

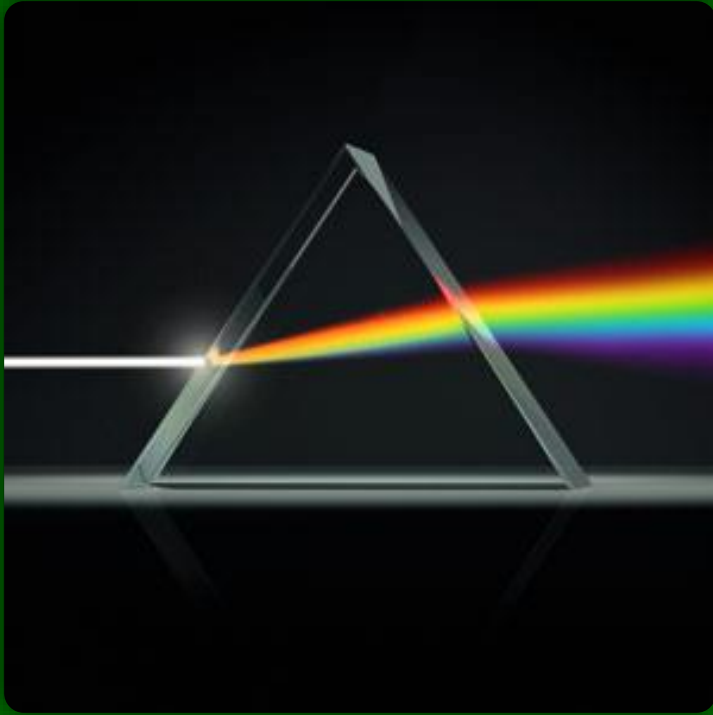
S4002

law, ethics & philosophy of science

workshop part I

philosophy & ethics of science

notes



M U N I
S C I

jan havliš

: national centre for biomolecular research

:: laboratory of functional genomics and proteomics



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is philosophy of science of any use to a scientist?

... philosophy of science is about as useful to scientists as ornithology is to birds ...

Richard Feynman

... most scientists tend to understand little more about science than fish about hydrodynamics ...

Imre Lakatos

how to teach a scientist to research?



by means of example

- : as a craft under master's leading
- :: examples & experience
- ::: mostly intuitive
- ::: prone to erroneous use



by means of understanding

- : as a subject under teacher's leading
- :: principles & rules
- ::: analytical & rational
- ::: more robust approach

part I – Jan Havliš

01. cognition

: how our mind works

02. epistemology / methodology of science

: how knowledge acquisition works

03. argumentation

: how the knowledge propagation and sharing works

04. ethics of scientific conduct / misconduct

: how the knowledge acquisition, propagation and sharing fails

part II – Michal Koščík, Jakub Míšek, Matěj Myška

01. Human rights and proportionality of legal principles

02. Methods for solving ethically exposed legal issues

03. Intellectual property right

: Subject, structure, introduction to copyright

04. Copyright

: Rights to publications, licensing practices, transfers in projects & research consortia

05. Data protection in science and research

: Personal data, research data

06. Industrial intellectual property rights in science and research

: Patents, utility models, specific types of rights

recommended reading – part I

[01] Karl R. Popper, **The Logic of Scientific Discovery**, *Routledge* 2002

[02] Alex Rosenberg, **Philosophy of Science**, *Routledge* 2013

[03] Carl G. Hempel, **Philosophy of Natural Science**, *Pearson* 1966

[04] Richard Dawkins, **Climbing mount improbable**, *WW Norton* 1997

[05] Jaroslav Flegr, **Frozen evolution**, *BookSurge Publishing* 2008

[06] Jonathan Marks, **What It Means to Be 98% Chimpanzee**, *University of California Press* 2002

[07] Paul K. Feyerabend, **Three Dialogues On Knowledge**, *Blackwell* 2011

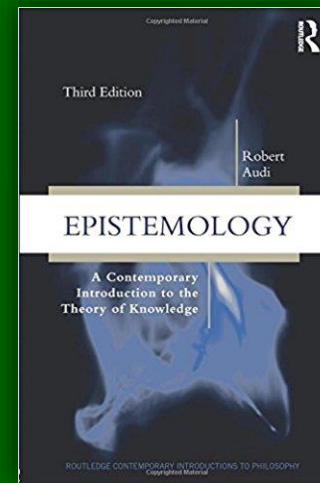
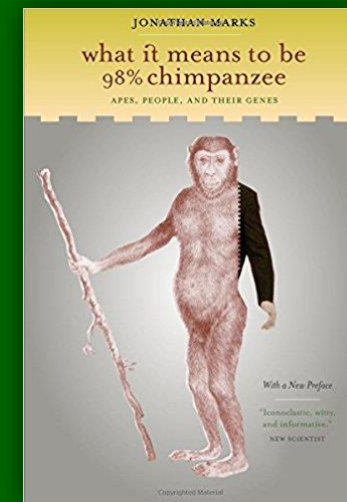
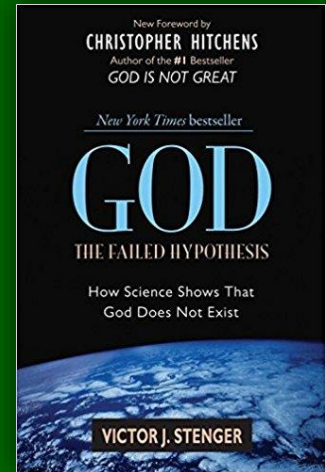
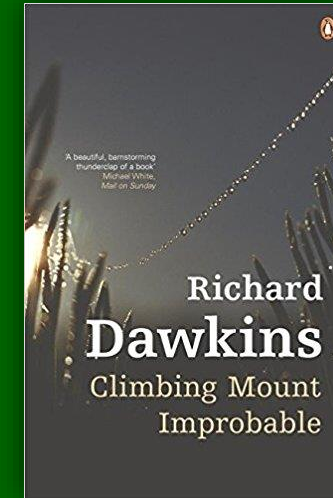
[08] Paul K. Feyerabend, **Against Method**, *Verso* 2010

[09] Victor J. Stenger, **God: the failed hypothesis**, *New York* 2007

[10] Stanislaw Lem, **Summa technologiae**, *Uni Minnesota Press* 2013

[11] Robert Audi, **Epistemology: A Contemporary Introduction**, *Routledge* 2010

[12] Daniel Kahnemann, **Thinking – Fast and Slow**, *Penguin* 2012



an active workshop participation

solving practical problems in areas of cognition, epistemology, argumentation and ethics

- : elaborate answers to all submitted problems
- :: discuss them with your fellow colleagues

a seminar paper (pick one of the following options; 5 pages max)

a methodical analysis of chosen particular research concept or publication

- : define the studied repeatable phenomenon and its circumstances
- : within the chosen problem, formulate hypothesis based on the above mentioned
- : show how to test the hypothesis by means of unique prediction
- : emphasise the pros and cons of the methodologic approach chosen in the selected study

an ethical analysis of chosen scientific misconduct

- : describe the particular scientific misconduct
- : try to determine how such a misconduct was or can be revealed
- : try to determine the danger of that particular misconduct for the general scientific practice
- : suggest how such a misconduct could be prevented

workshop schedule

part I – monday

11:30 – 13:30, 14:30 – 16:30

december 12, 2022

room E35-145a

part I – tuesday

11:30 – 13:30, 14:30 – 16:30

december 13, 2022

room E35-145a

deadline for submission of the essays for part I is february 3, 2023



part II – wednesday & thursday (Matěj Myška *et al.*)

11:30 – 16:30 & 11:30 – 16:30

december 14 & 15, 2022

room E35-145a