

Role of science in society

A summary of Prof. Feyerabend's inaugural lecture at
ETH from July 7, 1981

A presentation by

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A historical review

- All subjects were considered arts
 - Same methods on gaining knowledge
 - Knowledge was based on experiences, passed onto pupils
- Technai (ancient Greek)
 - Word covers all subjects (crafts, sciences, arts)
- Platon: Experiments should be conducted according to
 - Strict, well-defined rules
 - common logic and reasoning

A historical review (cont.)

For Feyerabend:

- Platon's demand are unrealistic
 - (somehow) became the fundament of how we think about research
- Science should not be perceived as a dogma

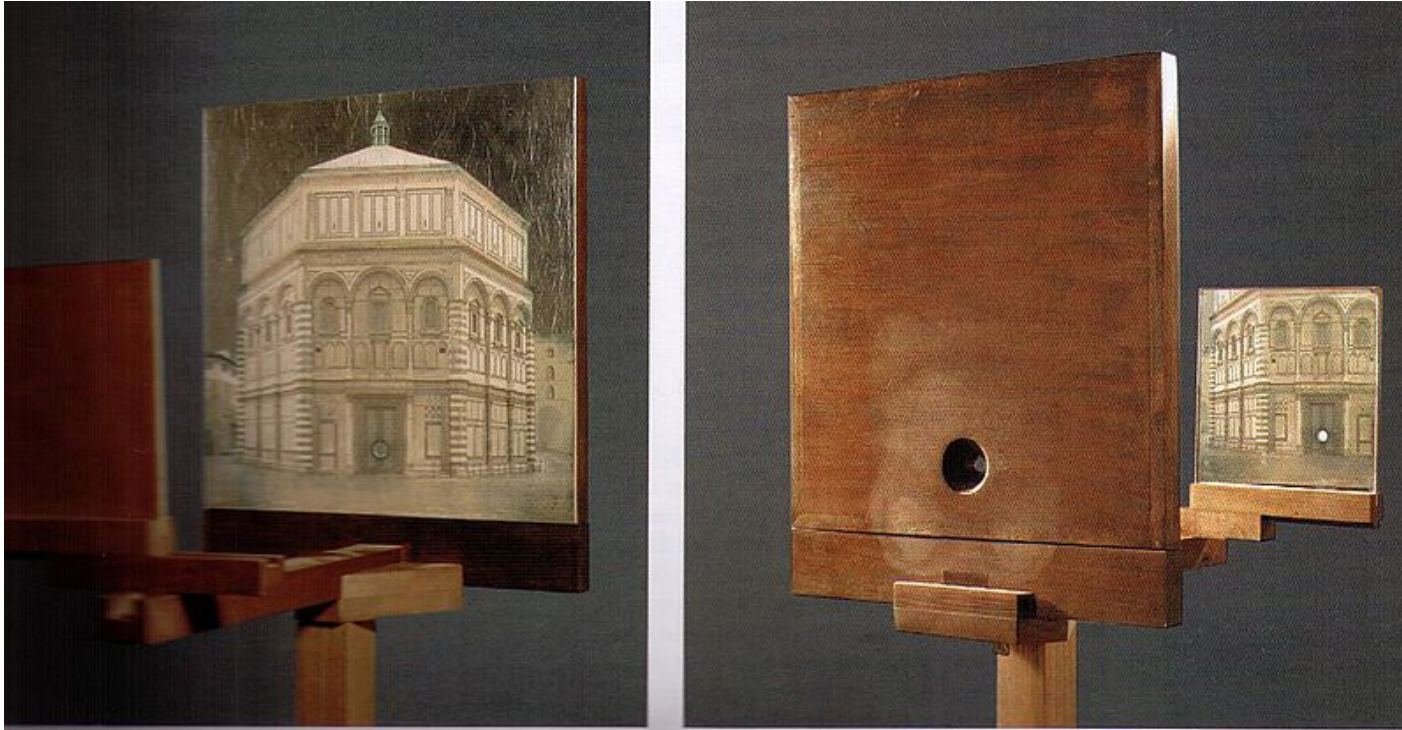
Background of Feyerabend's lecture

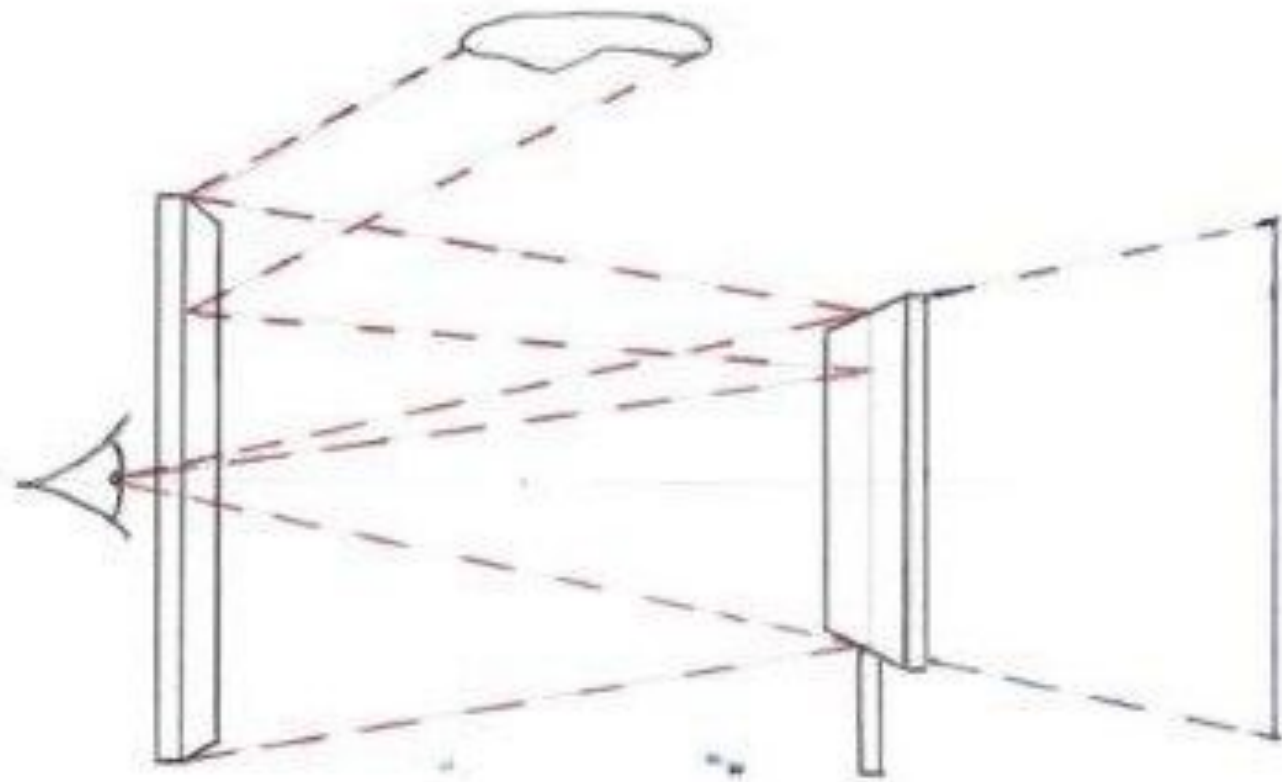
- Feyerabend wanted to tease his audience → Title: *Science as Art*
- Questions:
 - Like or dislike punk rock?
 - Like or dislike science?
- Did not agree on sharp differentiation between
 - Reason and intuition
 - Science and religion
 - Rationality and arts
- Science is not a conceptual entity



Example: Overlapping of Art and Science

Brunelleschi: Designer, architect and engineer, demonstrated an experiment (1413)





Brunelleschi's experiment/painting

- Technique is known as **central perspective**
- Observation of painting is similar to an experiment
 - Comparison under well-defined circumstances
 - Comparison to reality
 - Creation of painting after architectural design rules
- Combined knowledge of
 - Architecture
 - Perception of the human eye
 - Geometry

Shows how the border between art and science blur

Academic foundation - Way to earn respect?

- Ancient times to Renaissance: Architecture, Sculpting and Painting → Craft
- Middle Ages: Music and Poetry → Science
But painting → Craft
- Astrologers: Earn money, have people that believe them
→ but try to earn respect by showing the academic foundation of their field

What do we understand about arts?

How should we define science?

What is the role of art and science in society?

Modern art theory by A. Riegl

- No progress nor decay in art
- Only different types/styles of art
 - Each type is in itself consummate (completed)
 - Has its set of rules
 - Are on par with each other

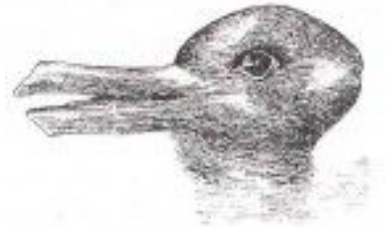
Art is the production of different types of art,
History of art is the sequence of their creation

A small excursion to cognitive science

- Human lives in a cosmos
- Unable to recognize it
- Tries to understand his environment, but often fails to phrase his cognizance (Erkenntnis)
- The more he understands, the better his situation gets
- Less mistakes in perception

→ Progress: Improvement of cognizance in sciences

→ Goal: Find the truth



Application of Riegl's theory on our experiment

- Brunelleschi's experiment and the theoretical conclusions
→ not progress, but simply a transformation
- experiment compares *two* works of art
Painting and building
- Different artistic styles are both consummate and can coexist together
- There is no objective reality within both artworks

Science as art as science

Examples

Science

- Measurable
- Objective
- Universally true

Art

- Arbitrary
- Intuitive
- Spontaneous

Art

- Arbitrary
- Intuitive
- Spontaneous

Science

- Measurable
- Objective
- Universally true



FOR HELP

1. PUSH **RED BUTTON**
2. OR **YELL**

**MORE
HELP**

Science

- Measurable
- Objective
- Universally true

Art

- Arbitrary
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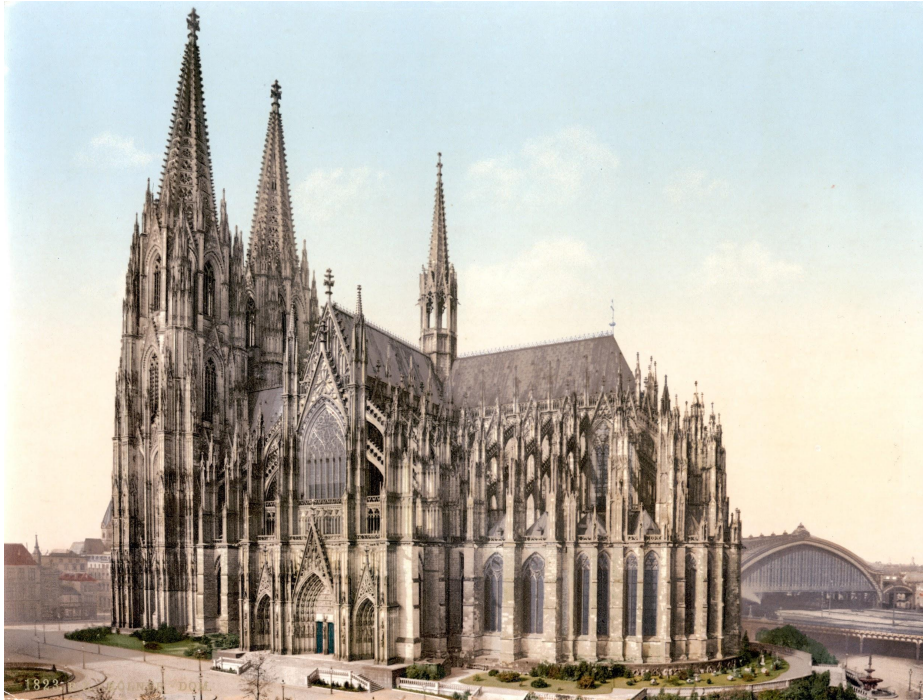
Reality (as seen by science)

- 100% of the women (measurable) are situated at the front row
- 100% of the men are located **furthermost away** from the lecturer
- Conclusion:
 - Women are more interested in this lecture
 - Men are 2nd class citizens
 - Women are prioritised / have an advantage over men
- Further analysis might be required to validate if findings are universally valid
- It is **true until proven wrong** (reasoning by argumentum ad ignorantiam)

Reality (as an art experiment)

- Highlighting massive male domination in higher education
- Question emancipation and gender “equality”
- Power game: who is moving whom: the professor the student or vice versa?
- Science (even conducted poorly) can be interpreted as art
 - At least one intentionally misleading argument on previous slide

Progress



Kölner Dom / Cologne Cathedral

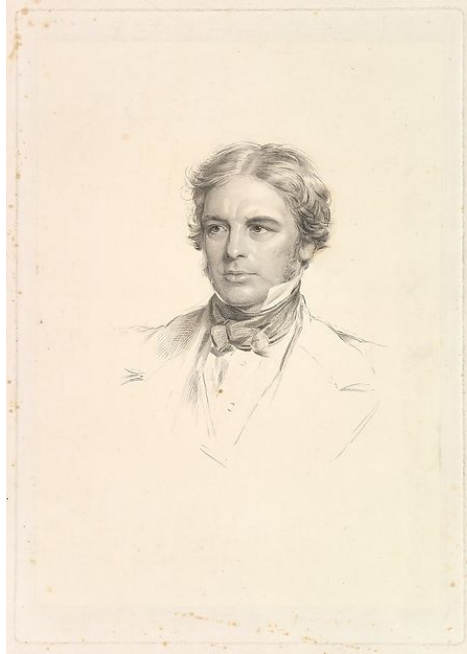


Prime Tower (Zürich)

Art Reality



Woman in Blue



Michael Faraday



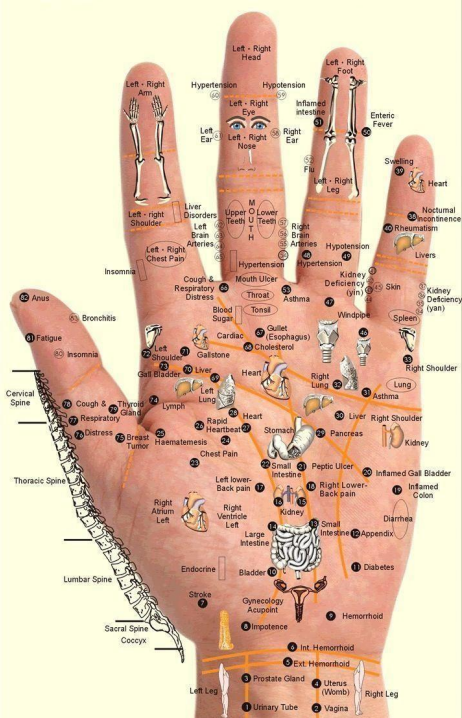
Two horses

The truth, an abstraction of reality

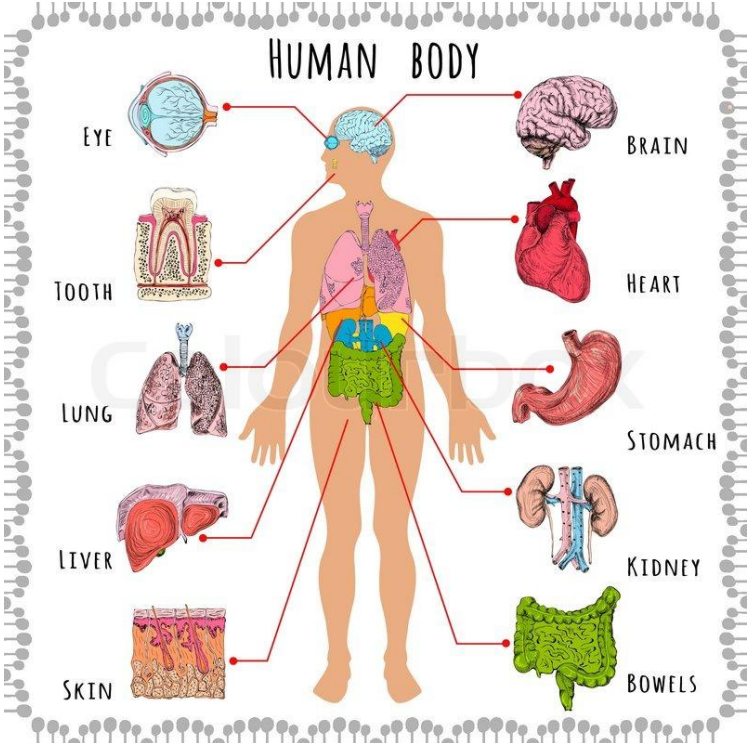
- Using abstraction, reasoning by laws = truth (false)
- Reasoning presents only a certain **style**
- Truth
 - A temporary, subjective concept
 - Not objective
 - Subject to political, cultural and weather influence



Medicine: Art or Science?



Acupuncture



"Human Body"

13:48

Summary

Perception of science and arts today

- Parents wish for their children to pursue a 'modest' profession
 - (Il)legal or free downloads of music and films
 - Logic and common rules on practicing research are very important
-
- ❑ People can pursue Phd's in painting or acting
 - ❑ Künstlerische Forschung: Project "Artists in Lab" by ZHdK
 - ❑ Professions which do not require a university degree are also considered 'reputable'

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Reality

- Brunelleschi's experiment compares two different artwork
- Both works are complete in their notion of style
- No unaffected notion of reality possible