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Session 2:

Metaphors, Analogies and Simplifying Models

Janet Byrd

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Metaphors and Analogies

The dictionary defines a "metaphor" as a figure of speech that uses one thing to mean another and makes a comparison between the two.

"You are the light of my life"

An analogy expresses similarity between things that might seem different. It can be a logical argument: if two things are alike in some ways, they are alike in some other ways as well.

"Having ADD is like wearing a hearing aid on all five senses."

ARGUMENT IS WAR

- Your claims are *indefensible.*
- He *attacked* every weak point in my argument.
- His criticisms were right on *target.*
- I *demolished* his argument.
- I've never *won* an argument with him.
- You disagree? Okay, *shoot!*
- He *shot down* all of my arguments.

Lakoff & Johnson 1980

TIME IS MONEY

You're *wasting* my time. This gadget will *save* you hours. I don't have the time to *give* you. How do you *spend* your time these days? That flat tire *cost* me an hour. I've *invested* a lot of time in her. I don't have enough time *to spare* for that. You're *running out* of time. You need to *budget* your time. Is that *worth* your while? Do you have much time *left?* He's living on *borrowed* time. You don't use your time *profitably*. I *lost* a lot of time when I got sick. *Thank you for* your time.

Lakoff & Johnson 1980

The Gettysburg Address

Four score and seven years ago our fathers brought forth, on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.

Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived and so dedicated, can long endure. We are met on a great battle-field of that war. We have come to dedicate a portion of that field, as a final resting place for those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do this.

But, in a larger sense, we can not dedicate—we can not consecrate—we can not hallow—this ground. The brave men, living and dead, who struggled here, have consecrated it, far above our poor power to add or detract. The world will little note, nor long remember what we say here, but it can never forget what they did here. It is for us the living, rather, to be dedicated here to the unfinished work which they who fought here have thus far so nobly advanced. It is rather for us to be here dedicated to the great task remaining before us—that from these honored dead we take increased devotion to that cause for which they here gave the last full measure of devotion—that we here highly resolve that these dead shall not have died in vain—that this nation, under God, shall have a new birth of freedom—and that government of the people, by the people, for the people, shall not perish from the earth.

Abraham Lincoln

Birth

Death

Rebirth

Metaphors are cues to the cultural models we all use to make sense of a complex world. We make sense of "new" information by calling up familiar images and experiences for context. This is "relational" thinking and is central to human cognition.

(Holyoke and Thagard 1997)

Analogies in Health

Having schizophrenia is like viewing life through a kaleidoscope. It is hard to put the pieces together and they keep changing. (*Wikianswers.com)*

Having ADD is like wearing a hearing aid on all five senses. You hear the people talking, the clinking of the glasses and the plates. *(The Holiday Husband: Helping Your ADD Spouse Concentrate on the Season)*

Alzheimer's disease is like a cat burglar. It slips into a person's life without making a sound, and soon treasured possessions start disappearing: memory, personality and independence. (*Chris Woolston, CONSUMER HEALTH INTERACTIVE)*

Why Wetlands Matter

Wetlands benefit us all. Wetlands act as a filter for the waters of our lakes, rivers and streams. Wetlands improve the water we drink, and the air we breathe. Wetlands act like giant sponges They soak up rain and snowmelt as they occur, serving as temporary storage basins, thus reducing erosion, and limiting the destruction caused by severe floods . . .

I confess to a prejudice. I believe that Cities are the most important single unit of human society. **They are to human beings what beehives are to bees.** Human beings are fundamentally community beings . . . No other level of government has to face so directly the reality of how well we or poorly we work as a human community. **We are bound together.** The municipal leader knows it, and sees it.

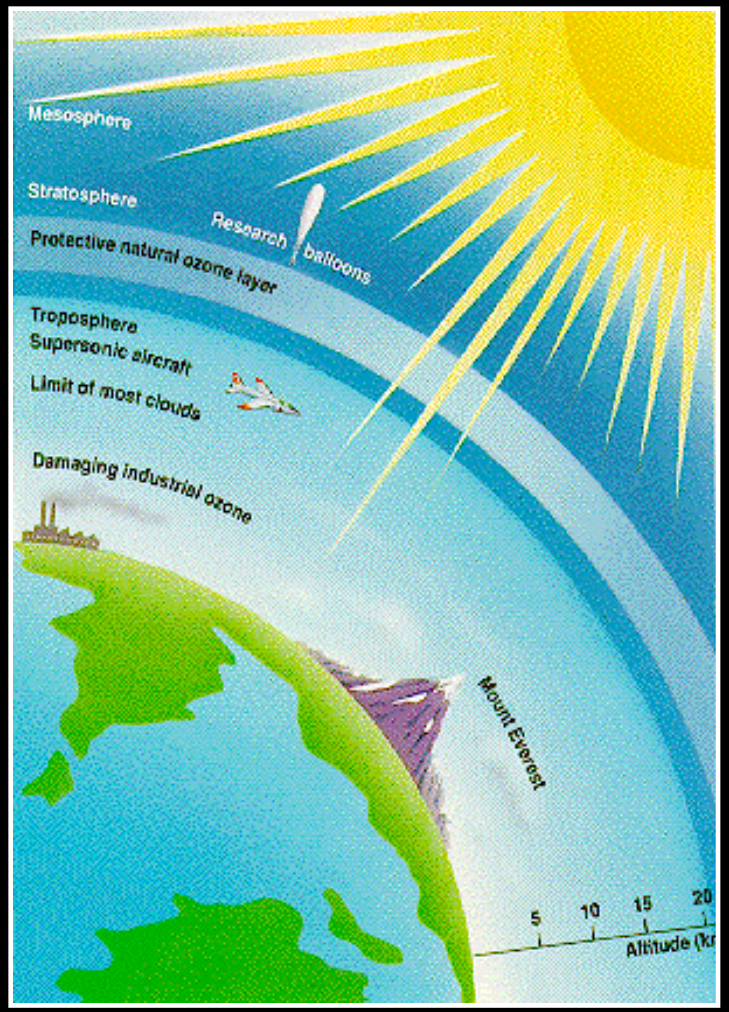
Pragmatism, Prophecy, and Prayer - The Rev. B. P. Campbell, Virginia Municipal League, Prayer Breakfast, 24 October 2005

Mechanisms for Understanding

". . . people typically rely on analogies in order to learn complex, abstract concepts. These concrete analogies are simplifying models - they help people organize information into a clear picture in their heads, including facts and ideas that they have been exposed to, but never been able to put together in a coherent way . . ."

- cultural logic

Ozone Depletion



Simplifying Model

Explaining shifting weather patterns, including arctic chill in Europe and snowstorms in the deep south:

Scientists' theories describe "…a strong pressure difference between the polar region and the middle latitudes channels the jet stream into a tight circle, or vortex, around the North Pole, effectively *containing the frigid air at the top of the world*."

"It's like a fence."
- Michelle L'Heureux

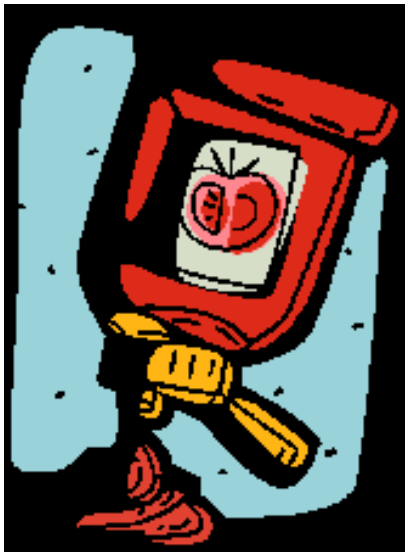
Gillis, J. (2011, January 24). Cold jumps arctic 'fence,' stoking winter's fury. *The New York Times.*

Simplifying Model

Hanford Nuclear Reservation is moving radioactive waste 7 miles from waste tanks to treatment plant.

The waste is a non-Newtonian liquid and doesn't follow the laws of gravity and motion. At first you have to pump hard to get the waste moving, then less hard to keep the same speed.

The "radioactive toxic brew acts like ketchup"



King, A. (2011, April 27). Questions remain about piping Hanford's nuclear waste. *NPR*, Retrieved from http://www.npr.org/templates/story/story.php?storyId=135750718

Building a Simplifying Model

- What is it **LIKE**?
- What does it **DO**?
- What **PROPERTIES** does it have?
- What **QUALITIES** would you like to emphasize? (i.e., what actions would it have, how would it move, what would it look like, what feeling would it invoke?)

Assessing the Strength of Simplifying Models

- What Does it Explain?
- Does it Drive Constructive Thinking?
- Does it Offer a “Common Sense” Alternative to Dominant Models?

What We are Trying to Understand

Polling:
Looking for Visible Attitudes

Our Research:
Looking for Hidden Reasoning – and our ability to shift the terrain

Metaphors or Analogies?

What metaphors do you use, or recall noticing? What are they "explaining" or what understanding do they distill?