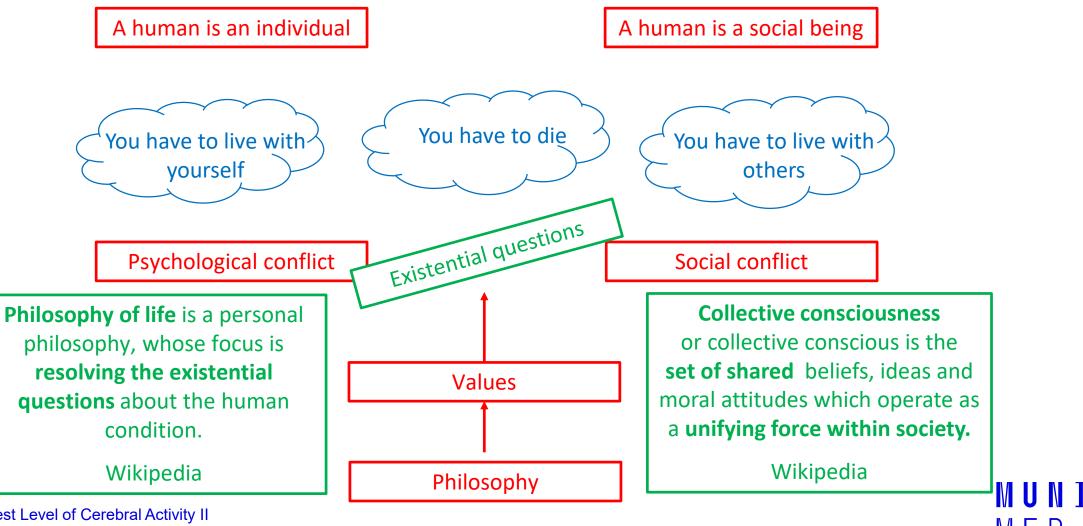
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The Highest Level of Cerebral Activity II

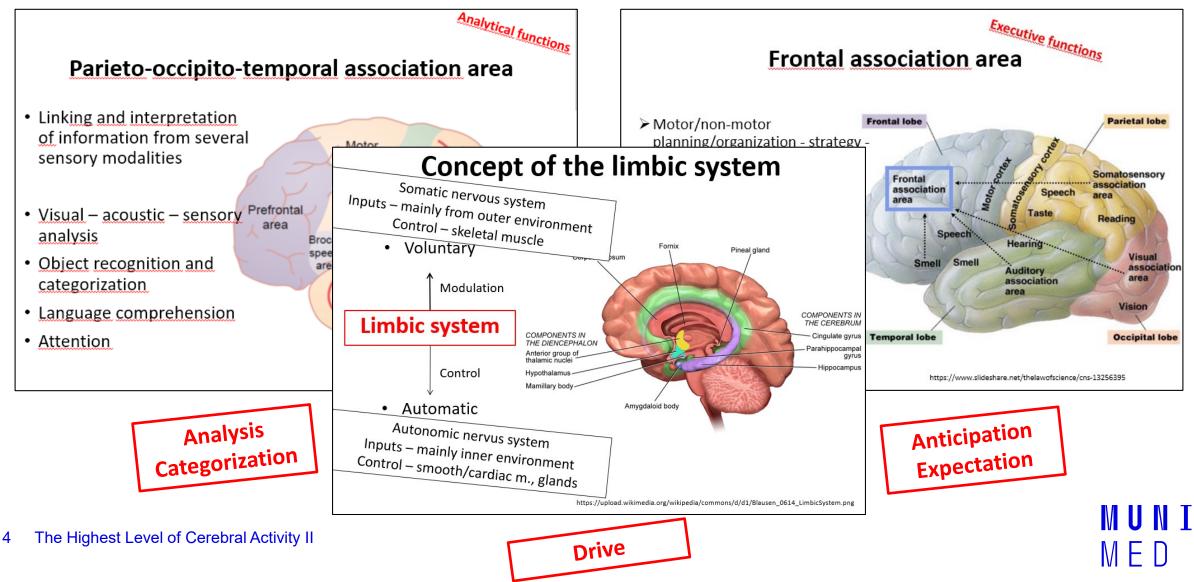
2 The Highest Level of Cerebral Activity II

Why?



The Highest Level of Cerebral Activity II 3

Complementary ways of thinking

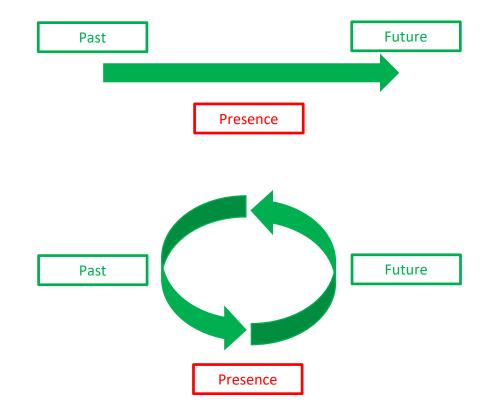


Mythology and philosophy

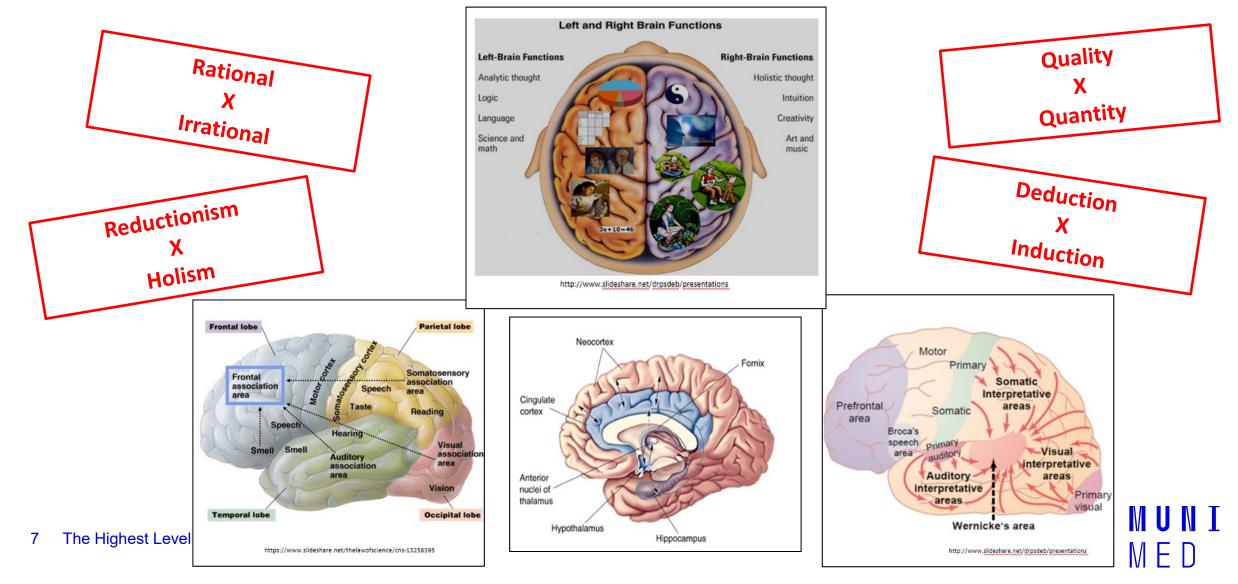
- All the nations have a mythology
- Language and mythology (and later culture and philosophy) define the nations
 - Communication
 - Values
- Explanation of complex issues
 - Pseudorational/iractional
 - Protscience
 - Symbolism education

Mythology and philosophy

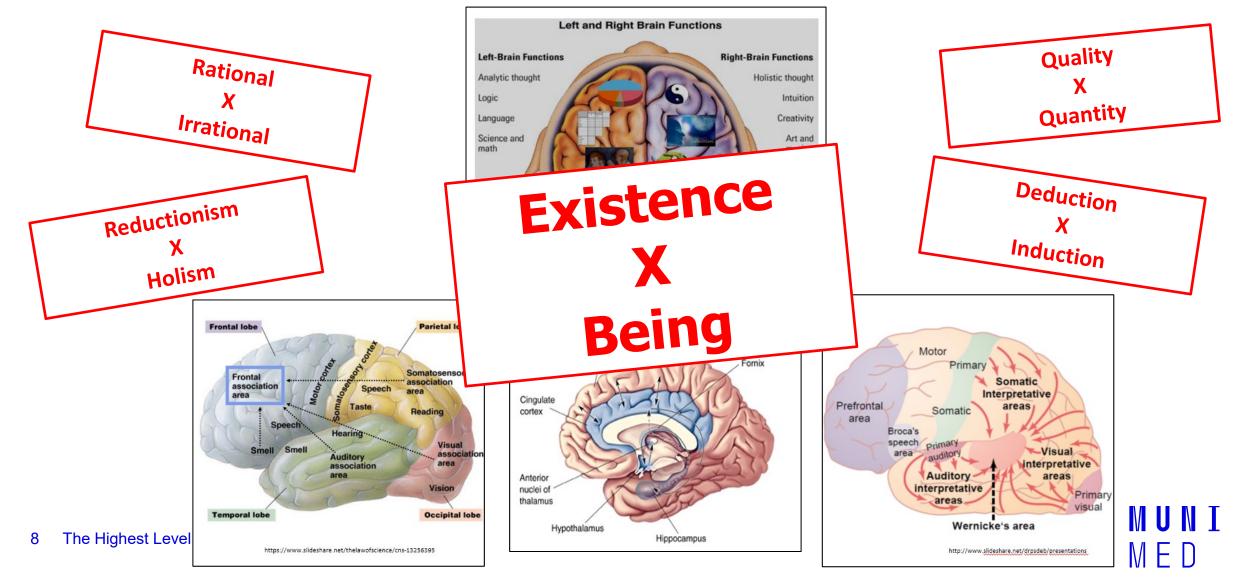
- All the nations have a mythology
- Language and mythology (and later culture and philosophy) define the nations
 - Communication
 - Values
- Explanation of complex issues
 - Pseudorational/iractional
 - Protscience
 - Symbolism education
- Intuitive understanding of cyclic time (The cyclic time model was established much later by followers of Pythagoras)
- Myth Philosophy Science (August Comte)



Philosophy, science and thinking



Philosophy, science and thinking



Antique philosophy

- Cosmology
 - Searching for the natural origins/source of things
 - Pre-Socratic philosophy
- Anthropologic philosophy
 - Focused on humans and society
 - Sophists, Socrates
- Systematic philosophy
 - Synthesis of previous philosophy to one system
 - Plato, Aristoteles
- Hellenistic philosophy
 - Focused on problematic of meaningful life
 - Stoicism, epicureism, skepticism...





https://www.britannica.com/media/full/topic/244231/54571

Milesian "school"

• Searching of the natural source of things (arche)



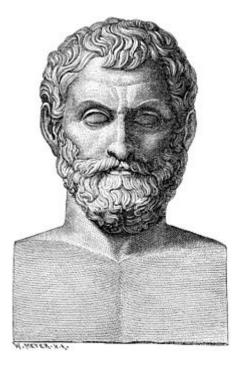
https://www.britannica.com/media/full/topic/244231/54571

Thales of Miletus (c. 624 – 548 BC)

- The first Greek philosopher, politician, geometrist, astronomist
- ✓ "everything has a same origin, but a different form"
- ✓ Source water (possibly inspired by the sea)



https://www.ephotozine.com/article/how-to-photograph-stormy-seas-15558



https://en.wikipedia.org/wiki/Thales_of_Miletus

Anaximander (c. 610 – 546 BC)

- Angular distance measurement
- Gnomon (sundial)
- ➤ Globe of sky
- Map of the world
- ✓ Origin Apeiron (infinite, limitless)
- ✓ The things are arisen from Apeiron by separation and then disappear evolution

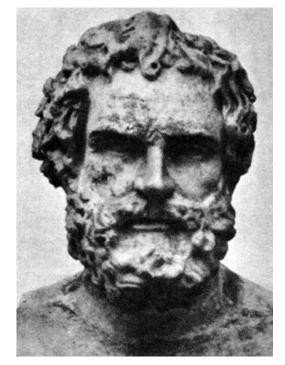


https://www.aldebaran.cz/famous/people/Ana ximandros.php

Anaximenes (c. 585-528 BC)

✓ Origin – (infinite) air (apeiros aer)

✓ Thickening of air – water, stone✓ Dilution of air - fire



https://cz.pinterest.com/pin/56766472802249481 3/?lp=true

Milesian "school"

- Searching of origin/source (arche)
- Rational way of thinking
 - Principle of follow Greek philosophy and modern science
- Reductionism
 - ✓ Simplification one origin/source (monism)
 - \checkmark Principle of modern science
 - ✓ An opposite approach to reductionism is holism it is not possible to cover any problems in a holistic way only by rational thinking, it is necessary to use irrational way of thinking too (for example intuition)



Pythagorean school

- The first real school of philosophy
- Searching for mathematical rules of logos/harmony

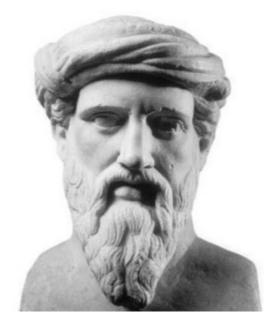


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Pythagoras (c. 570-495 BC)

Founder of the Pythagorean school
 Philosophy had a mystical character and the school might resemble sect

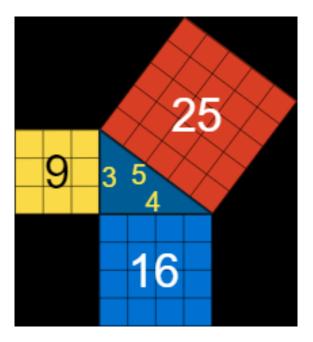
✓ Introduced "modern" meaning many terms like theoria, logos, cosmos etc.



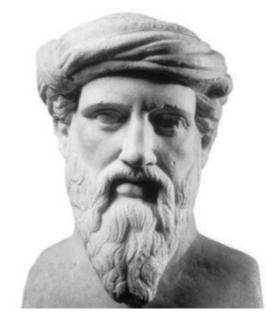
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Pythagoras (c. 570-495 BC)



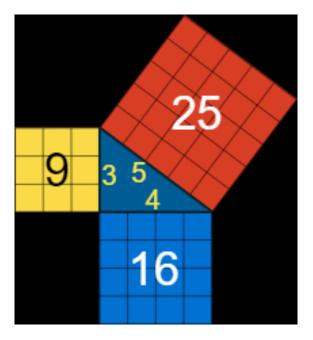
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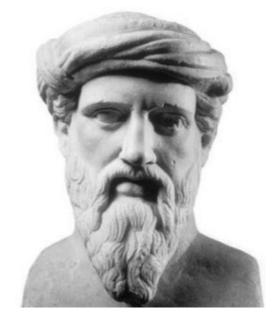
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Pythagoras (c. 570-495 BC)



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Philosophical meaning of Pyythagora's Theorem

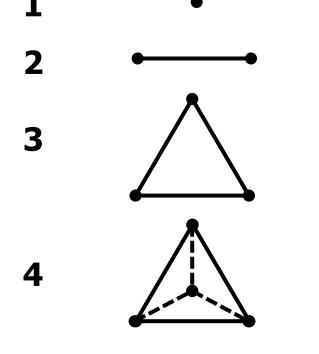
When you reach higher level, you can find relationships which are not visible on a lower level.

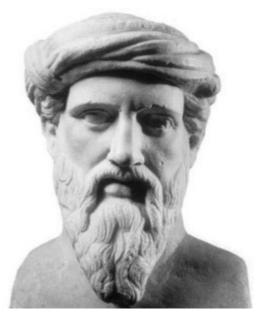
25 9 3 5 16

https://www.mathsisfun.com/pythagoras.html

Pythagoras

(c. 570-495 BC)





https://www.goodreads.com/phot o/author/203707.Pythagoras

Philosophical meaning of Pyythagora's Theorem

When you reach higher level, you can find relationships which are not visible on a lower level.



Pythagoreans

✓ Abstract way of thinking

✓ Holistic approach



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Heraclitus of Ephesus

(c. 540 - 480 BC)

- Dynamic approach
 - Ever-present change as fundamental

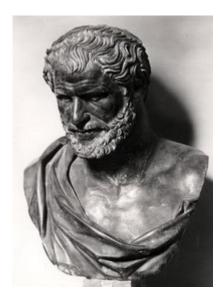
essence

✓ There are no static things

≻Origin – fire

 ✓ Fire is dynamic and changes everything
 ➢ Dynamism is organized by logos

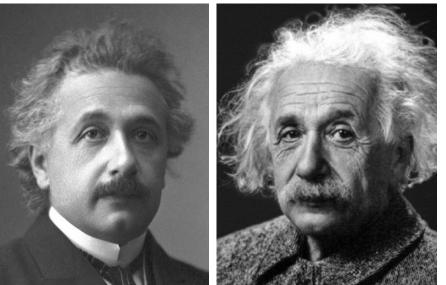
PHRYGIA Lárissa legean Se rnassus Chios LYDIA Mt Laurium Miletus CARIA Halicarnassus Cos I.



http://www.xn--ideayaynevi-5zb.com/adlar/herakleitos.html

Dynamism may be also considered as a fight/antagonism

https://www.nobelprize.org/prizes/physics/19 21/einstein/biographical/



https://www.viva.org.uk/what-we-do/celebrity supporters/albert-einstein

Eleatics

- In opposition to Heraclitus
- Emphasized the role of logical thinking



23 The Highest Level of Cerebral Activity II

https://www.britannica.com/media/full/topic/244231/54571

Xenophanes (c. 570-475 BC)

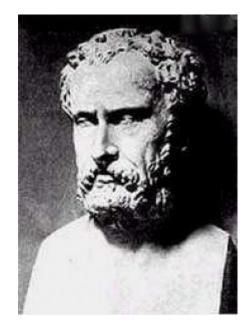
- Rhapsodian

 Parody to mythology

 Ridiculing myths

 Why should men behave in a good way, if Greek gods are corrupted?

 Ridiculing Heracleitus ???
 - ✓ Nothing changes
- Inspiration to Eleatics



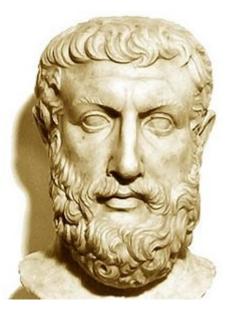
https://www.iep.utm.edu/xenoph/

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Parmenides (c. 510-450 BC)

- Founder of Eleatic school
- ✓ What exists, just exists and you can study it (positive way)
- ✓ Nonexistence cannot exist and if you try to study it, you will find that is not possible (negative way)
- ✓ Ambiguity (some things exist and some does not) is a way of fools
- There is no movement (movement precepted by our senses is an illusion)





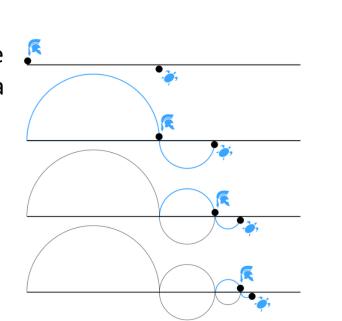
https://en.wikipedia.org/wiki/Parm enides

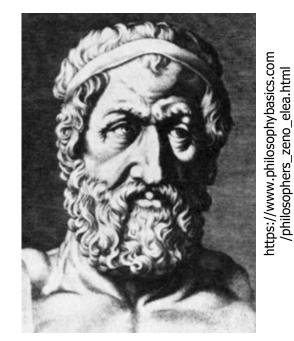
Zeno of Elea

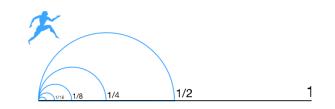
(c. 490-430 BC)

- Proof by contradiction
- Aporia paradox
 The arrow
 - \checkmark Achilles and tortoise [
 - ✓ Bisection of abscissa









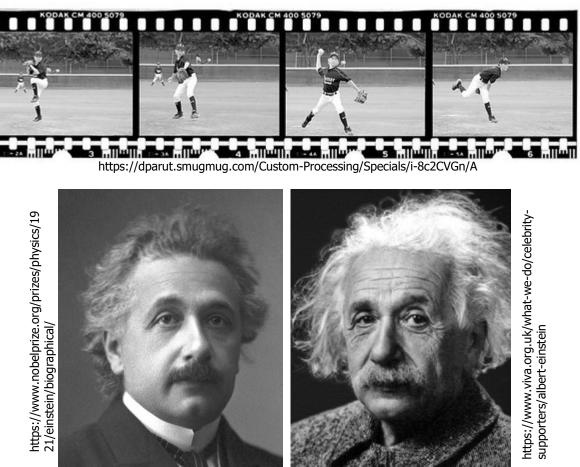
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26 The Highest Level of Cerebral Activity II

https://en.wikipedia.org/wiki/Zeno_of_Elea

Heraclitus – Zen

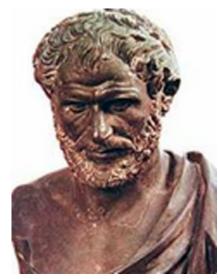
✓ Limits of logical thinking (argumentum ab absurd)



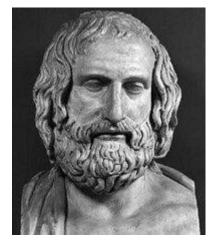
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Preatomists

- Empedocles
- (c. 490 430 BC)
 - Synthesis of Herakleitus and Eleats
 - Everything is based on existence of four elements (Water, Air, Earth and Fire) which have been continually transformed by the powers of Love and Strife
 - \checkmark One God is the origin of Motion
- Anaxagoras
- (c. 500 428 BC)
 - Introduced philosophy in Athens
 - ✓ Four elements replaced with the unlimited amount of elements (seeds)
 - ✓ Origin of Motion is Nus (abstract Spirit/God/Mind/Reason), which organized original chaos to logos



https://theaeoneye.com/tag/empedocles/



https://www.philosophybasics.com/philo sophers_anaxagoras.html

28 The Highest Level of Cerebral Activity II

Atomists

- Leukippos (c. 500 440 BC)
- **Democritos** (c. 460 370 BC)
- ✓ The things are composed of indivisible particles (atomoi), which naturally move (fall), connect each other and disconnect (emergence and extinction of things)
- \checkmark Everything is ruled by logos
- ✓ Existence of emptiness



https://www.crystalinks.com/democritus.html

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Preatomists – atomists

✓ Synthesis of previous philosophy

✓ The first attempt to create a system

Sophists

- **Protagoras** (c. 481 411 BC)
- Gorgias (483-375 BC)
- \checkmark Teachers of logic and rhetoric in Athens
- ✓ Also focused on gnoseology and social issues (laws, economy)
- ✓ Emphasized the role of rhetoric and argumentation
- \checkmark The second generation falls into formalism

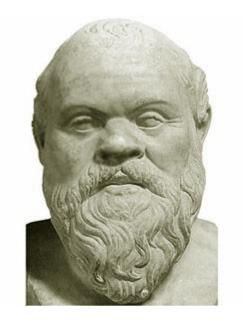


https://radiozurnal.rozhlas.cz/slovaci-se-bavi-cesi-jako-brouk-pytlik-6299979

Socrates (470-399 BC)

Plato (427-347 BC)

Aristotle (384-322 BC)



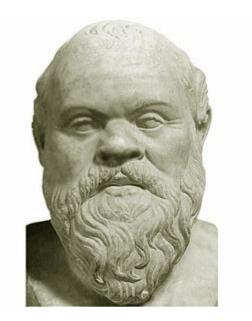
https://edukalife.blogspot.cz/2015/07/soc rates-biography-greek-philosopher-is.html

https://www.biografiasyvidas.com/bio grafia/p/platon.htm

https://www.biografiasyvidas.com/monog rafia/aristoteles/

Socrates (469-399 BC)

- Focused on ethical aspectsNot interested in cosmology or nature
- Dialectic method (dialogue)
- ✓ Socratic paradoxes
 - No one desires evil.
 - No one does wrong willingly or knowingly.
 - Virtue—all virtue—is knowledge.
 - Virtue is sufficient for happiness.
 - I know that I know nothing.



https://edukalife.blogspot.cz/2015/07/soc rates-biography-greek-philosopher-is.html

Plato

(427-347 BC)

- ➢ 35 -36 dialogues, letters
 - Early dialogues (Socratic)
 ✓ Socrates' philosophy
 - Dialogues of mature period
 ✓ Platos´ ideas presented by Socrates
 - Late dialogues

✓ Influence of Aristotle

➢Platonic academy (387-86 BC (430-529))

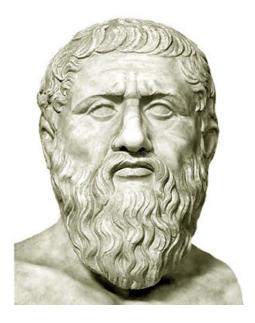
➢Plato did not like democracy

✓ Democracy was responsible for the death of Socrates

✓ Democracy lost the war against Sparta

✓ Democracy is not constructive (politicians discus too much)

≻ldeas



https://www.biografiasyvidas.com/bio grafia/p/platon.htm

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Material world

Perception

35 The Highest Level of C

Active principle Passive principle Principle of cognition



https://www.vibrantho me.co.uk/rice-dk-applegreen-small-melaminekids-cup.html



Material world

Perception

36 The Highest Level of (

Active principle Passive principle Principle of cognition

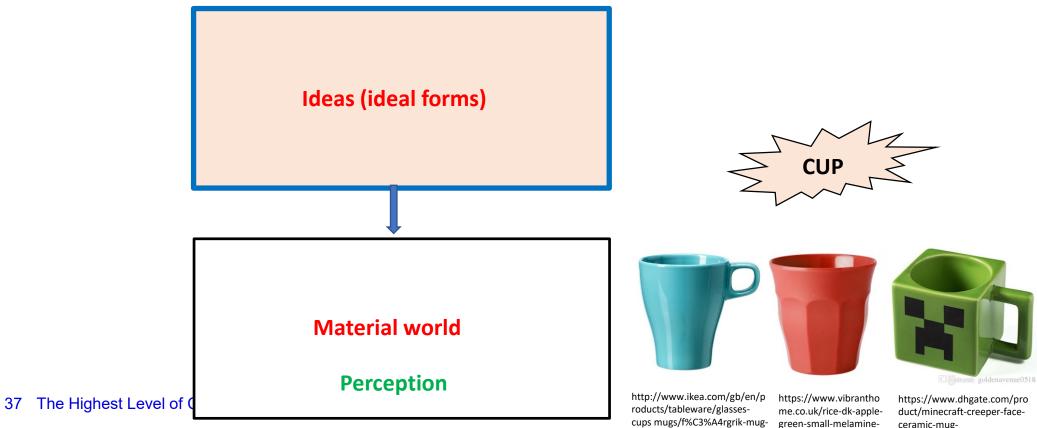


http://www.ikea.com/gb/en/p roducts/tableware/glassescups mugs/f%C3%A4rgrik-mugturquoise-art-50234803/

https://www.vibrantho me.co.uk/rice-dk-applegreen-small-melaminekids-cup.html

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EHgate.com goldenavenue0518

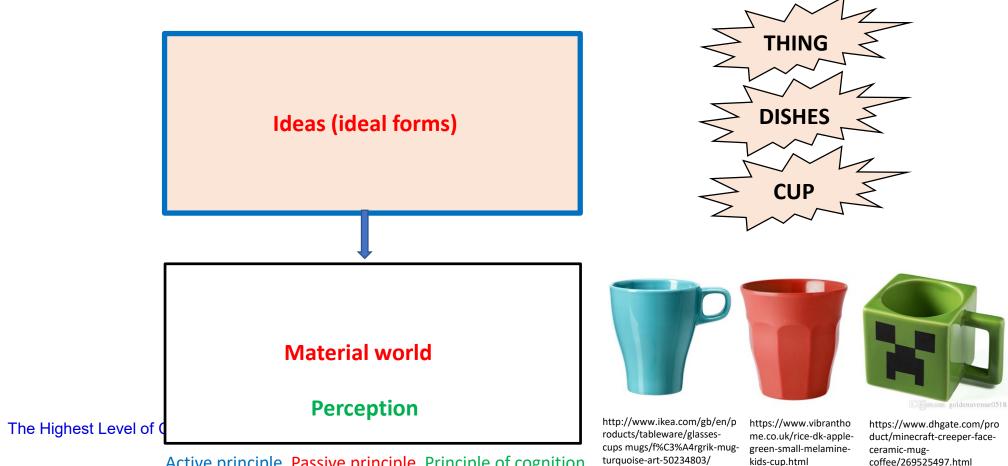


Active principle Passive principle Principle of cognition

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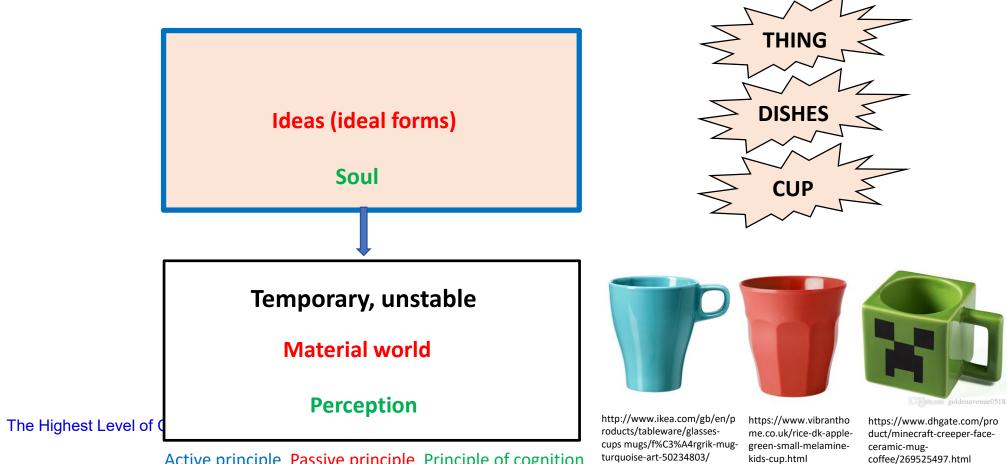


Active principle Passive principle Principle of cognition

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kids-cup.html

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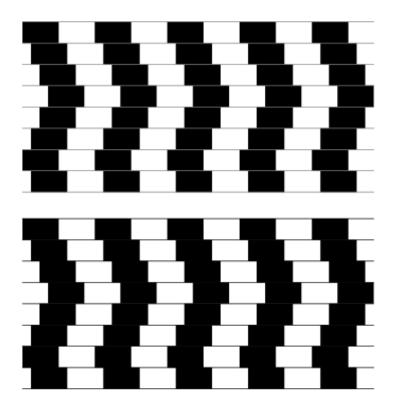
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Active principle Passive principle Principle of cognition

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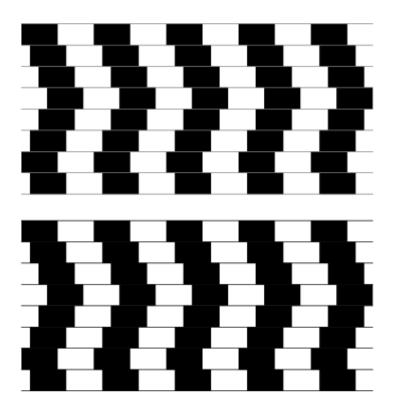
We cannot fully trust perception



http://mathworld.wolfram.com/CafeWallIllusion.html

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We cannot fully trust perception



http://mathworld.wolfram.com/CafeWallIllusion.html

Diagram 1

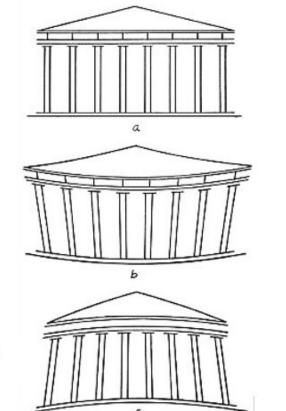
The temple as it visually appears with correction

Diagram 2

The temple as it would appear without correction

Diagram 3

The temple as it is actually built with Correction



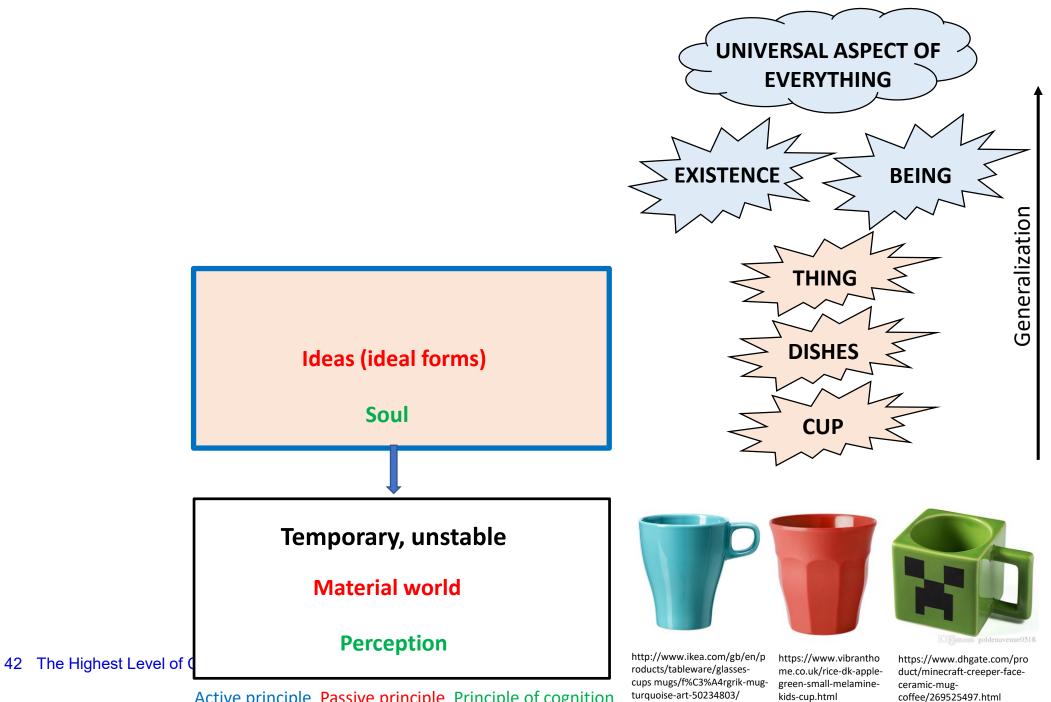
Optical Correction (Entasis) In Doric Temples

SoSCZhZbEWOwnnkEby-XrxHO7RBEw67e3CoSCYtnwpE7b1nuEWiE +optical+illusion&tbm=isch&tbs=rimg:Cep4xGmedLt Vhulru -8eYI 3KR

a=X&ved=0ahUKEwjxv8K14tzZAhXMAMA =i2fCkTtvWe4qdM:

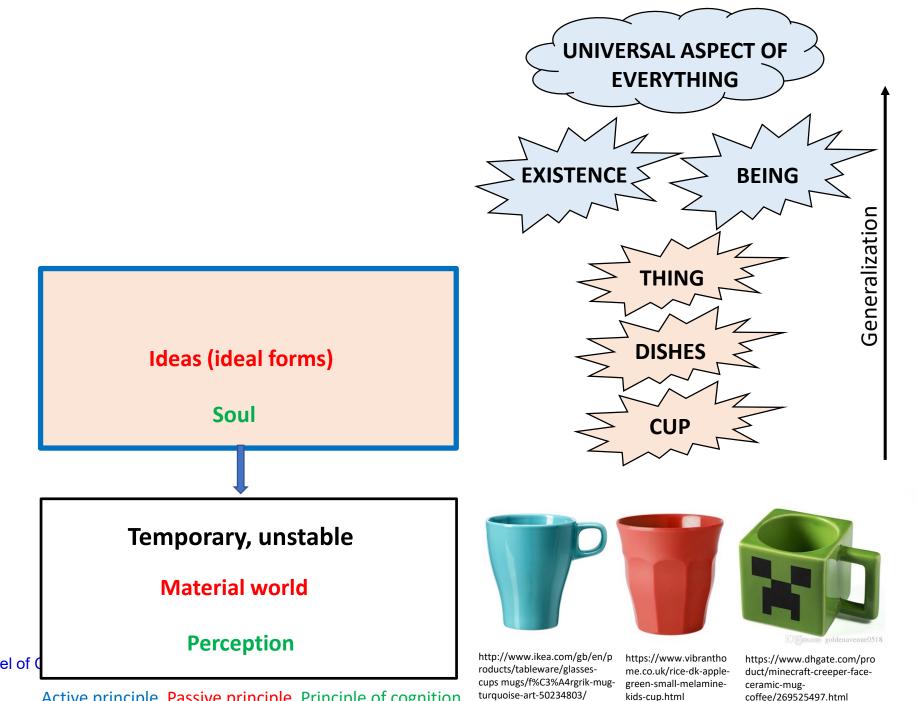
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nNcRxzIw 151EaaAZp 366&bih=



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Active principle Passive principle Principle of cognition



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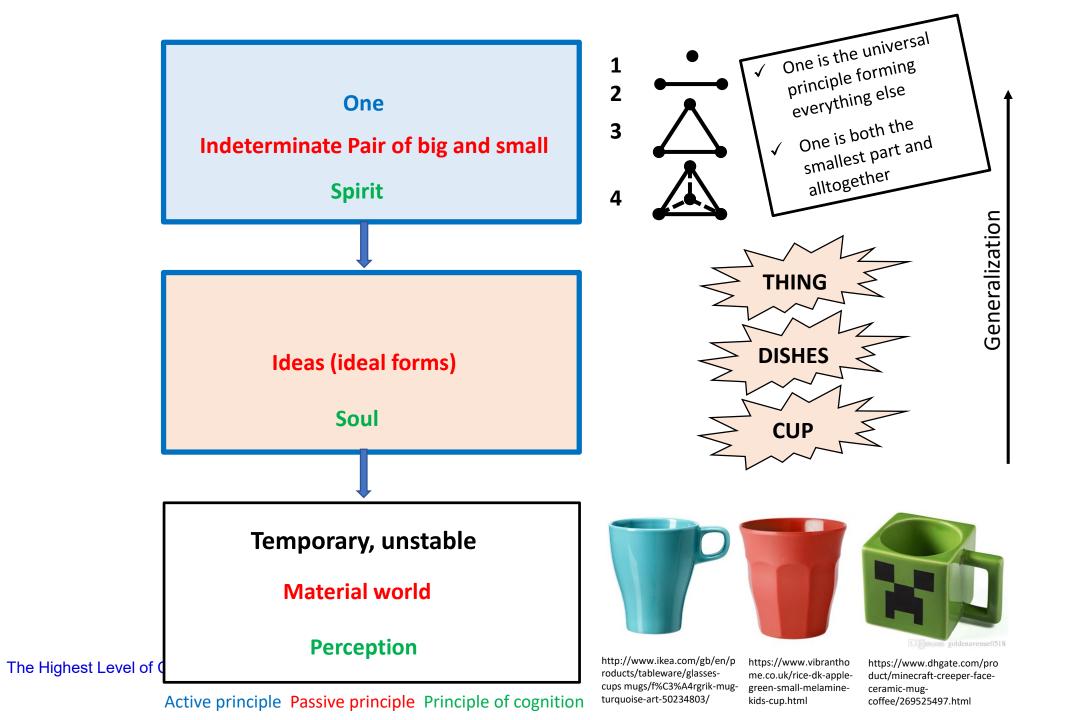
Active principle Passive principle Principle of cognition

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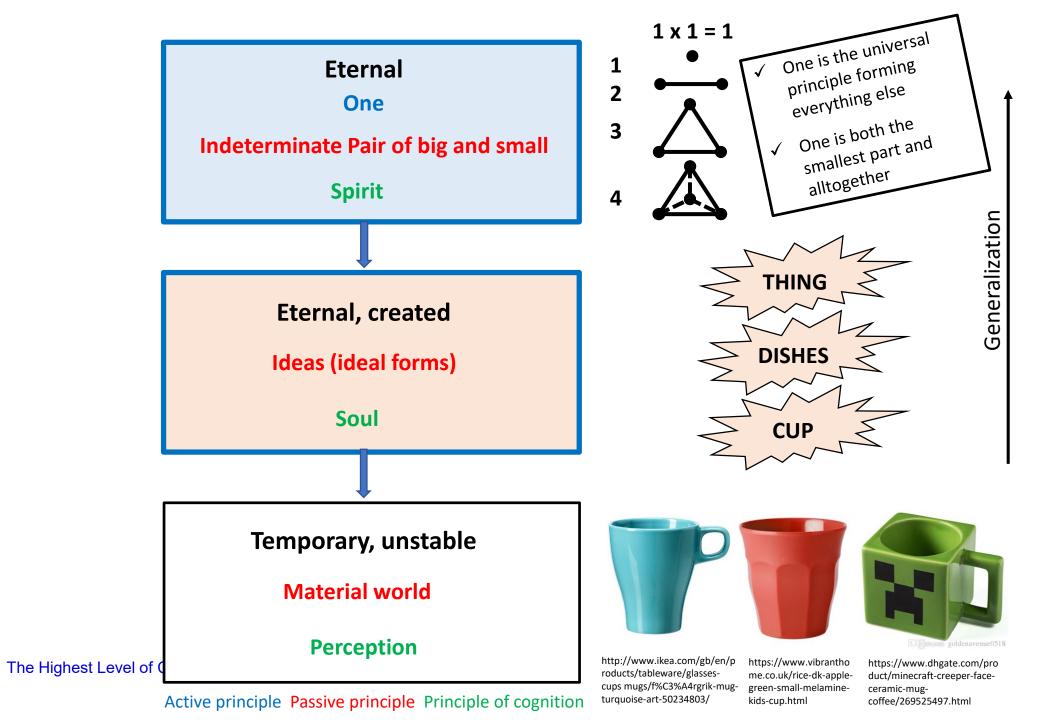
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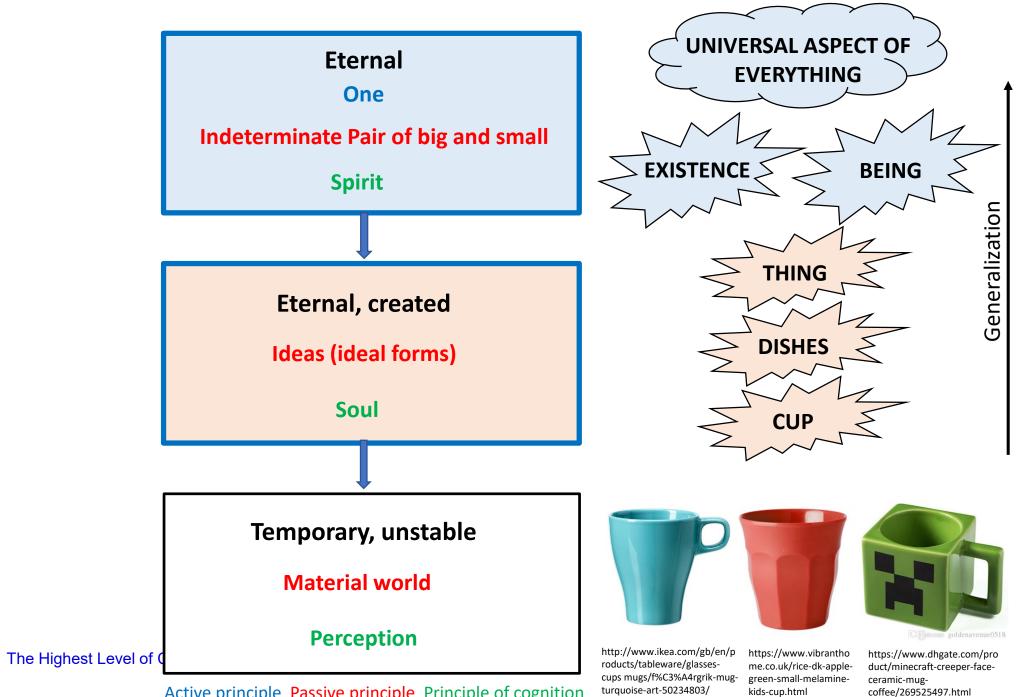
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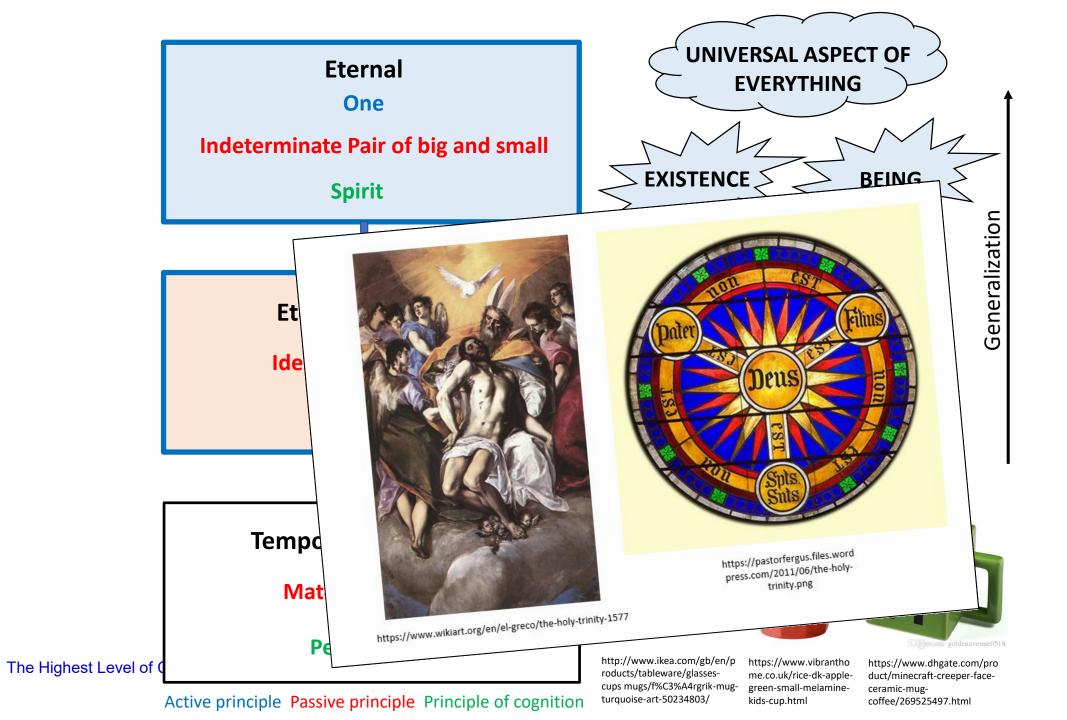
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Active principle Passive principle Principle of cognition

46



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Republic

> Logic excercise, not meant as a guide

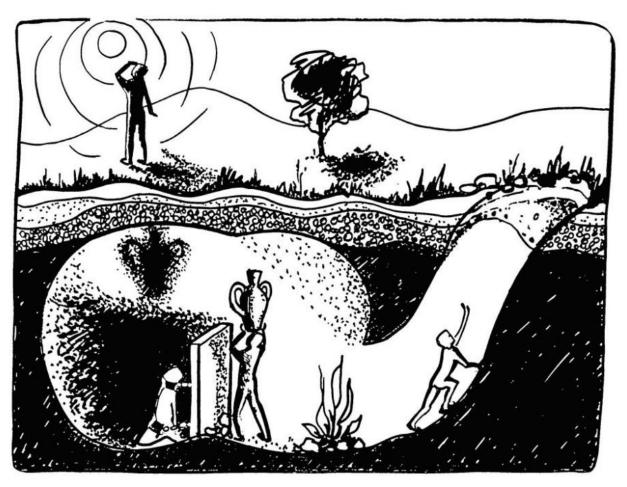
Socratic paradox

- ✓ Good ideas may result in bad things when we try to implement them in their purest form
- An attempt to define ideal political systém, which would immune to such mistakes as Socrates punishment
- The citizens would be divided into the three groups according to personal qualities:
 - ✓ Rulers (Philosopher Kings)
 - ✓ Warriors/Guardians
 - ✓ Workers
- The citizen would be paired according to their qualities (the best with the best, the worst with the worst)
 - >To prevent rebelion, manipulated draw would be performed (mimicking the will of the gods)
- Children would be taken and raised institutionally
- In the last dialogue (The Laws) direct application of the laws was elaborated (no more rule of humans)



Allegory of the Cave (Republic)

What is reality? What we consider to be real



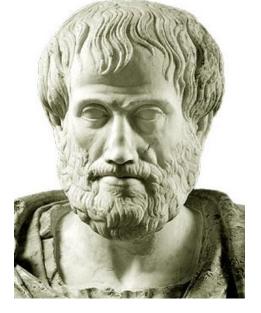
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https://slideplayer.cz/slide/3125141/

Aristotle (384-322 BC)

- Synthesis of previous philosophy
 - A system based on Greek ideals of harmony and moderation.
 - Combined two main streams
 - ✓ Physical-materiál (Milesian-Heracleitian-Deomcrititan)
 - ✓ Logical-abstract (Pythagorean-Eleatic-Platonic)
- ➤ Rationalization, categorization
 - Logic (Organon tool of thinking Categories, On interpretation, Analytics, Topics...)
 - ✓ Nature philosophy (Physics, On the Heavens, History of animals, Generation of animals, Parts of animals, On the Soul...)
 - ✓ Metaphysics (First philosophy)
 - ✓ Ethics (Ethics, Nicomachean Ethics)
 - ✓ Politics and economy (Politics)
 - ✓ Rhetoric and poetics (Rhetoric, Poetics)



https://www.biografiasyvidas.com/monog rafia/aristoteles/

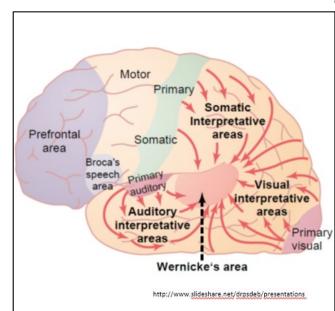
Aristotle

Deductive reasoning

- Aristotle has established formal rules of deduction
- Aristotelian syllogism
 - ✓ 1. General statement (All the men are mortal)
 - ✓ 2. Specific statement (Socrates is a man)
 - ✓ 3. Conclusion (Socrates is mortal)
- > Ideas are not entities, it is just a product of reasoning
- Emphasized empirism (the most important is, according to Aristotle, tactile sensation, because all the animals have an ability of tactile sensation)
- > Four causes (on the example of statue)
 - Material (marble; Milesian)
 - Formal (shape; eleats)

51

- Efficient (hand of artist, pre-atomists)
- The final cause meaning (function of the st.; A.)
 - ✓ The most important is the final cause
 - The universe has been evolved to have a purpose and to be suitable for creation of human beings.
 - ✓ Prime mover a primary cause God





https://www.biografiasyvidas.com/mo nografia/aristoteles/

 $M \in D$

Aristotle

➤ Theory of the soul

- Based on relation between form (soul) and substance (body)
- The soul is determinant which makes the body real (living)
- Vegetative (Plants, animals, humans)
- Sensory (Animals, humans)
- Rational (Humans)

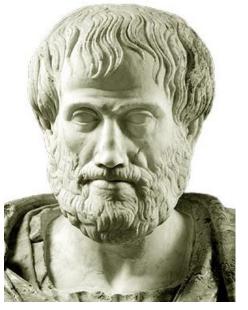
> Ethical aspects associated with the theory of the soul

- Humans are rational beings and reasoning should lead to moderation, however sensoric and vegetative souls should not be supressed too much (no ascetism)
- Golden middle way
- The purpose of life is to develop abilities
 - Two ways
 - ✓ Ethical reign of reason over instincts
 - ✓ Dianoetic improving of reason

Ideal political system

52

- The form of political systém should correspond to the specific need of the nation at that time
- The relationship between citizen and state should be based on generosity and criterion of general benefit

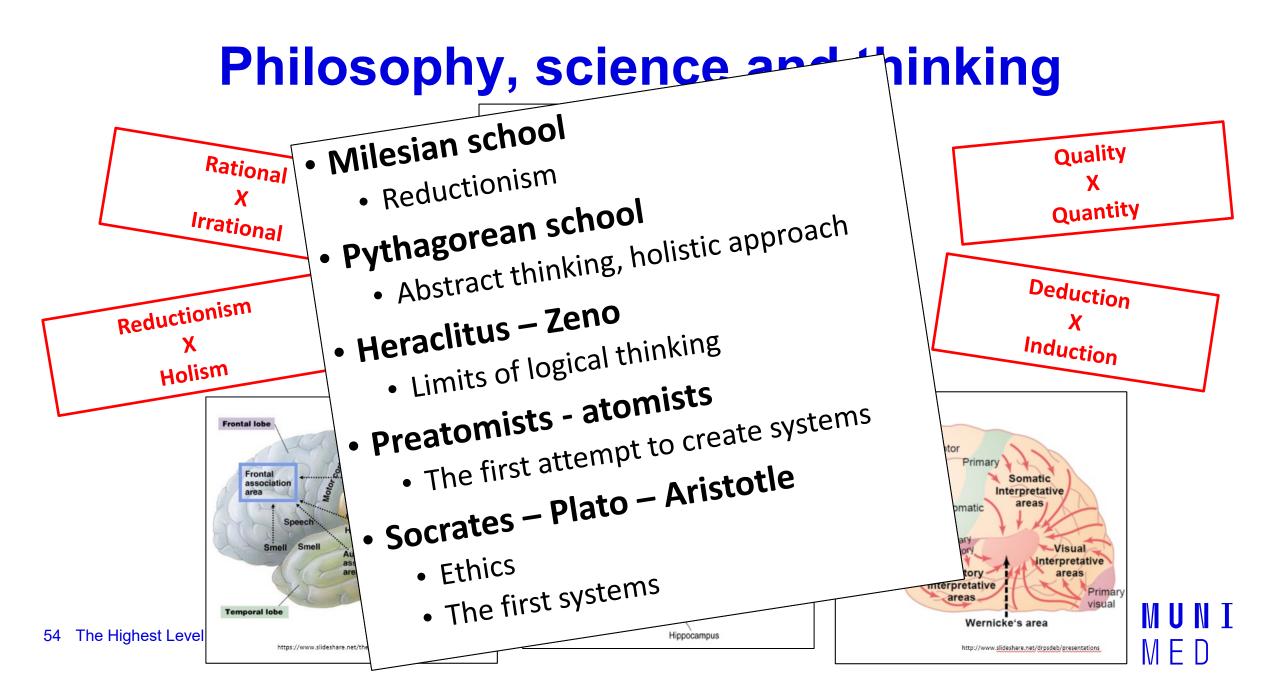


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 $M \vdash 1$

", The whole is greater than the sum of its parts"





Raffael Santi – Athénská škola (1509-1510)



55 The Highest Level of Cerebral Activity II

http://novaakropolis.blogspot.com/2010/09/athenska-skola-rafael-santi.html

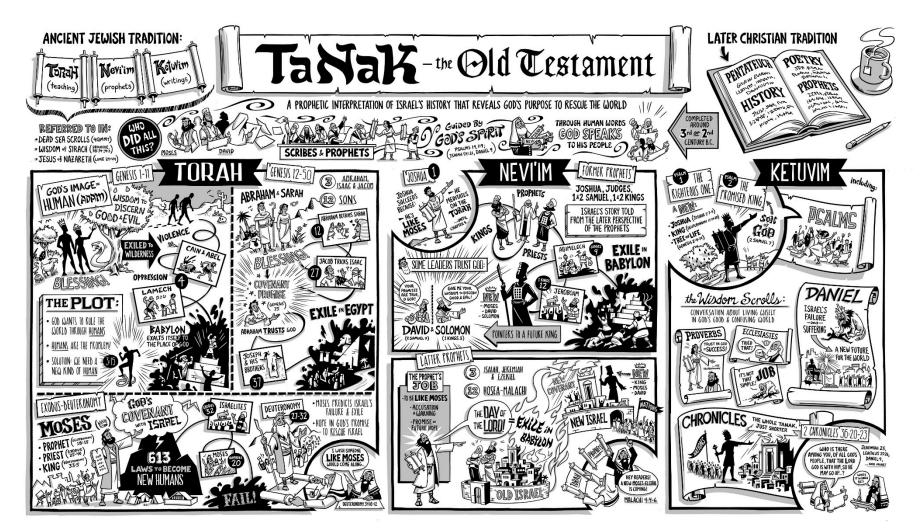
Raffael Santi – Athénská škola (1509-1510)



1: Zeno of Citium 2: Epicurus 3: unknown 4: Boethius or Anaximander 5: Averroes 6: Pythagoras 7: Alcibiades or Alexander the Great or Pericles 8: Antisthenes or Xenophon 9: unknown (sometimes identified as Hypatia in recent popular sources) or Fornarina as a personification of Love (Francesco Maria della Rovere?) 10: Aeschines 11: Parmenides or Nicomachus 12: Socrates or Anaxagoras 13: Heraclitus (Michelangelo?) 14: Plato (Leonardo da Vinci?) 15: Aristotle (Giuliano da Sangallo?) 16: Diogenes of Sinope or Socrates 17: Plotinus? 18: Euclid or Archimedes (Bramante?) 19: Strabo or Zoroaster? (Baldassare Castiglione?) 20: Ptolemy R: Apelles (Raphael) 21: Protogenes (Il Sodoma or Timoteo Viti)

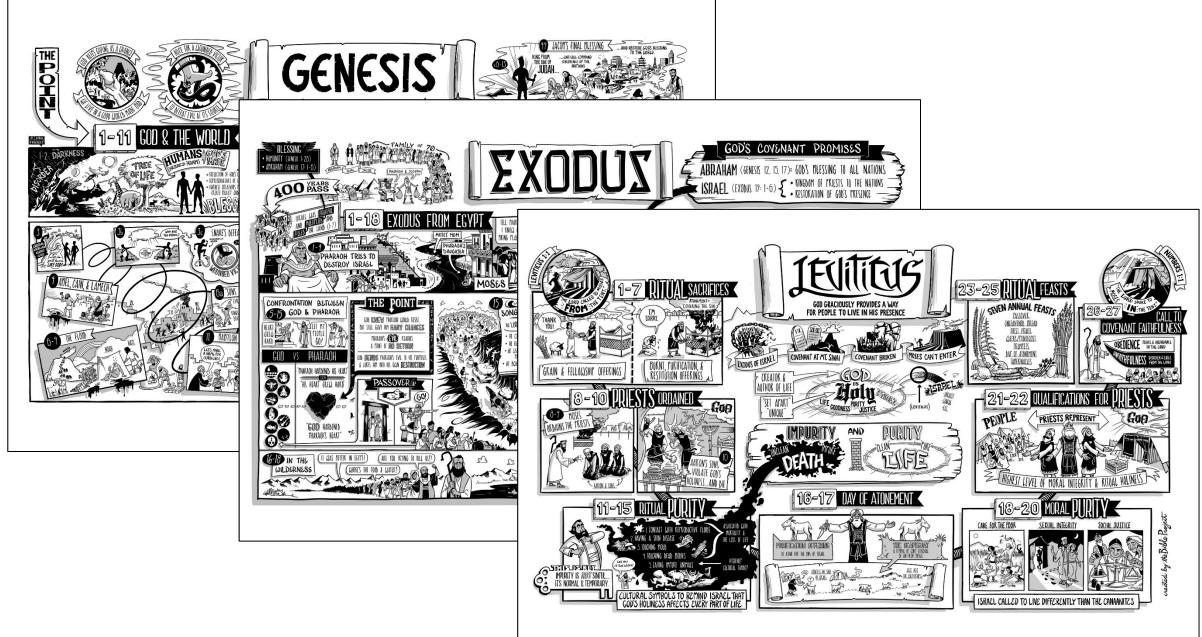
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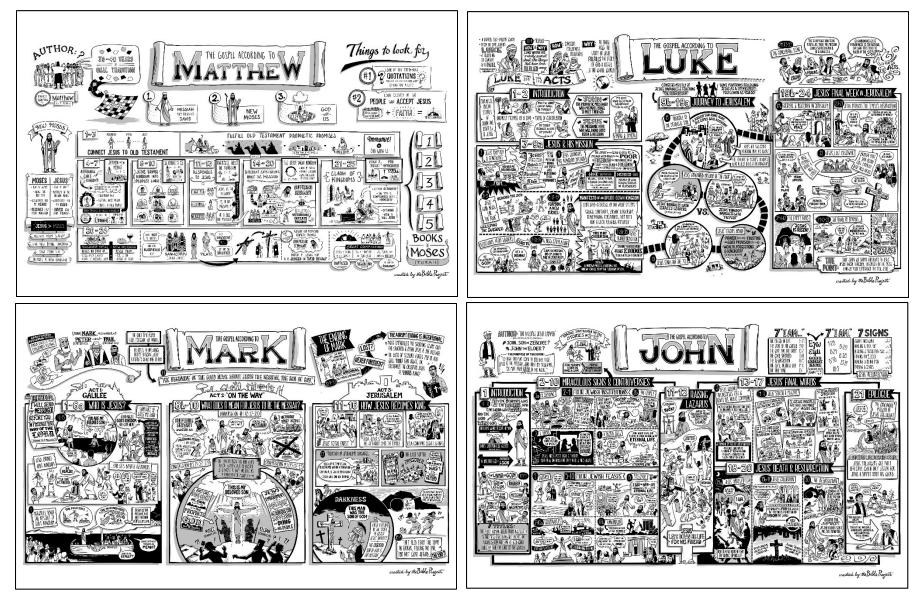
Judaism



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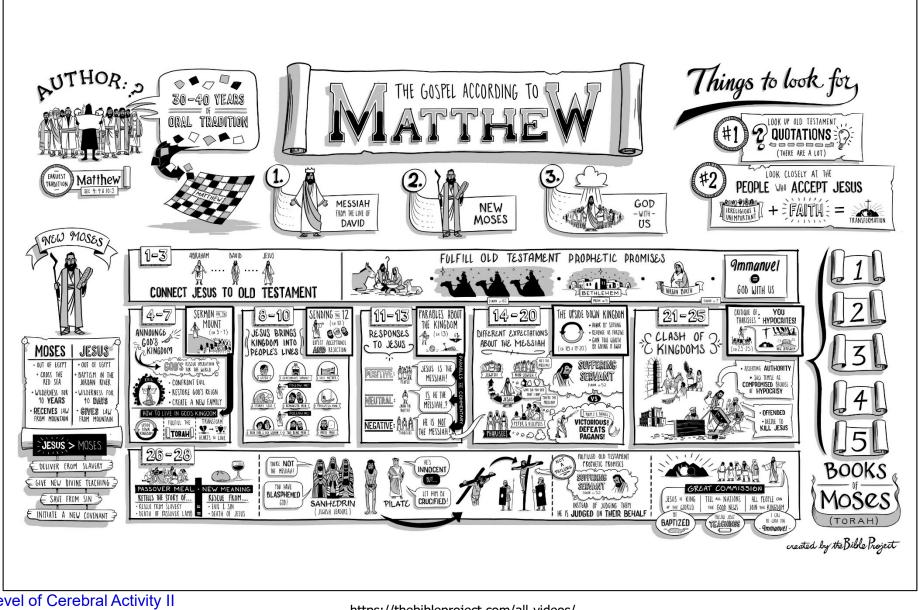
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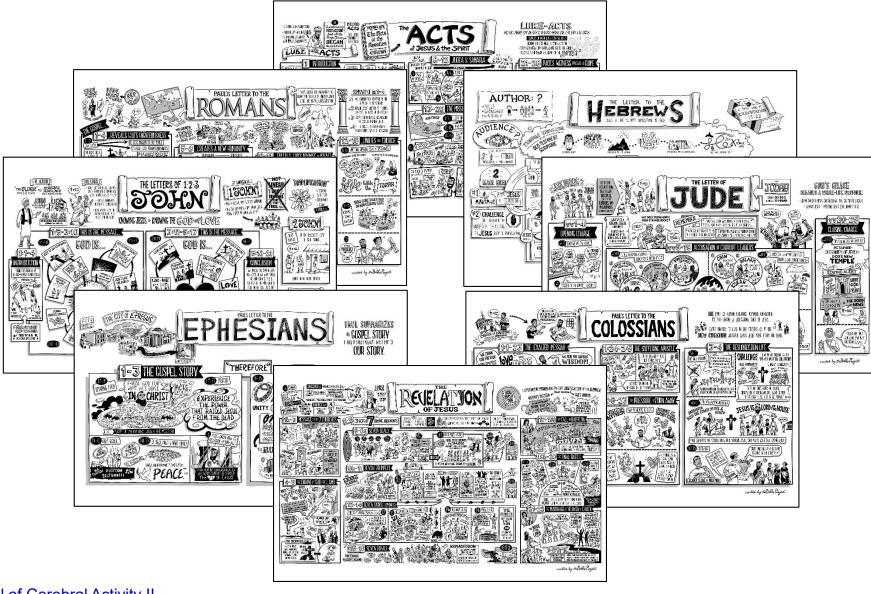
59 The Highest Level of Cerebral Activity II

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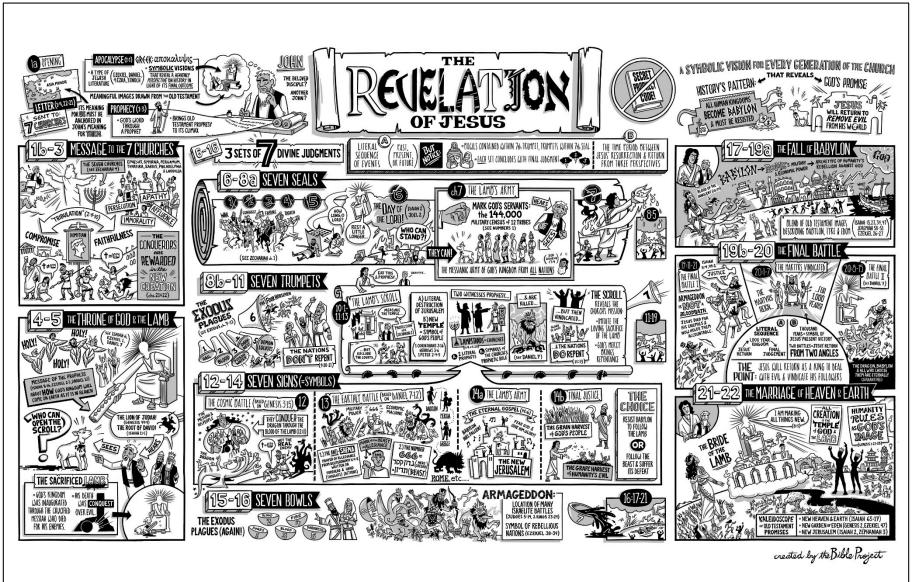


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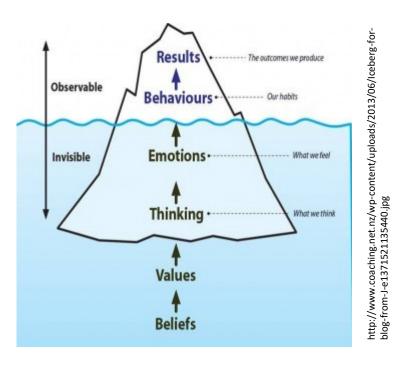
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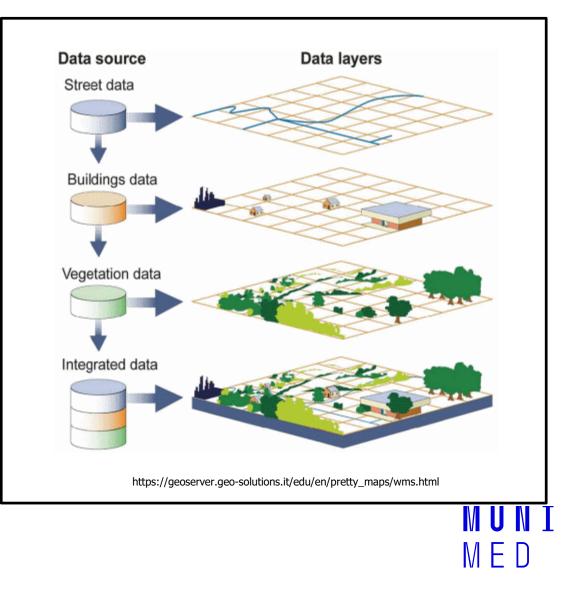


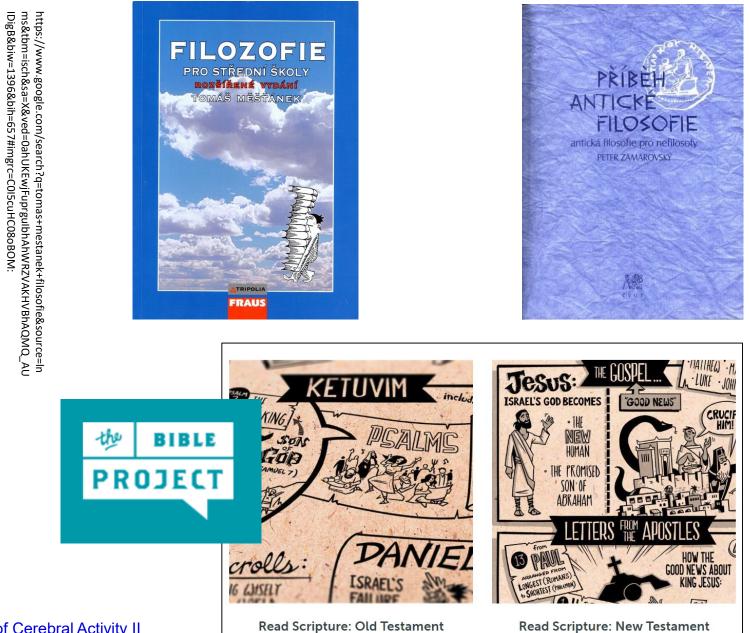
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- ✓ Jewish tradition
- ✓ Greek tradition
- ✓ (Roman tradition)







The Highest Level of Cerebral Activity II 64

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