Review: September – December 2012

Plato’s Cave
Allegory of the Cave
Simone Weil’s commentary on The Cave
Video

Ways of knowing
What does Maja know?

Kinds of knowing
Direct experience
Knowing how
Knowing that X is true (knowledge claim)

Knowledge claims
Presented as true, but can be questioned, supported, refuted, archived, etc.

Tests for truth of a knowledge claim:
Coherence: Plausible? Consistent with what I know? Make sense?
Correspondence: matches what really happens in the world.
Pragmatism: tentative, but applicable, useful

Cognition
Our brain craves organization, has a powerful need to organize our experience, make rules and be able to predict. At the same time, our ability to consciously process information is very limited

40:11,000,000
Rule of 7

Cognitive biases
Some knowledge claims may pass all three tests, but still be false, because our perception of what really happens in the world, and what we “know” and what makes sense to us, may not be true.

Ways to limit effects of bias:
1. Knowledge community (critique of peers)
2. formal methods for testing hypotheses
3. inductive reasoning (select variables --& relationships between variables—to test)
4. deductive reasoning (syllogisms) — test the rigor of the procedure for testing a hypothesis
Deductive reasoning: drawing specific conclusions from general rules

Syllogism: major premise + minor premise \(\rightarrow\) deduction / conclusion

If the major premise and minor premise are true, then the conclusion must be true.

Logical fallacies in deductive reasoning (formal fallacies)

If the conclusion is not true, then (a) the major premise is not true, or (b) the minor premise is not true, or (c) the argument is flawed.

Inductive reasoning: proposing general rules inferred from experience or observation

Two kinds of inductive reasoning:

a) generalizations (based on things we already know).
   Test the soundness of a generalization with:
   sufficient number, varying circumstances, exceptions

b) analogies (based on things we already know)

Logical fallacies in inductive reasoning

Paradigms

“This is not a pipe”
“The map is not the territory”
“Some things can’t be true but are.
Chambers’ definition of paradigm

Videos:
Derren Brown: Swapping persons
Jill Bolte Taylor: Stroke of insight
Dan Ariely: Are we in control of our decisions?
Ben Goldacre: Battling Bad Science
Michael Shermer: Why people believe weird things
Hans Rosling, Stats that reshape your worldview
Iraqi TV debate on flat earth/round earth
The West Wing: Peters Projection World Map

Readings:
Dombrowski
Bastion
Woolman
Chambers
Uphoff & Combs
Abbott
PARADIGMS:
Maps: to depict one thing, you have to ignore other things.
Paradigms: we see only what makes sense to us (tests of knowledge claims)
Flat earth / round earth
Rice production
Rickets
Development tourism

Why don’t we see?

Chimamanda Adichie: The danger of a single story
(about finding characters in stories who are like "me").

Paradigms, culture, literature. CA is a Nigerian, author of
children’s literature.
e.g. single story of children’s passtimes, a single story of
Nigeria/Africa for outsiders.
A story that starts with the failed
states of Africa differs from a story that begins with the
European colonization of Africa which established the failed
states of Africa.