

The role of science in creating the Weltanschauung

1. Philosophy and science long time ago

- Sometimes in the past, the philosopher was a scientist, the scientist was a philosopher
- It a a common paradigm of working
- The influence was constat and continues: Descartes, Newton, Leibniz, Kant...
- However, problmes: for instance, Newton could not explain gravity, Hume was against Newton's notion of cauzality, Kant tried to construct the fundament of Newton's theory
- 19th Century: Non-Eucludian geometry + speculative philosophy

2. Analytical philosophy – 20th Century

Causes and effects:

- Reaction to the speculative philosophy
- The axiomatization of Euclidian geometry
- Theory of relativity (Einstein) + quantum mechanics
- The elimination of Kantian intuition and synthetic method
- Overevaluation of analytic notion
- The dictatorship of logical and analytic language

→ The relativization of language

- *Linguistic* – Russell, Wittgenstein (“linguistic turn”) and Carnap (“linguistic frameworks” with L-rules and P-rules + internal and external questions) = “linguistic philosophy” (Hanna 2001)
- *Conceptual* (‘70)

- Ryle: Theory of meaning - “occupational disease of twentieth-century Anglo-Saxon and Austrian philosophy”
- Analytical philosophy - “is the joint product of two intimately connected occupational diseases: a preoccupation with the theory of meaning, and a preoccupation with the logico-linguistic theory of necessity” (Hanna 2001, p. 6)
- The philosophical system (an “image about the world”) is totally rejected (The context: Scientific theories)

**The fatal (but inevitable) movement of
philosophy in front of science:**

**The transformation of an instrument
(the analysis of language) in a goal**

Philosophy of the last 60th years

- Feyerabend's (incommensurability of scientific theories)
- Kuhn (paradigms)
- **Goodman's "Ways of worldmaking"**
- Davidson (conceptual scheme)
- Putnam (internal realism or pragmatism)
- Friedman (a priori relativized principle)

Goodman “The Way the World Is” (1978):

- “The way the world is given”
- “The way the world is to be seen”
- “The way the world is to be described”
- “The way the world is”

- He rejects the notion of “given”: “The question is not *what* is given but *how* it is given. Is it given as a single whole or is it given as many small particles?” (Goodman 1978, p. 25)
- The relativization of the “ways” through which we see/conceive/describe the world

“There are many different equally true descriptions of the world ... None of them tell us *the* way the world is, but each of them tells us *a* way the world is.” (Goodman 1978, p. 30)

→ Conceptual schemes dictate the identification of objects



Refugee in language

3. Science and philosophy today

The progress in science

- Long time ago, science became free of religion, much later of philosophy
 - *The progress in particular sciences – through the explanation of “local” aspects of the world*
- (Kant and Bohr: noumena - phenomena)

This progress involves:

- The exponential increases of knowledge
- The enormous specialization of language
- Matematization (abstractization)



Today scientists totally ignore philosophy

The effect for philosophy

- Science undertakes almost all philosophical questions
- The philosopher - totally overcome by scientific knowledge
 - **The philosophers reject the idea of any “Weltanschauung”!**
- The philosopher abandoned the fight for creating the “Weltanschauung” and retired, with a solemn dignity, under the logical- linguistic wrapper of analyzing the linguistic notions, and later, running in moral and political mind-blowing debates.

The philosopher today

- Philosophy = “Analytical textbooks” – the analysis of certain concepts/notions from scientific theories (the relationship between theoretical and empirical, etc.)
- The effect of philosophical works in science today:
ZERO!

The philosopher of the last century remains “unsettle” in front of decisive steps realized by great scientists!

However, science today...

- Many paradoxes, problems, controversies
- Scientific problems unsolved
- Some scientific theories do not have (ontological) fundamentals (quantum mechanics and cognitive neuroscience)

Problems in physics

(1) The relationship between theory of relativity and quantum mechanics (micro-macro) and the reality (world) (→ The “superstring theory”)

(2) Quantum mechanics: Perpetual mysteries

- Non-locality and non-spatiality
- Decoherence
- Superposition of particle or superposition particles-wave
- Young's two-slit experiment
- Heisenberg's principle of uncertainty
- Schrödinger's cat

“After more than seven decades, no one understands how or even whether the collapse of a probability wave really happens.” (Greene 2004, p. 119; his italics!)

“Although quantum mechanics is a breathtakingly successful theory in its application, its interpretation remains confused and hotly debated.” (Davies 2006, p. 290)

(3) Biology

- The paradox: **NO definition of life**
- The application of “theory of complexity” (Kauffman) – No results

(4) Cognitive neuroscience

- No accepted mind-brain relationship
- The great problem: the combination of “specialized functions/localization” with “integration”

- The interpretation fMRI and PET results (“Lost in localization”)
- EEG: The relation among oscillations, cognitive states, and brain areas = very unclear (Oscillations: 0-100 then 120 Hz to 1000 Hz)
- In general, contradictories or without (ontological) foundations results

“Binding problem”

- spatial (location) and temporal binding
- conscious and unconscious binding
- perceptual, visual binding, auditory binding
- binding in language understanding; binding in reasoning
- sensory-motor binding, cross modal identification, and memory reconstruction
- within a single modality, across modalities like sensory-motor integration; cross-modal binding; in action control or across perception and action
- memory binding
- binding in connection with consciousness (a unified experience)
- feature binding (associating the visual features with objects), variable binding (natural language and other abstract thought), and the subjective unity of perception.

- Roskies (1999): Binding problem = “one of the most puzzling and fascinating issues that the brain and cognitive sciences have ever faced”
- Triesch and von der Malsburg (1996): BP the key questions about the brain functions
- Hardcastle, O’Regan and Noe: Pseudo-problem
- Paradox: Cognitive neuroscience – a new science without laws!



No ontological fundament of this “science”

4. The required role of philosopher in relationship with science

- In order to influence scientists, the philosopher needs to create a new **Weltanschauung**



- A philosophical framework which indicate the alternative for scientific problems from particular sciences



- This framework has to represent the foundation (always philosophical) of scientific theories (see Kant)

- When a Weltanschauung appears?

“Before or after the apparition of a scientific theory” (Parvu)

- The scientist works in a local knowledge framework → Local aspects of reality

- The theoretical-empirical relation in scientific theories → Continuous “swing” (Margenau in Mormann & Ibarra 1995)
- Quite impossible a scientific theory that would explain all the phenomena (physical, biological, cognitive, micro, macro) together

**→ The impossibility scientific theory to offer a
Weltanschauung**

(However, Newton and Einstein – his last 25 years)

- Paradoxically, because of the progress of particular sciences it is necessary a new Weltanschauung!
- The paradox: Where is the fundament of reality? (Ex: Higgs's particle)

Friedman (2001)

- Return ***“to the long forgotten image of philosophy that once guided science”***

5. The steps of creating a philosophical system

Step I

- Acquiring philosophical knowledge (main paradigms)
- Acquiring scientific knowledge (theories, concepts) of particular sciences (physics, biology, cognitive science) referring to various “aspects of the world”

Step II

- The analyses of paradoxes, problems in particular sciences
- Identification of sub-paradigms in which the scientists work
- Identification of main notions that create the link between scientific theories and sub-paradigms

Steps I + II = **Knowledge**

Step III

- Identification of actual general paradigm of all particular sciences
 - Integration of scientific knowledge in a single framework
 - Through a continuously “**swing**” between science and philosophy
- Creation of the first set of philosophical concepts (based on scientific concepts)

Step IV

- The analyses of the relations among the concepts of the first set
- Creation of the second set of pure philosophical concepts
- Overpass the scientific contradictions/paradoxes
- The analyses of relations among the concepts of the second set



A new Weltanschauung (“pure philosophy”)

Step III + IV = IMAGINATION

- Steps I + II - Knowledge = Necessary condition
- Steps III + IV - Imagination = Sufficient condition

Golden rule:

“Knowledge from science is more important than knowledge from philosophy”

- Philosophy necessary: Not to repeat or to do the same mistakes
- Science necessary: What are its problems → Their solutions through a philosophical system + the framework of scientific frameworks

- *“Imagination is more important than knowledge.”* (Einstein)
- *“The greatest enemy of knowledge is not ignorance, but the illusion of knowledge.”* (Hawking)

Appendix: What we have to avoid?

- 2 directions in human thinking:
 - (1) Thales, atomists, Parmenides, Pythagoras - Plato, realism, Kepler, Riemann, Einstein (his complete theory), GUT and TOE, superstring theory → “Perfection” (beyond “appearances”) = **Everything is reduced to something unique!**
 - (2) Heraclites, Aristotle, nominalism, Copernicus, Darwin, Freud, quantum mechanics, physicists against superstring theory → Our image of the “world” is imperfect, incomplete, partial

→ **Avoid the idea of PERFECTION!**

(Perfect number: 1, 3, 4, 5, 7, 10, 12 vs. 6, 13)

(Perfection: Religious obsession → Philosophical +
Mathematical + Physics (superstring theory)
obsession)

(Arthur Koestler – “**Lunatics**”: Kepler – circle vs.
ellipse)

- Mathematics-reality relation and perfection

Einstein:

“When the mathematical propositions refer to reality, they are not sure, when they are sure, they do not refer to reality.”

- Nature is not perfect – It does not think!
(Today, with God – at the monastery not at the department of philosophy or science!)
- A philosophical system has to be open
- Closed system presupposes perfection, unicity
- “Illusion of knowledge” = Plato’s Ideas – The direction of the last 2 millenniums = Perfection = Unicity = “Perfect worlds” (created by a Supreme Being = Supreme Surrogate)

THE END