

# The Scientific Process in Popular Culture

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- 2: I identify its rendition in [The Imitation Game](#)
- 3: You search for other renditions in a movie, a book, a graphic novel, etc.
- 4: You prepare and give a quick talk about [a rendition you find interesting](#)

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Bring your own context.

– Josh Whedon  
(well, almost)

# The pitfall

action vs. actor

ball vs. player

object vs. subject

A short story is about a murder.

A novel is about the murderer.

– Philip K. Dick

# Here: scientist vs. the scientific process

- the mad scientist
- the evil scientist
- the daughter of the old scientist
- the young scientist  
(he is after the daughter of the old scientist)
- etc.

# Typical examples of scientists

In movies:

- James Bond (they want to destroy the world)
- Independence Day (they are locked up<sup>\*</sup>)
- E.T. (they want to dissect E.T.!)
- etc.

\* in Area 51...

# The Imitation Game

Two aspects are nicely rendered:

- T.T.T. (Piet Hein)
- supersaturation



Put up in a place  
Where it's easy to see  
The cryptic admonishment  
T.T.T.

When you feel how depressingly  
slowly you climb,  
it's well to remember that  
Things Take Time!

# T.T.T. in The Imitation Game

- Setting up the experiment takes time.
- The experiment takes time.
- Management vs. Turing.

I never worry about action, only about inaction.  
– Winston Churchill

# Supersaturation in The Imitation Game

- Turing immerses himself in the problem.
- He is receptive to the smallest input (name of German girlfriend, “Heil Hitler”).

Inspiration exists, but it must find you working.

– Pablo Picasso

# About immersing oneself in a problem

heap of knowledge + change of perspective



the mind clicks

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the mind clicks

Genius is 99% perspiration  
and 1% inspiration.  
– Thomas Edison

# Your exercise

Find a movie / book / etc.  
that illustrates  
an aspect of the scientific process.

# In natural science

The scientific process:

- observation,
- hypothesis, and
- experiment.

Experiments should be reproducible.

# A broad distinction

- deductive: “lig på bordet”  
(the corpse is on the table)
- inductive



# The first inkling

- “Hey, that’s funny...” (Asimov)
- “Hum, something doesn’t fit.” (Tycho Brahe)

# The moment

- Eureka! (Archimedes)
- The apple (Newton)
- An oddity (H. C. Ørsted)

# A huge pitfall: prejudices

- “If you look for something,  
you are likely to find it.”  
– Niels Steno
- “You must not fool yourself.  
However, you are the easiest person to fool.”  
– Richard Feynman

# References (essays)

- Cargo Cult Science (Richard Feynman)
- The Relativity of Wrong (Isaac Asimov)

## References (books)

- Bellwether (Connie Willis)
- Uncle Petros and Goldbach's conjecture, a novel of mathematical obsession (Apostolos Doxiadis)
- Math Girls (Hiroshi Yuki)
- Birth of a Theorem (Cedric Villani)
- Harry Potter and the Methods of Rationality

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(And remember to **repeat each question.**)