

1. Two opposing forces are alive in the intellectual landscape of early 20th century. First, there is the *metaphysical* and *theologizing* thought. Opposed to this is *the spirit of enlightenment* and *anti-metaphysical, factual research*. The mode of thought *grounded in experience* and *averse to speculation* is strengthened by this opposition.

2. The spirit of a *scientific conception of the world* is very much alive in all branches of *empirical science*, but its leaders don't *systematize* their approach, *advocate* its principles, or *organize* their efforts. Anti-metaphysical endeavors are found all over the world:

- ▷ in England, lead by RUSSELL & WHITEHEAD, where the tradition of the great *empiricists* is still alive;
- ▷ in United States, lead by the *pragmatist school* of PEIRCE, JAMES, and DEWEY;
- ▷ in Germany, lead by the *logical empiricist* "Berlin Circle" organized around REICHENBACH;
- ▷ in Austria, lead by the *logical positivist* "Vienna Circle" organized around SCHLICK, NEURATH & CARNAP.
- ▷ in many other places, like Poland & Russia.

3. The following factors make Vienna a fertile ground for the development of the scientific conception of the world:

- ▷ *liberalist* political philosophy
- ▷ *empiricist* epistemology
- ▷ *utilitarian* ethics
- ▷ *materialist* conception of history

4. Also important is the fact that Vienna houses some of the beasts of 19th century science, including the following figures: Ernst MACH, Ludwig BOLTZMANN & Franz BRENTANO. Through Brentano Vienna got access to the important work of Bernard BOLZANO in the foundations of logic and analysis. Brentano's students went on to shape the course of 20th century philosophy (both analytic and continental); among them were:

- ▷ Edmund HUSSERL
- ▷ Alexius von MEINONG
- ▷ Kazimierz TWARDOWSKI
- ▷ Sigmund FREUD

Husserl, the father of *phenomenology*, made important contributions to the philosophy of mathematics and logic. Meinong, one of the villains of Quine's "On What There Is" (he's referred to as "Wyman"), put forth a *theory of objects* that has some affinity to modern theories of concepts. Twardowski fathered the famous LWOW-WARSAW SCHOOL of logic, which give the world some of the beasts of early 20th century *logic* and *semantics*: LUKASIEWICZ, LESNIEWSKI, KOTARBINSKI, ADJUKIEWICZ, and the great Alfred TARSKI.

5. These factors had the effect of creating in Vienna an intellectual atmosphere where general questions in connection with the *empirical sciences* could be discussed and debated. Especially prominent were questions concerned with the: epistemological and methodological problems of *physics*, the foundations of *mathematics*, problems of *axiomatics*, *symbolic logic*, and so on. The following were the main strands from the history of science and philosophy that came together:

- ▷ *Positivism & empiricism* (Hume, Comte, Mill, Avenarius, Mach)
- ▷ *Foundations, aims & methods of science* (Helmholtz, Riemann, Mach, Poincaré, Duhem, Boltzmann, Einstein)
- ▷ *Symbolic Logic*, pure & applied (Leibniz, Peano, Frege, Schröder, Russell, Whitehead, Wittgenstein)
- ▷ *Axiomatics* (Pasch, Peano, Vailati, Pieri, Hilbert)
- ▷ *Hedonism & positivist sociology* (Epicurus, Hume, Bentham, Mill, Comte, Feuerbach, Marx, Spencer)

6. Moritz SCHLICK is invited to Vienna to inherit the chair of natural philosophy formerly held by Mach & Boltzmann. He gathers around him a circle (the “Vienna Circle”) of people united by the shared ideal of *the scientific conception of the world*. Here we recall Wittgenstein’s dictum: “what can be said at all, can be said clearly” (*Tractatus*). It became clear very soon that a position not only *free from metaphysics*, but *opposed to metaphysics* was a common goal for the Circle. The Circle collaborates through the Ernst Mach Society with people from all over the world, people who are well disposed toward the scientific conception of the world and turn away from *metaphysics* and *theology*.

7. The scientific conception of the world can be characterized not by any *theses* of its own, but rather by its basic *attitude*, its *point of view*, and *direction of research*. The following list might help give you an idea of what the Vienna Circle conception of the world is all about.

7.1. Our goal is *unified science*. The task is to *link and harmonize* the achievements of individual investigators in their various fields of science. The emphasis is on *collective efforts* and on *that which can be grasped intersubjectively*. We search for a *neutral system of formulae*, a *symbolism freed from the slag of historical languages*. We search for a total *system of concepts*.

7.2 We strive for *neatness* and *clarity*. We reject dark distances and unfathomable depths. We believe that *in science there are no “depths”*; there is surface everywhere. *Everything is accessible to man* and *man is the measure* of all things. Here we are closer to the Sophists than to the Platonists, closer to the Epicureans than to the Pythagoreans. We stand with all who stand for *earthly being* and *the here and now*.

7.3 The scientific world-conception knows *no unsolvable riddle*. Clarification of the *traditional philosophical problems* leads us to partly unmask them as *pseudo-problems*, and partly to transform them into *empirical problems*.

7.4 The task of philosophy lies in the *clarification* of problems and assertions, *not* in the propounding of special “philosophical” pronouncements. With Russell, we advocate the substitution of *piecemeal, detailed* and *verifiable* results for large untested generalities recommended only by a certain appeal to imagination.

7.5 Our method is the *logical analysis* of languages. It is this method of logical analysis that essentially distinguishes our *neo-empiricism* and *neo-positivism* from their earlier versions that were more *psychologistic* in their orientation.

7.6 When someone makes an obscure pronouncement we don’t tell him that what he says is false, but ask him instead to specify the *meaning* of it.

7.7 We recognize two kinds of *statement*. First, there are the *synthetic* statements of empirical science; their meaning can be determined by logical analysis via reduction to the simplest statements about *the empirically given*. Secondly, there are *analytic* statements to which belong the pronouncements of metaphysics and these are *empty of meaning*.

7.8 The scientific conception of the world rejects metaphysical philosophy. Its *logical diagnosis* of metaphysics is twofold. First metaphysics has a too narrow a tie to the form of *natural languages*. As a result, it leads, for example, into thinking that every word must be a ‘thing’ and must refer to something somewhere. Secondly, it’s confused about the power of thought. As a result, it makes claims like ‘I think therefore I am.’ We are convinced that thinking cannot lead to knowledge out of its own resources without any *empirical material*. All thought and inference consist of nothing but a transition from statements to other statements that contain nothing that was not already in the former. This makes it impossible to develop metaphysics from ‘pure [reason]’.