

Introduction

What is Critical Thinking?

“Some Thoughts and Advice for Our Students and All Students”

August 29, 2017

We are scholars and teachers at Princeton, Harvard, and Yale who have some thoughts to share and advice to offer students who are headed off to colleges around the country. Our advice can be distilled to three words:

Think for yourself.

(roughly the same as critical thinking)

Thinking for yourself means:

- “questioning dominant ideas even when others insist on their being treated as unquestionable”.
- being open minded, willing to debate
- “deciding what one believes not by conforming to fashionable opinions, but by taking the trouble to learn and honestly consider the strongest arguments to be advanced on both or all sides of questions—including arguments for positions that others revile and want to stigmatize and against positions others seek to immunize from critical scrutiny”.

Why think for yourself?

- Thinking for yourself comes from a love of truth and the desire to attain it. (A critical thinker is a lifelong truth-seeker.)
- Critical thinking helps us resist lies, propaganda, misinformation.
- Critical thinking helps us argue persuasively and honestly for our views.

Francis Collins, former NIH director



(Fallacies concerning cost-benefit analysis)

5. Narrow Focus on One Problem

- A cost-benefit analysis is often used to evaluate a possible measure to address *one specific problem*.

Other effects (whether beneficial or harmful) occurring elsewhere are often not considered.





"Yes, the planet got destroyed. But for a beautiful moment in time we created a lot of value for shareholders."

The Paradox of Epistemic Authority

- I've said that critical thinking is largely about *thinking for yourself*, rather than simply believing what you're told.
- But to what extent is this really possible? Can we really live in the world today without relying on (epistemic) authorities?
- A big part of thinking critically is figuring out whom to trust. *Which* authorities are reliable?

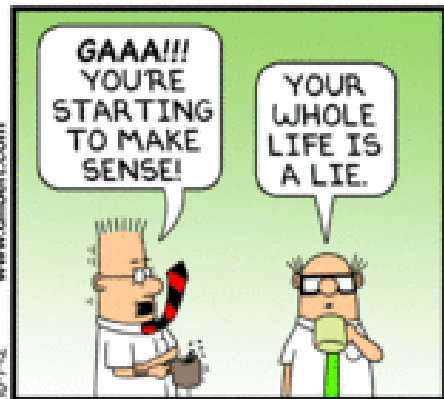
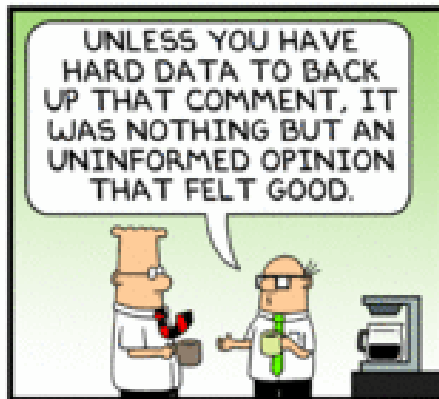
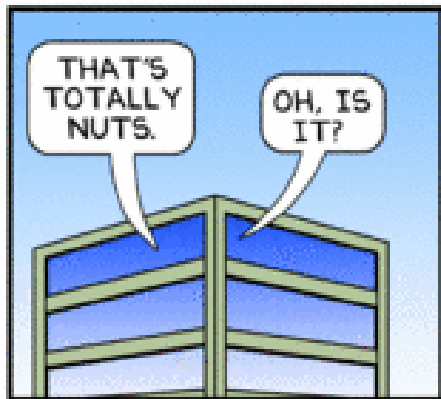
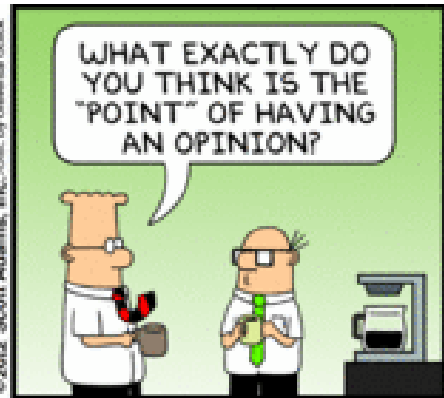
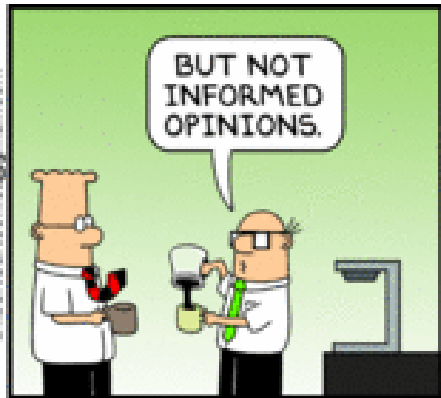
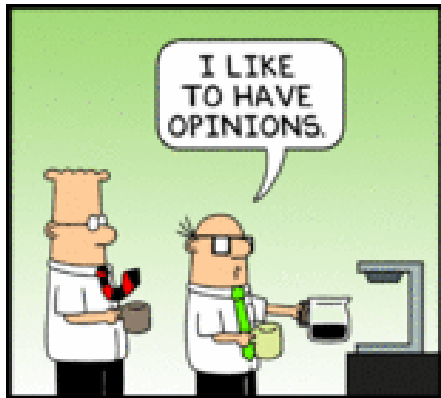
- In practice we trust “our people”.
- (We trust the leaders in our particular community, whether it’s our family, our circle of friends, our political group, our church, our favourite magazine, our favourite blogs, etc.)
- But “our people” may be wrong on some issues. Do we have a duty to check? How would we do that?

Self Interest

- We tend to form beliefs that coincide with our own interests and general outlook.
- We tend to oppose beliefs that would cost us personally, regardless of whether they're supported by evidence. E.g.?
 - “I believe in the free market, so global warming is a hoax”.
 - “I cross the Port Mann bridge twice a day, so getting rid of the toll is a great idea”.
 - “I eat beef, so raising cattle (in huge numbers) isn't bad for the environment”.

Belief is *pleasurable*

- Doubt and uncertainty are uncomfortable, unsettling.
- Belief, especially certainty, is pleasant.
- Dogmatic belief is a solid basis for action.
- On the other hand, uncertainty about how things stand in the world undermines decisive action.
- Uncertainty is cognitively demanding!



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D·O·R·O·T·H·Y

TRANSPORTED TO A SURREAL LANDSCAPE,
A YOUNG GIRL KILLS THE FIRST PERSON SHE MEETS
THEN TEAMS UP WITH THREE STRANGERS TO KILL AGAIN

“Cherry picking”

THE DEADLY FACTS ABOUT **WATER!**

FACT!

WATER CAN BE CHEMICALLY
SYNTHESIZED BY BURNING
ROCKET FUEL!!!

FACT!

OVER CONSUMPTION CAN CAUSE
EXCESSIVE SWEATING, URINATION,
AND EVEN DEATH!!!

FACT!

100%
OF ALL SERIAL KILLERS,
RAPIST AND DRUG DEALERS HAVE
ADMITTED TO DRINKING WATER!!!



FACT!

WATER ONE OF THE PRIMARY INGREDIENTS
IN HERBICIDES AND PESTICIDES!!!

FACT!

WATER IS THE LEADING
CAUSE OF DROWNING!!!

FACT!

100 PERCENT OF ALL PEOPLE
EXPOSED TO WATER WILL DIE!

Look at *all* the evidence

- A critical (rational) thinker bases their beliefs on the *total* available evidence. (No cherry picking, confirmation bias, etc.)
- (It's usually *very painful* to examine evidence that opposes your cherished views!!)



From Doonesbury, 18th March 2012...