IB CONFERENCE
OF THE AMERICAS 2015

Chicago, IL • 23–26 July

TIPS FOR TOK: EDUCATING FOR LIFE WITH ARTS AND SCIENCES

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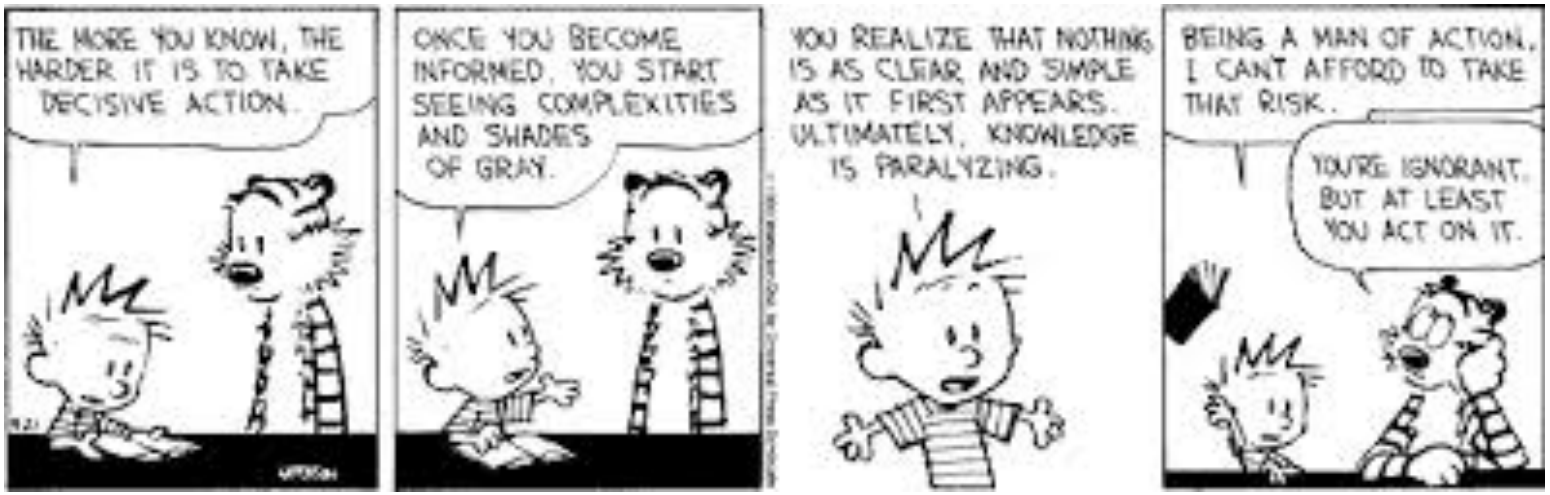
Aim of the session

To demonstrate how arts and sciences can help students to critically reflect on their own beliefs and assumptions.

To analyze assertions that result from simple acceptance of knowledge claims without sufficient inquiry and evidence.

My experience as a TOK teacher

I have noticed that our students have a basic understanding of the nature of knowledge. My main objective is to put down clichés, common sense assumptions and naïve thoughts in order to reveal to the students the complexity of acquiring knowledge.


THE MORE YOU KNOW, THE HARDER IT IS TO TAKE DECISIVE ACTION.
ONCE YOU BECOME INFORMED, YOU START SEEING COMPLEXITIES AND SHADES OF GRAY.
YOU REALIZE THAT NOTHING IS AS CLEAR AND SIMPLE AS IT FIRST APPEARS. ULTIMATELY, KNOWLEDGE IS PARALYZING.
BEING A MAN OF ACTION, I CAN'T AFFORD TO TAKE THAT RISK.
YOU'RE IGNORANT. BUT AT LEAST YOU ACT ON IT.

Examples of clichés about knowledge

- “ Sciences are objective and arts are subjective“.
- “ History is written by the winners. Therefore it is full of bias “.
- “ Ethics is depending on our own culture and values. Therefore it is relative “ .
- “ I have the right to believe that… ”
- Other examples?

What should we do with clichés?

My Weapon: doubt!

In order to put down clichés, stereotypes and naïve thoughts about knowledge, I use doubt as a weapon. I show to my students how great scientists, artists and philosophers have used it in the history.

But all sorts of doubt?

No! Only fruitful, methodic, rational, measured, limited and based on facts doubt!

What should we avoid as TOK teachers?

Skepticism (or relativism)!

The aim of the course is not to foster the prevailing skepticism.

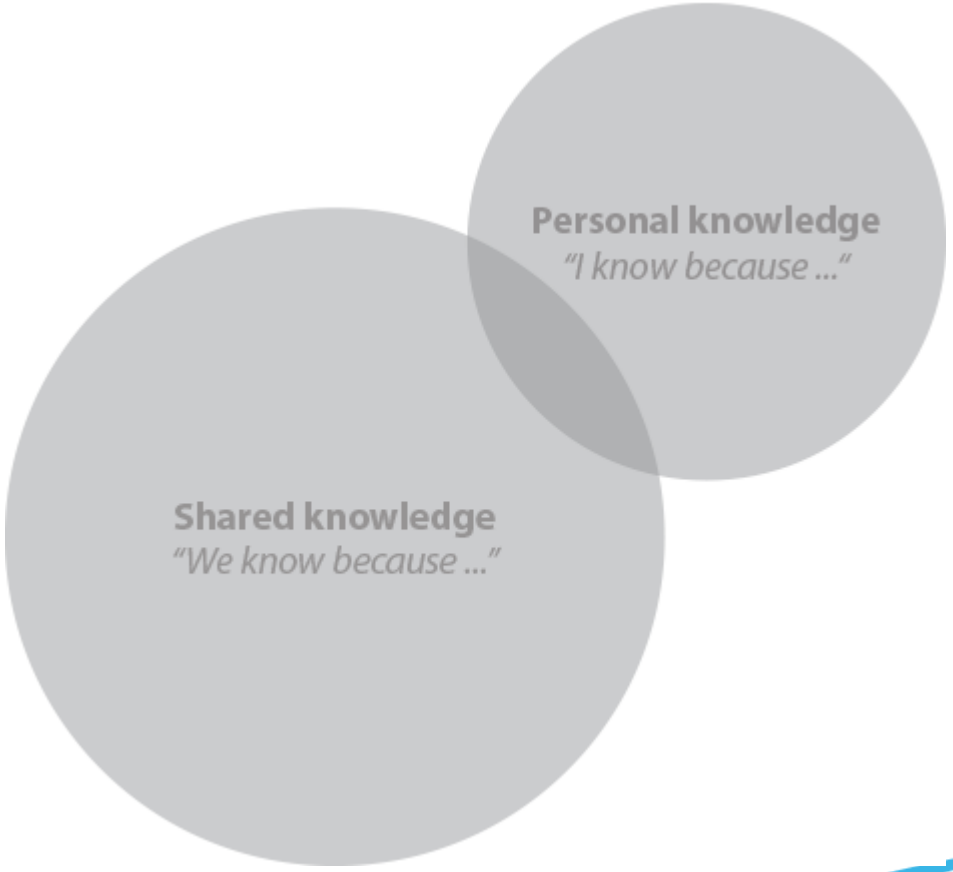
I don't want to transform my students into cynical persons who doubt of everything.

The golden rule of doubt

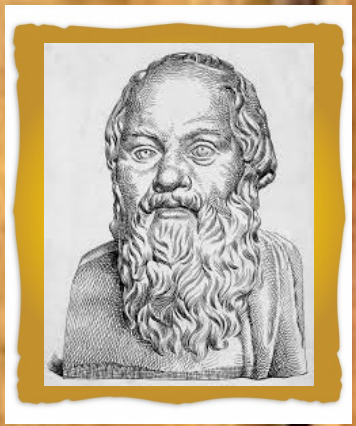
The more you know, the better your doubts are.

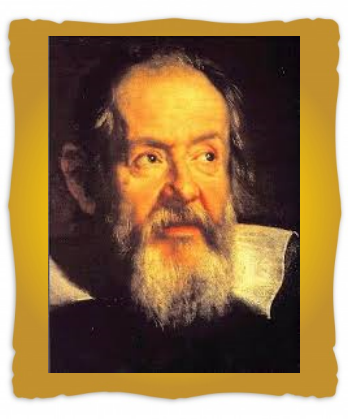
In order to doubt of an established truth, one needs to have a sound understanding of an area of knowledge.

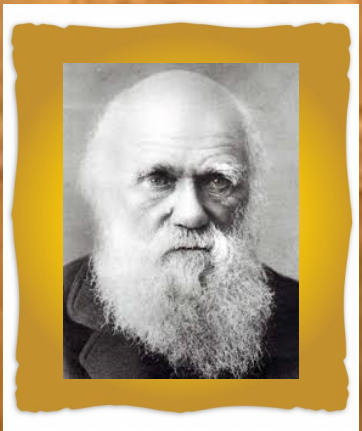
The new TOK diagram: an useful tool against skepticism!

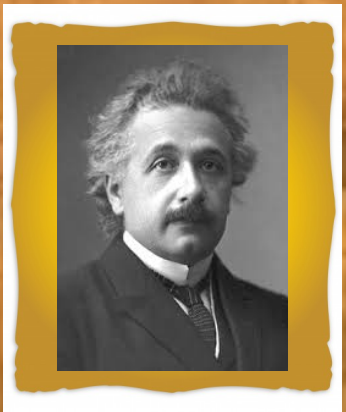


Masters of doubt







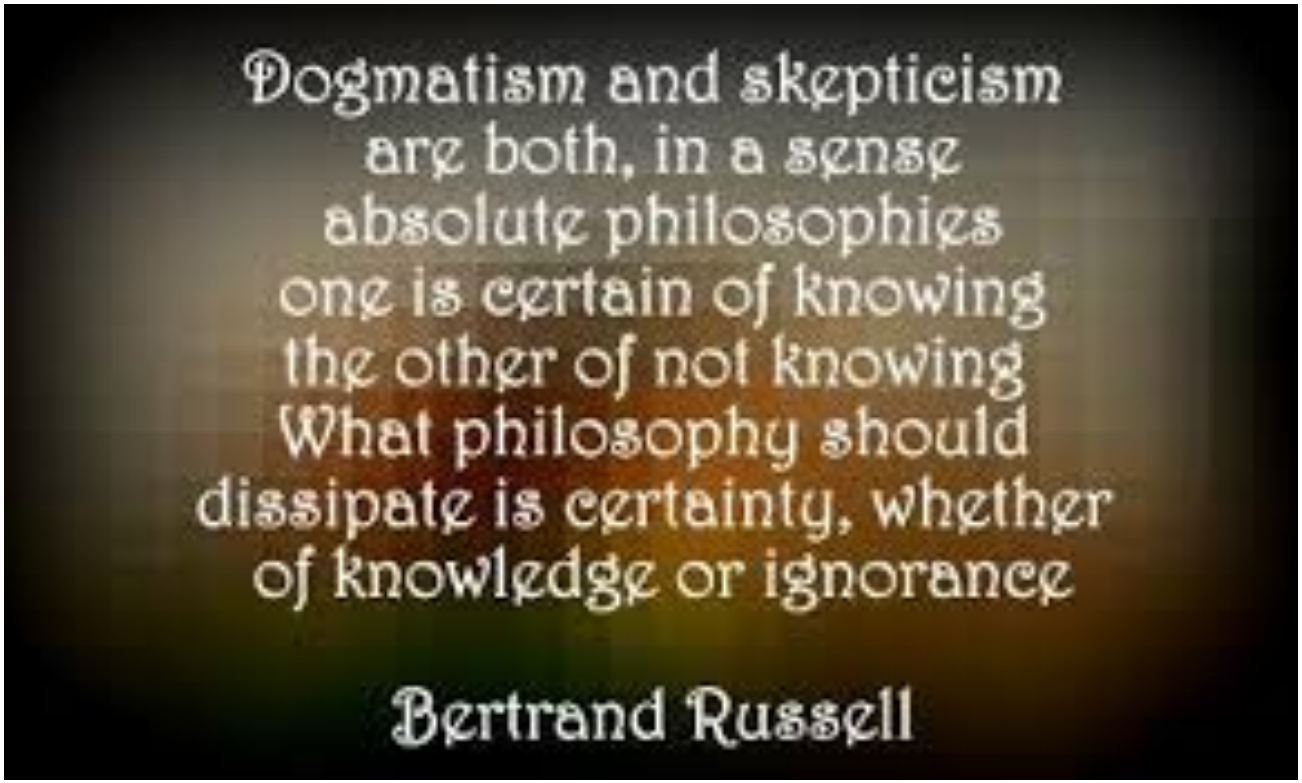


The two TOK dangers

Dogmatism

Skepticism

Bertrand Russell's quotation



Let's work a little bit!

Examples of “truths“ derived from common sense

- It is impossible to create a tridimensional effect (perspective) on a flat surface such as a paper sheet.
- Our visual perception is trustable. There is no need to doubt of our sense perception. Therefore what we see is what we get.
- If two objects are falling, the heavier will touch the ground first.
- It only takes a good observation of species to come to the conclusion that humans, because of their intelligence and their aptitude of speaking, are radically different from animals.
- When our ancestors were cavemen, males were hunters and females stayed in the cave with the babies. Besides, the paintings on the walls have been made by the males.
- It is obvious that space and time are the same for everybody and are absolute.

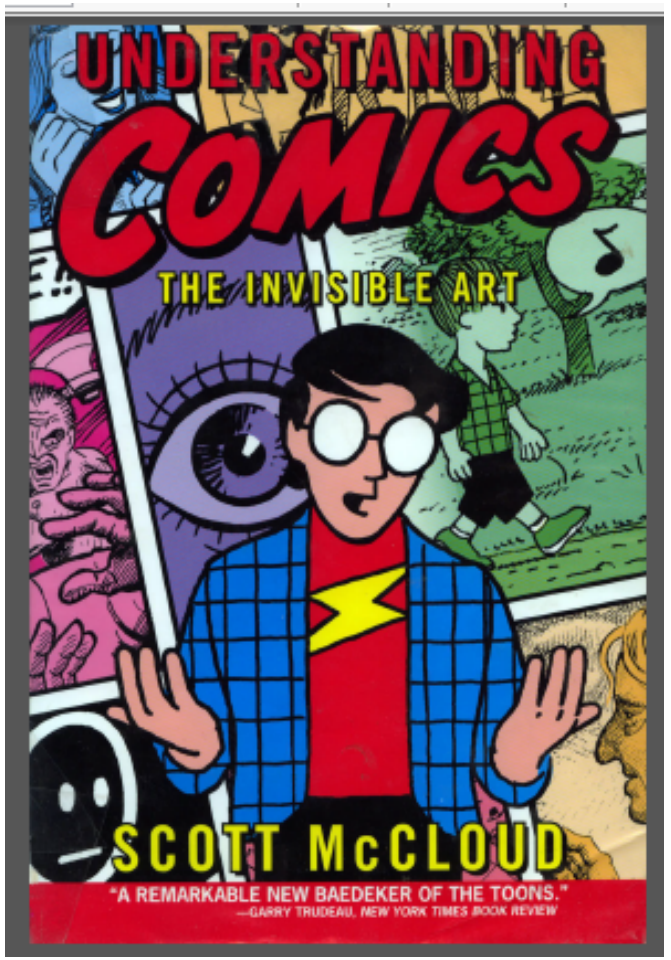
False!

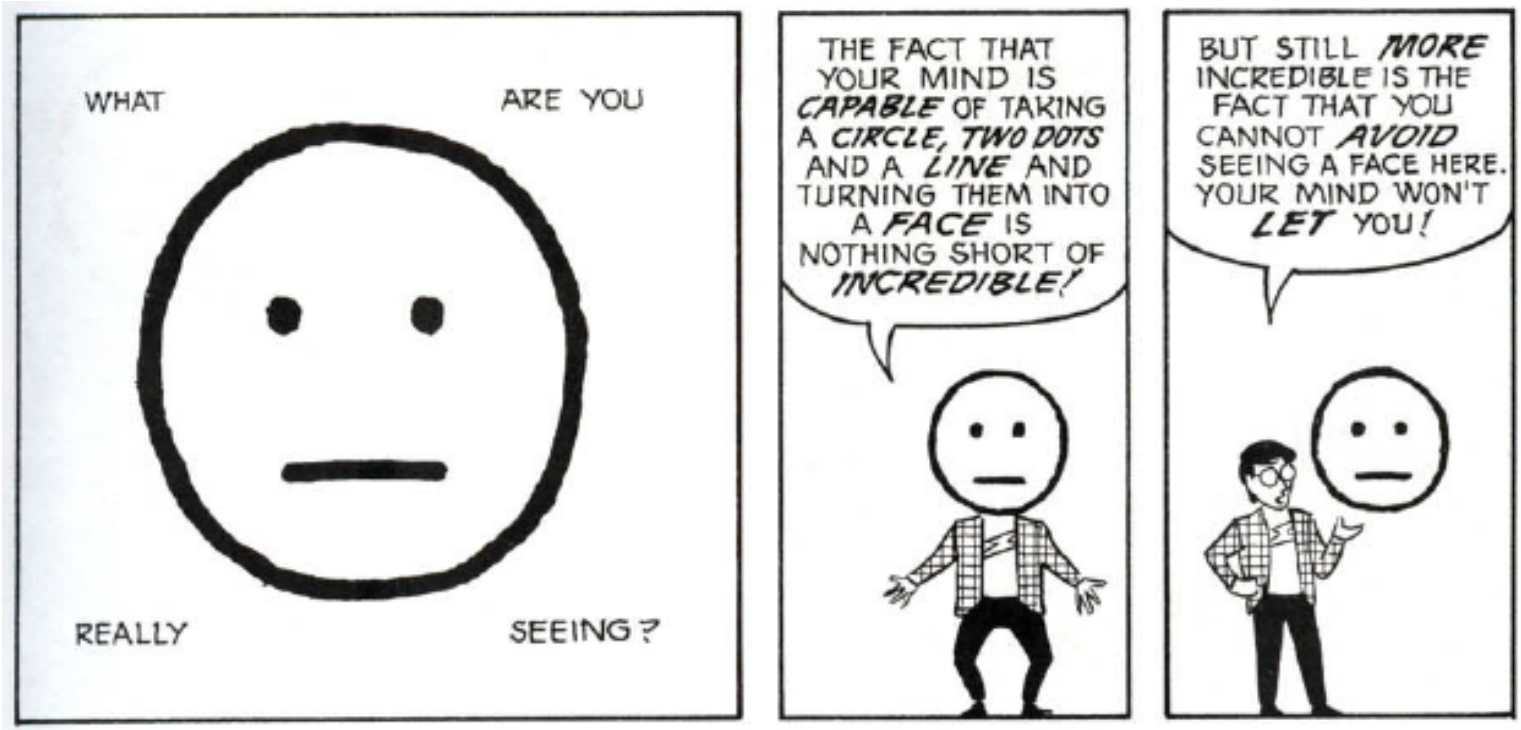
Truth number 1

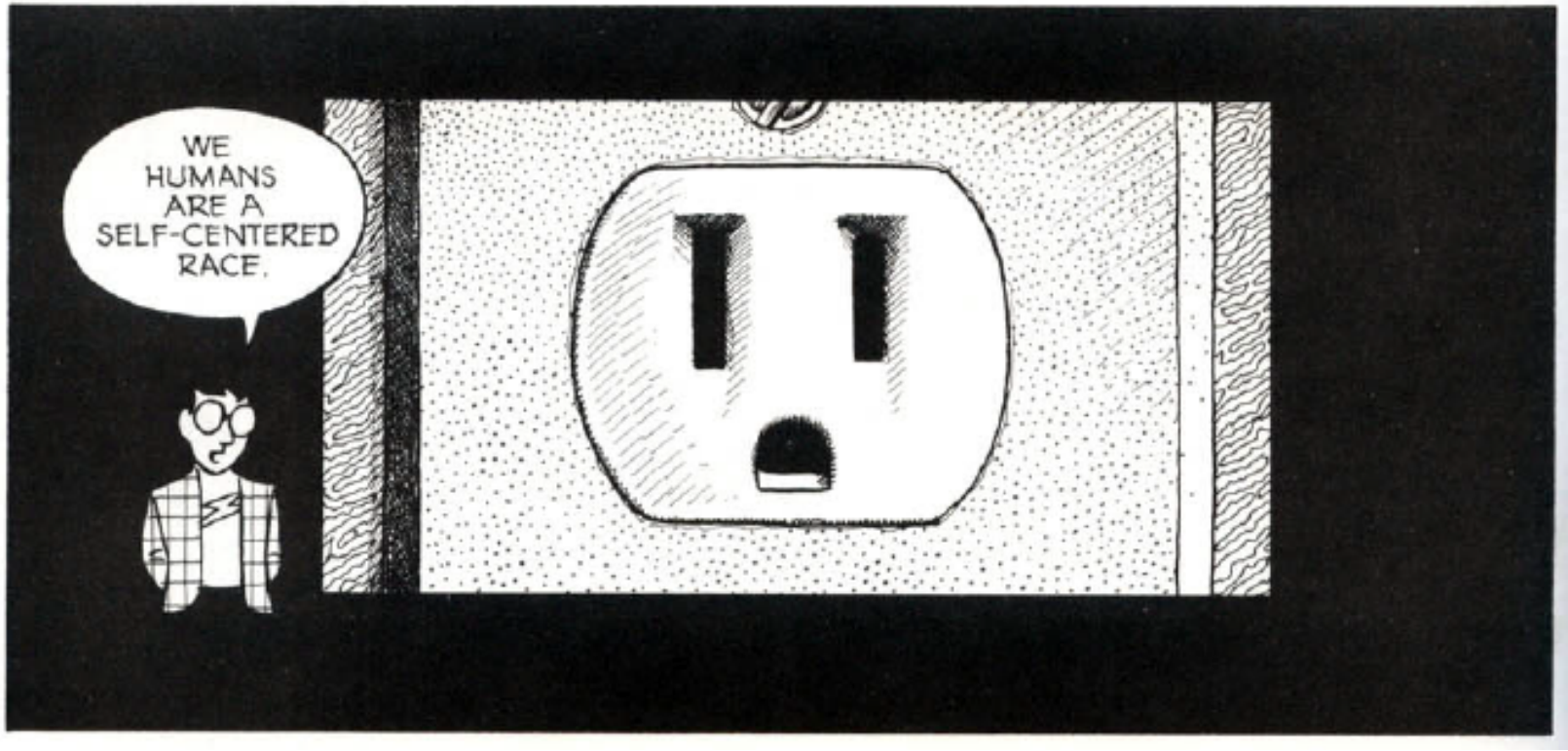
With *Flagellation of Christ*, Piero della Francesca (1416-1492) first introduced perspective in the history of painting. But the renaissance man was also a mathematician and a geometer…

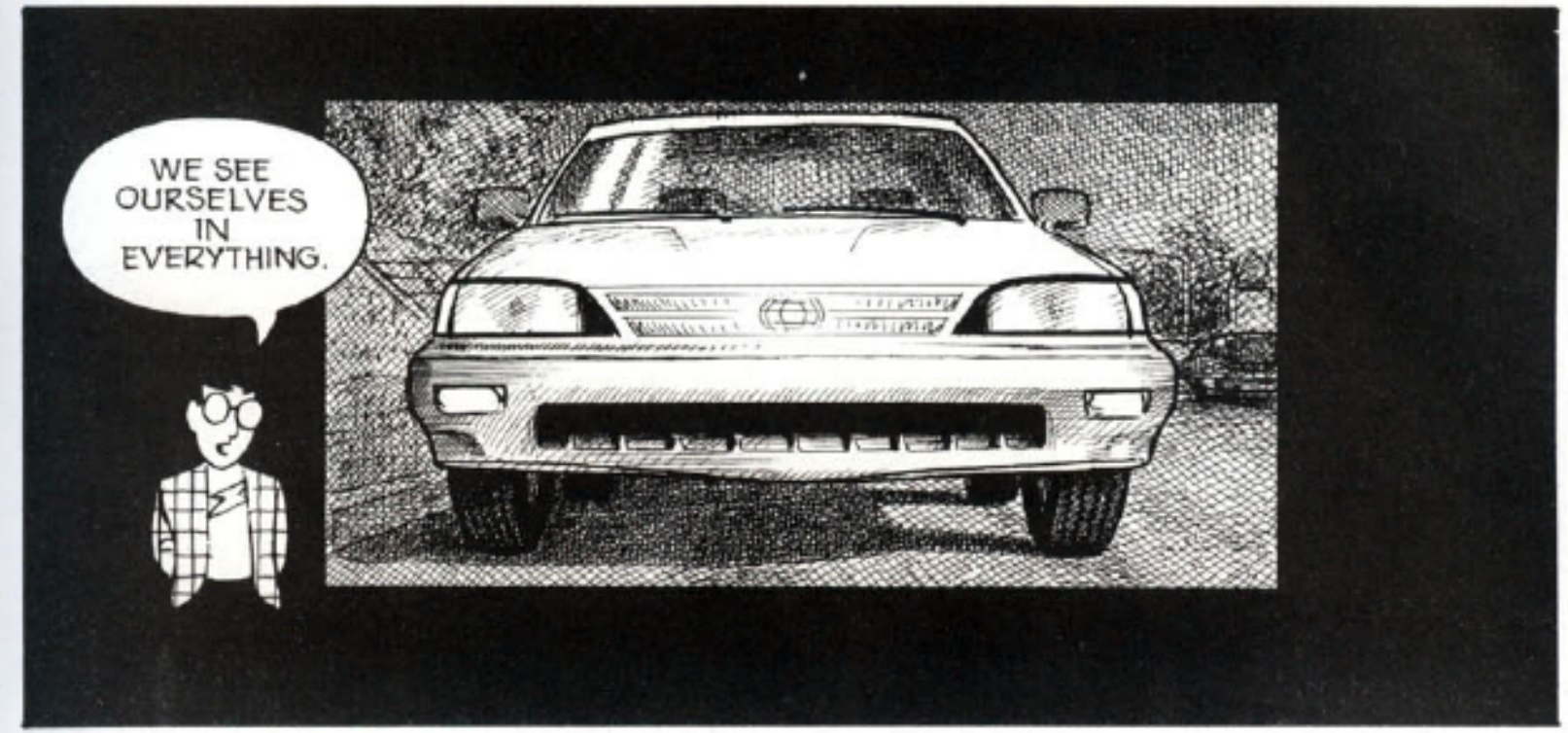
Truth number 2

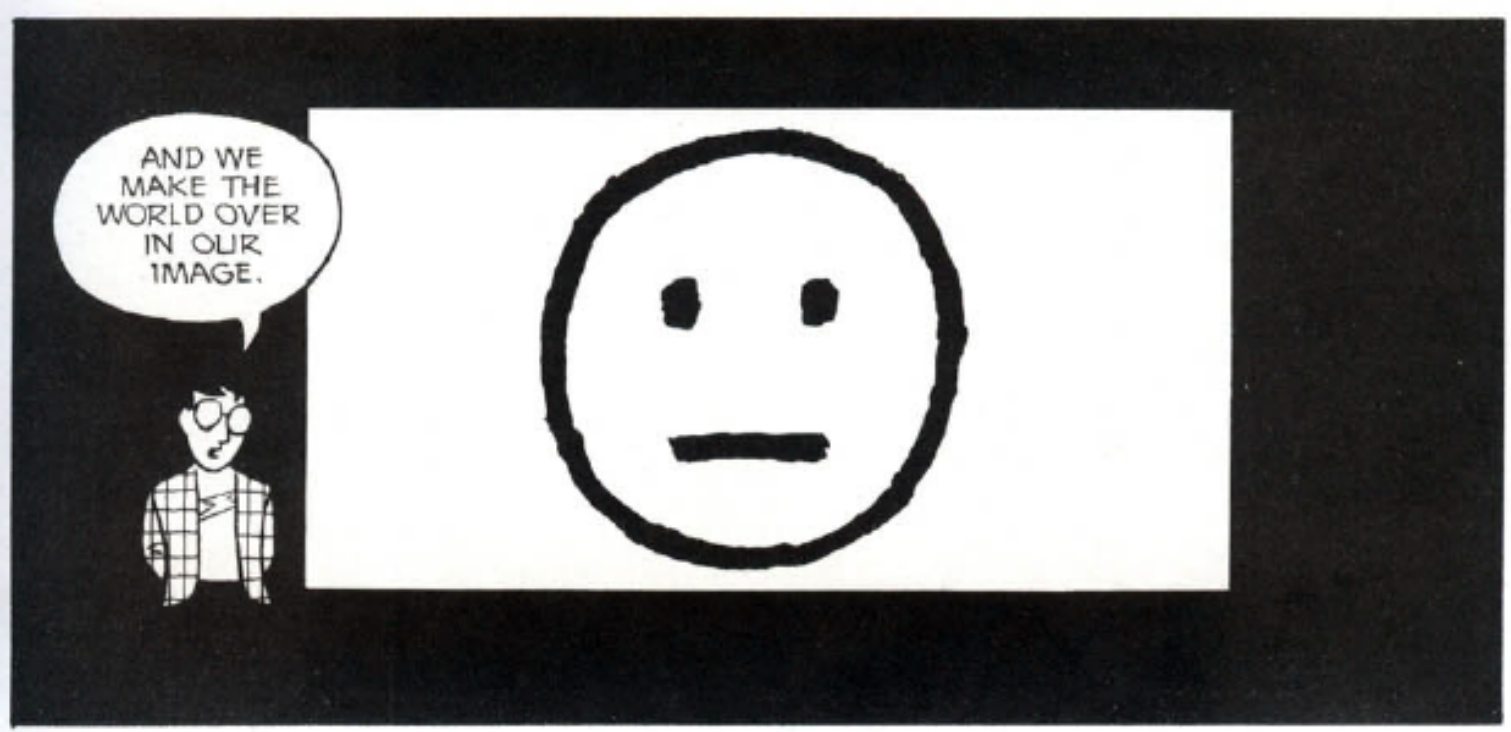
When arts learn us a lot about sense perception!

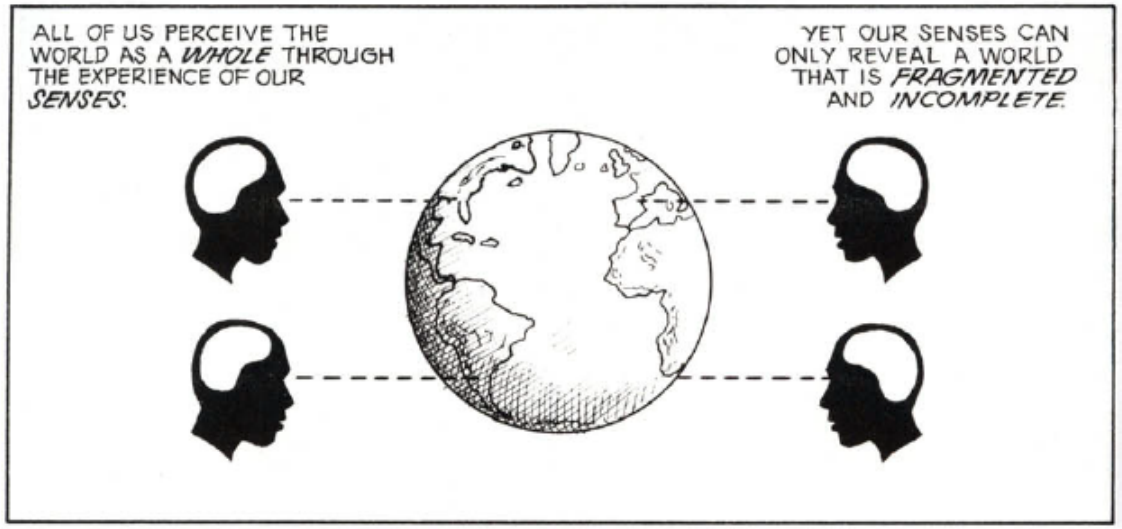


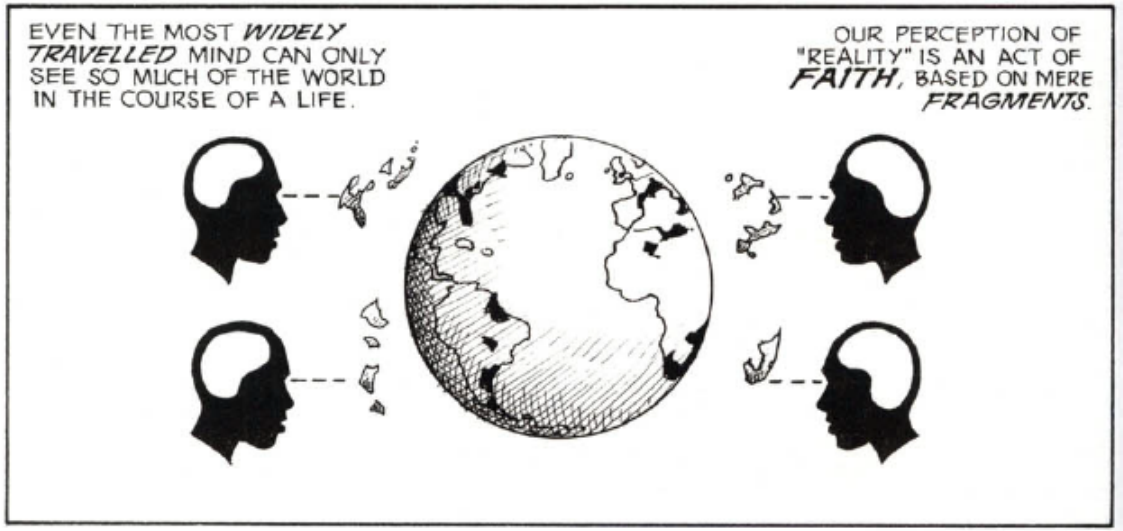

WHAT
ARE YOU
REALLY
SEEING?
THE FACT THAT YOUR MIND IS CAPABLE OF TAKING A CIRCLE, TWO DOTS AND A LINE AND TURNING THEM INTO A FACE IS NOTHING SHORT OF INCREDIBLE!
BUT STILL MORE INCREDIBLE IS THE FACT THAT YOU CANNOT AVOID SEEING A FACE HERE. YOUR MIND WON'T LET YOU!

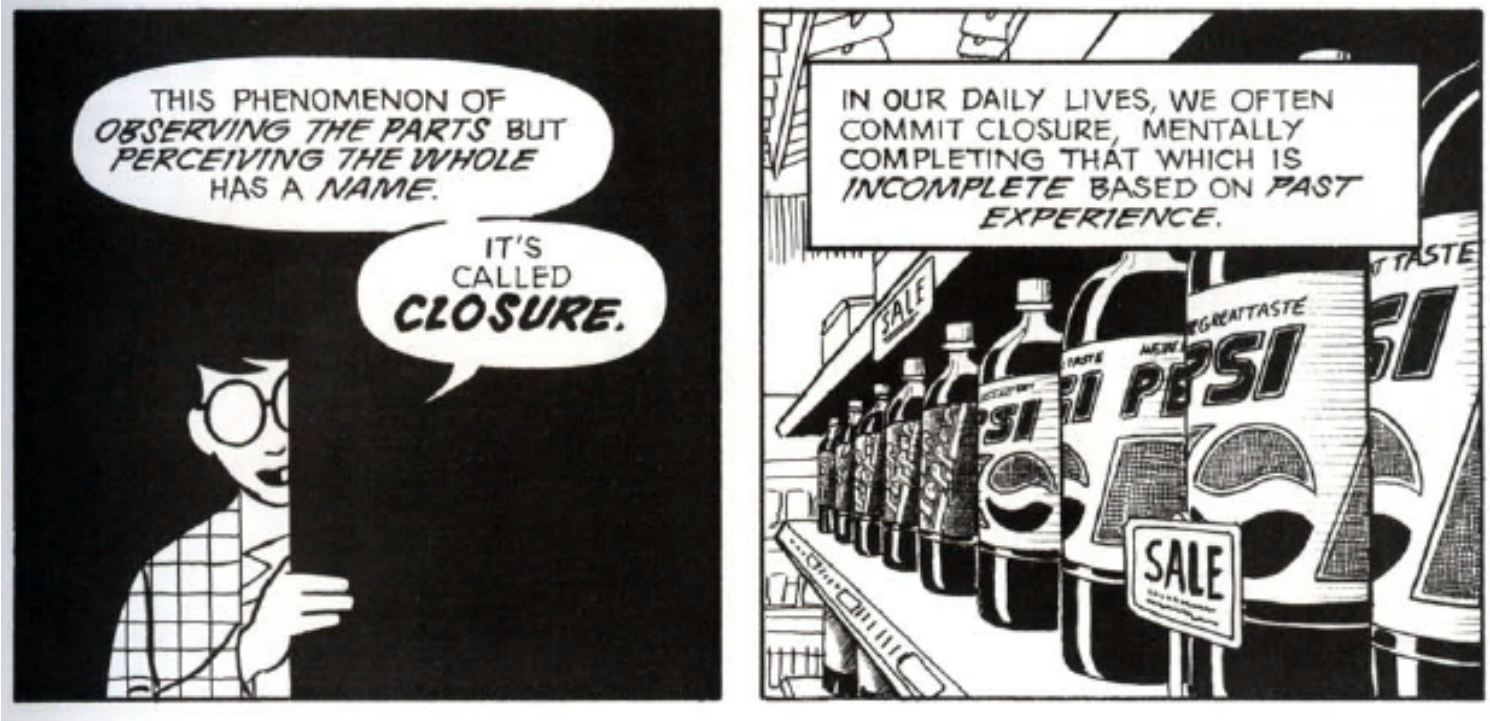

WE HUMANS ARE A SELF-CENTERED RACE.


WE SEE OURSELVES IN EVERYTHING.


AND WE MAKE THE WORLD OVER IN OUR IMAGE.


ALL OF US PERCEIVE THE WORLD AS A *WHOLE* THROUGH THE EXPERIENCE OF OUR *SENSES*.
YET OUR SENSES CAN ONLY REVEAL A WORLD THAT IS *FRAGMENTED* AND *INCOMPLETE*.

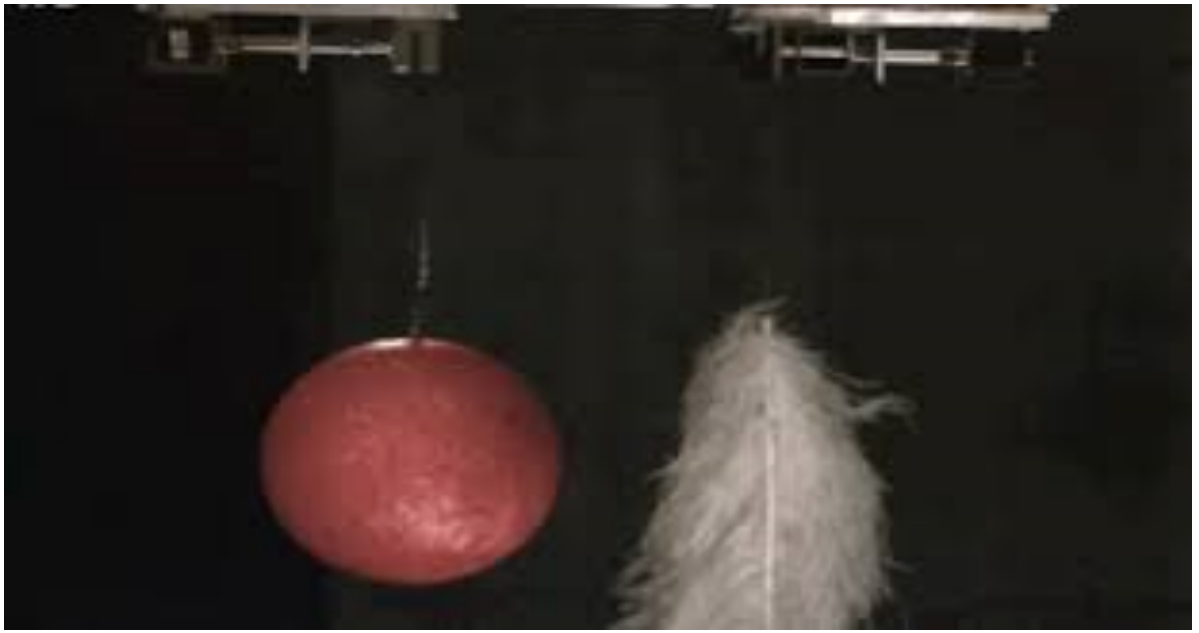

EVEN THE MOST *WIDELY TRAVELLED* MIND CAN ONLY SEE SO MUCH OF THE WORLD IN THE COURSE OF A LIFE.
OUR PERCEPTION OF "REALITY" IS AN ACT OF *FAITH*, BASED ON MERE *FRAGMENTS*.


THIS PHENOMENON OF OBSERVING THE PARTS BUT PERCEIVING THE WHOLE HAS A NAME.
IT'S CALLED CLOSURE.
IN OUR DAILY LIVES, WE OFTEN COMMIT CLOSURE, MENTALLY COMPLETING THAT WHICH IS INCOMPLETE BASED ON PAST EXPERIENCE.
SALE
PEPSI
SALE

Truth number 3

Galileo was a brilliant Aristotle's reader and a scientist who believed in experiment. That's what it takes to question a physical belief that was supported by the intelligentsia of his time and the common sense.

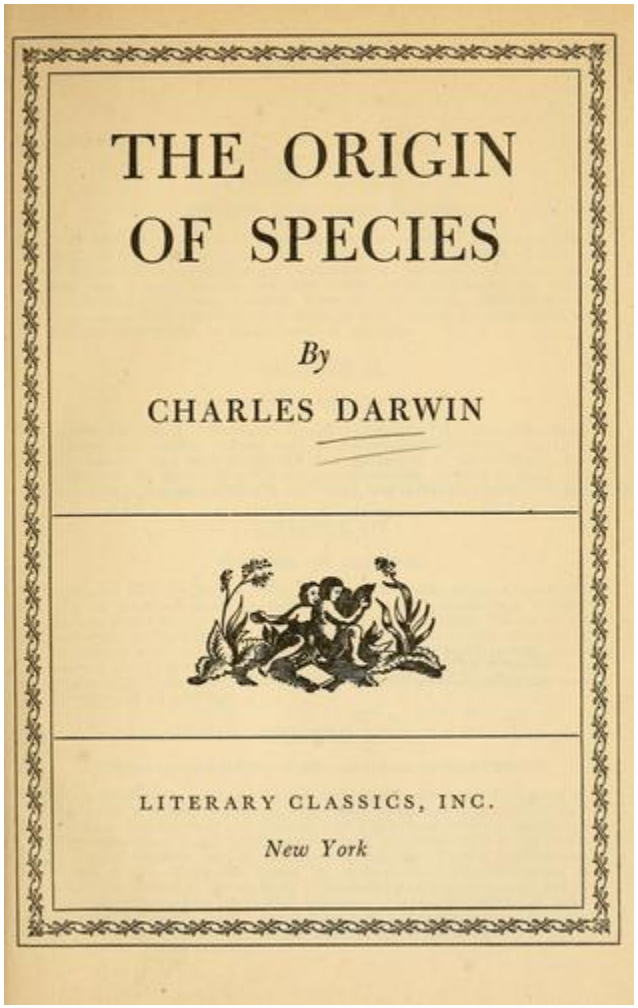
The way science demonstrates!



https://www.youtube.com/watch?v=E43-CfukEgs -

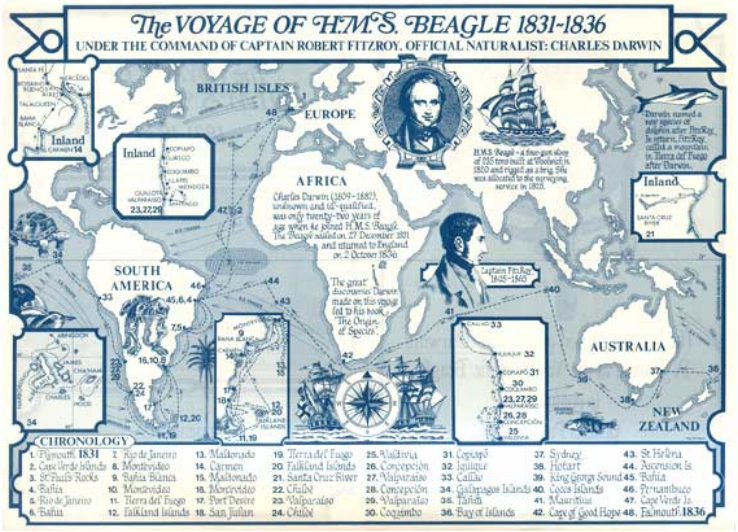
Truth number 4

This book is the cause of a genuine scientific revolution. The secrets of its author? The capacity to think outside the box, a lot of observations and a great share of invention.



Charles Darwin and the voyage of the *Beagle*

What does it take to make a scientific revolution? Observation, patience and experiments.



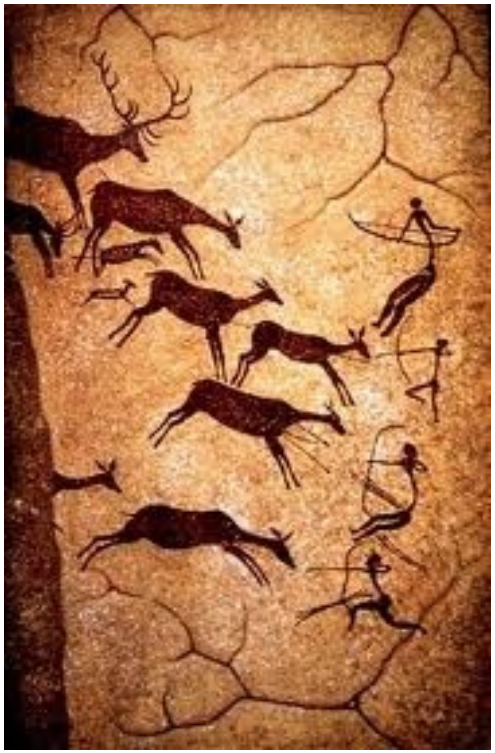
'*My success as a man of science has been determined, as far as I can judge, by complex and diversified mental qualities and conditions. Of these, the most important have been – the love of science – unbounded patience in long reflecting over any subject – industry in observing and collecting facts – and a fair share of invention as well as of common-sense'.* (Charles Darwin, *Autobiography, New York,* W.W. Norton and Company, 1993)

Truth number 5

The first paleontologists belonged to the Victorian era, one of the most misogynist periods… When bias and prejudices contaminate science!

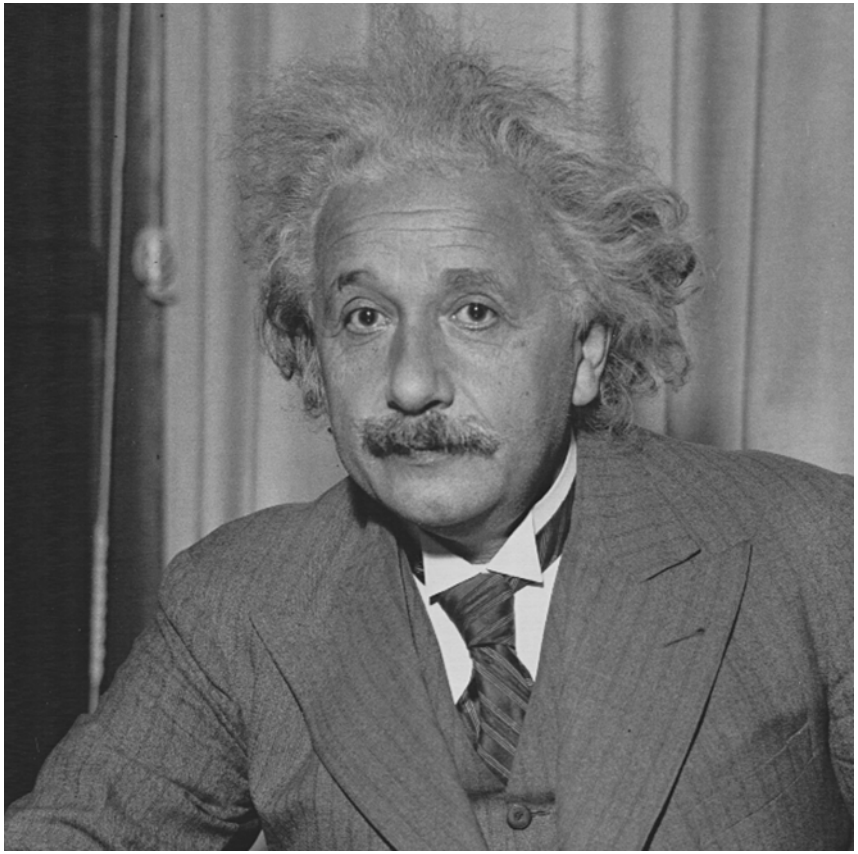
A nuanced vision of the role of prehistoric women

These paintings in Lascaux, France, may have been done by women as well as by men. Recent researches tend to demonstrate that women were very active in the Neolithic era. They were hunters-gatherers, artists, craftswomen and so on.



Truth number 6

Albert Einstein used a thought experiment in order to discover the time relativity. Easy to do? No! One needs to have great knowledge to perform that kind of experiment.




Space traveler is
younger than twin

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The TOK essay

Diploma Programme
Programme du diplôme
Programa del Diploma

Theory of knowledge prescribed titles

May 2015 examination session

Instructions to candidates

Your theory of knowledge essay for examination mus
authentication. It must be written on one of the six t
choose any title, but are recommended to consult v
according to the assessment criteria published in
of your essays should be on knowledge questions.
your IB programme and to your experiences as a knowe
provide relevant examples to illustrate your arguments. Pay at
arguments, and remember to consider what can be said against them
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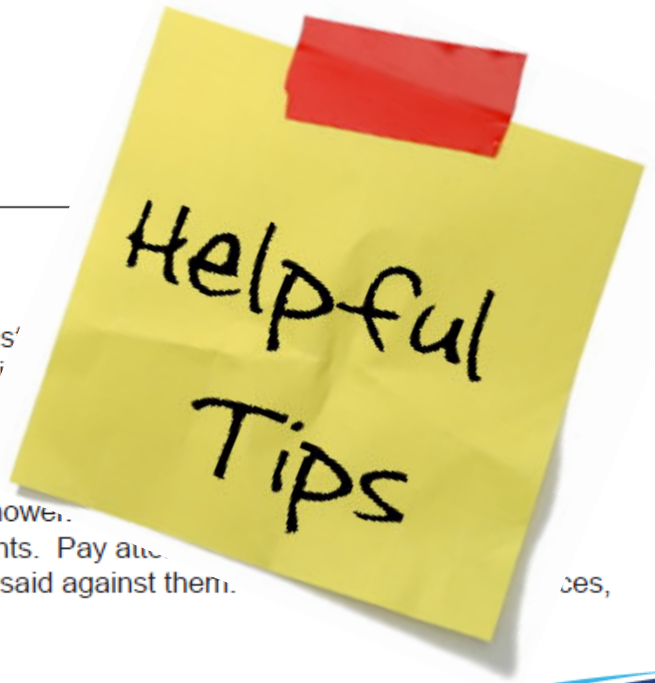
cite them according to a recognized convention.



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