The role of science in creating the Weltanschauung
1. Philosophy and science long time ago

- Sometimes in the past, the philosopher was a scientists, 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

Cauzes 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 dictature of logica and analytic langyage
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)

- “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 - fen omen)
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 overcomes 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) fundaments (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”)

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(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 incertitude
- 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!

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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 particulars 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 form 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, Keppler, 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