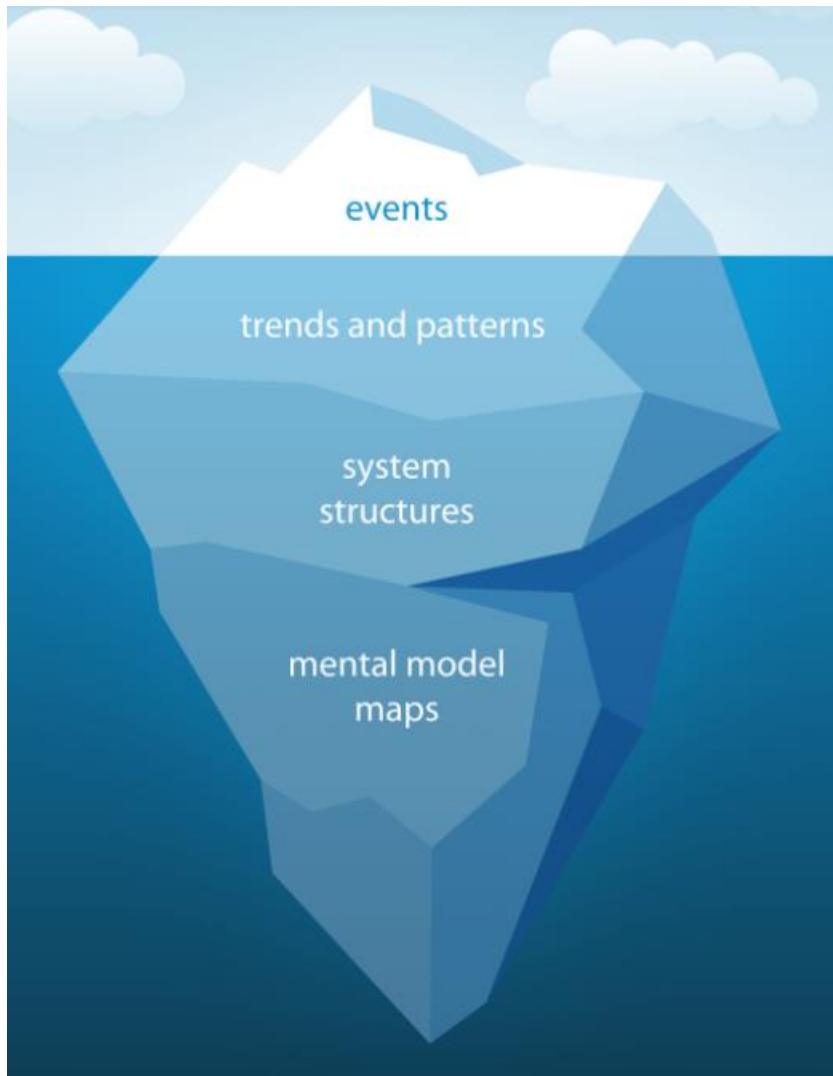


<https://thesystemsthinker.com/the-blind-men-and-the-elephant/>

The point of the elephant metaphor includes at least two aspects.

- People may perceive different aspects of a situation and “talk past” one another as a result.
- It is likely that no one “sees” the entire situation.
- Or, perhaps, some become “elephant deniers,” because they cannot cope with the political consequences of the reality of the, “elephant.”

The iceberg metaphor is also a common representation of important aspects of systems thinking.



<https://systemssolutions.org/systems-thinking/>

The Slinky metaphor.

<https://en.wikipedia.org/wiki/Slinky>

The relevance of the Slinky metaphor is that systems have **STRUCTURES** and structures produce **BEHAVIORS**. In other words, the iceberg metaphor is incomplete, as all metaphors are. All that “ice” below the surface has behaviors.

Systems seem to have minds of their own. (Our minds, are, after all, complex systems.)

THE POWER OF COMPUTER SIMULATIONS

Weather forecasting has become much more accurate in recent years. The weather is a system. Computer **SIMILATIONS** are simulations of weather **MODELS** to reflect their probabilistic

behaviors over the dimension of time. (Small changes in initial conditions can lead to big differences over time, as per CHAOS THEORY.) But, the point is that computer simulations can produce USEFUL PREDICTIONS of that is likely to happen in the future (and what the consequences of a human-made intervention is likely to be.)

For example, later in this course we will study a simple computer simulation involving the ecology of a (imaginary) small island in which there are only three elements – grass, rabbits, and foxes. We will set the values of some initial parameters and run the simulation to observe what happens. There are three possible outcomes, as follows.

- The rabbits die for lack of grass to eat, and the foxes all die for lack of rabbits to eat.
- The foxes all die first, then the rabbits multiply and eat all the grass. Then the rabbits die and the foxes die.
- OR, the system stabilizes into a dynamic pattern in which the rabbits, the foxes and the grass all survive indefinitely with their populations fluctuating up and down in dynamic cycles.

If you are thinking, “balancing loops,” you are thinking correctly.

BACK to my metaphor of the clay pot being shaped on the wheel. 😊