

Action science skills for managing down, across *or up* the ladder

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Conclusion

- Most of the time, we treat our interpretations as facts, rather than as hypotheses.
- By treating our interpretations as hypotheses that require testing, we can increase our effectiveness at managing down, across or *up the ladder*.
- Implementing this advice requires a shift in attitude and behavior (e.g. approaching management like a behavioral scientist)

Overview

Generate and analyze first person data

Introduce two new theoretical tools

- Ladder of inference

- Balancing parts of speech

Analyze the reading using the tools

Connections to your own work experience

Cognitive Biases and Heuristics

Ease of recall and availability

- Events that are vivid, evoke emotion and/or are specific are easier to remember.

Representativeness

- Events that match preexisting mental categories are seen as more likely than those that don't (regardless of underlying likelihood, base rates, etc.)

Anchoring and adjustment

- Our conclusions are biased by prior data (regardless of its relevance, new information, etc.)

The problem

Our perceptual filters and heuristics are biased

- Our brains are huge data reduction mechanisms
- Heuristics and mental models are a central technique our brains use to reduce data
- Our heuristics are biased and self serving (e.g., fundamental attribution error)
- We are usually unaware of the influence of heuristics on our perceptions, therefore...
- We underestimate the extent to which our conclusions may be wrong

The problem refined

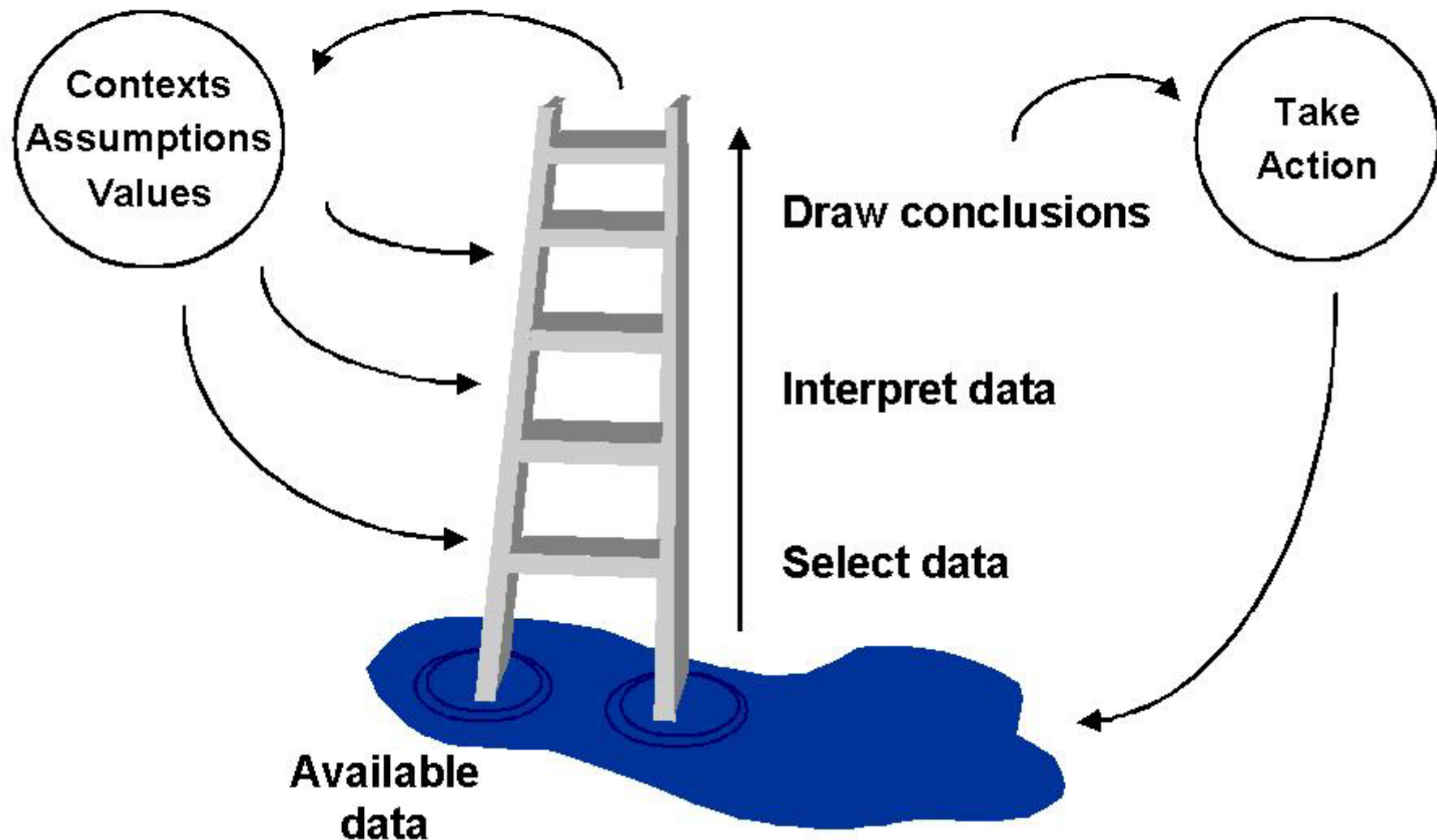
We treat our own interpretations as facts

We rarely test our interpretations (or the interpretations of others)

Most of the time, this process is happening just below our level of awareness



The Ladder of Inference



The Ladder of Inference (Senge, *TFDR*, p. 242)

“We live in a world of self generating beliefs which remain largely untested”

Our reasoning is self sealing

Assumptions that limit effectiveness

- Our beliefs are the truth**
- The truth is obvious**
- Our beliefs are based on real data**
- The data we select are the real data**

Self Sealing Reasoning Process

- 1. We select data that is biased**
- 2. We add meaning and make assumptions based on our own experience, culture, etc.**
- 3. We draw conclusions**
- 4. We take actions based on these conclusions**
- 5. People's reactions reinforce our conclusions and affect what data we select next time**

Self Sealing Reasoning Example

I say “hello” when I pass you on the way to class. You do not reply. (*Observable data*)

Nice people reply when people greet them. Since you didn't, you must not be very nice. (*Meaning making and inferences*)

I don't reply to you when you say hello to me in class next week. (*My actions*)

You conclude I am not nice and stop talking to me. (*Your reactions confirm my conclusions*)

Using the Ladder of Inference

- **To become more aware of your own thinking and reasoning**
- **To make your thinking and reasoning more visible to others**
- **To inquire into others' thinking and reasoning**

(Senge, *TFDR*, p. 245)

The Ladder of Inference Language

Clarifying data selection

“What is the observable data behind that statement?”

“Does everyone agree on what the data is?”

Making meaning making visible

“Can you run me through your reasoning?”

“How did you get from x, y, z data to x, y, z conclusion?”

Publicly testing inferences

“Larry, I noticed that you have been quiet during the meeting.” (Naming data)

“Does that mean you are uninterested?”
(Testing inference)

Advocacy & Inquiry 2 x 2

ADVOCACY	HIGH	Imposing Explaining	Mutual Learning
	LOW	Observing Withdrawing	Interrogating Interviewing
		LOW	HIGH
		INQUIRY	

Action science applied

McNeil and Walters case (from the reading)

- McNeil's performance problems
- Walter's response
- Adario's reaction

Ladder of inference analysis

Parts of speech analysis

Action science applied

A case from your own experience?

- Recent list serve comment about the Indian Restaurant
- Others?

Action science: A new approach

**Treat our own (and others') conclusions
as hypotheses to be tested**

Two tools of action science

- Ladder of inference
- Balancing advocacy and inquiry

Practice using the tools off line

**Apply the tools in practice to increase
your effectiveness**