

Are scientists responsible for the outcome of the results of their research? Are they jointly responsible for the conclusions others draw from their research results? After the Second World War physicists for the first time had to make the excruciating experience that they were supposed to be at least partly guilty for the enormous suffering and vast destruction dealt out by means of the Atomic Bomb. The massive amount of energy which could be made available by means of the technical control of the nuclear fission called economical powers into action. Technology is since long ago a cue ball in the game for capital and power. This counts not only for the Nuclear Energy, it also counts for Information Technology, Pharmacy, Genetic Engineering, Medicine, etc.

But we learned from the experience that results of scientific reasoning, in the long run, cannot be avoided, prohibited, or kept secret. There is only one way: The way of truthfulness and radical elucidation of the truth. It is not possible to carry on science responsibly without asking for the philosophical foundation of the scientific methods used.

The claim for the value freedom of the results of natural sciences is the result of a realistic error. The natural sciences describe the world not as an unchangeable objective reality, but as it appears to man as an actor in this world.

Theories in various fields of the Humanities are not free from metaphysical assumptions about the human mind and human reasoning. In this connection counts- hidden or open- the Cartesian Dualism and what Kant calls the dialectical illusion, e. g. the talk of religious experience instead of religious ideas. The Science of Religion needs a demythologization. The Science of Religion must be consequently practiced as an anthropological discipline to avoid metaphysical prejudices about the human mind and human reasoning. Notions like 'magic' and 'animism' are products of such superstitions about 'primitive cultures'.

The distinction between the Humanities (Geisteswissenschaften) and Natural Sciences originated under the political and social conditions of the 19<sup>th</sup> century. The "Interpretative" Geisteswissenschaften were methodically separated from the "Explaining" Natural Sciences. If we want to bridge the gap between the two positions we must rely on Cognitive Science, Theory of Evolution, and Systems Theory.

Material regarding this subject:

The following is cited from Wikipedia: [http://en.wikipedia.org/wiki/The\\_Two\\_Cultures](http://en.wikipedia.org/wiki/The_Two_Cultures)

The Two Cultures is the title of an influential 1959 Rede Lecture by British scientist and novelist C. P. Snow.[1][2] Its thesis was that "the intellectual life of the whole of western society" was split into the titular two cultures — namely the sciences and the humanities — and that this was a major hindrance to solving the world's problems.

The name of C. P. Snow stands for the whole discussion which newly arose some years ago. The Biologist Edward O. Wilson tried a reconciliation of the "Two Cultures" based on Cybernetics and Evolutionary Theory.

There is an interesting article in Wikipedia:

[http://en.wikipedia.org/wiki/Science\\_wars](http://en.wikipedia.org/wiki/Science_wars)

Ethics of Science and Technology sensibly is not ethics driven by belief but discourse ethics (s. Karl-Otto Apel). In a scientific discourse everybody must be able to take part, independent from his/her cultural or religious background.

Material on Karl-OttoApel:

Film Karl-Otto Apel "Der Letztbegründer"

<http://www.youtube.com/watch?v=T2zFNxI3EjA&feature=related>

Apel, Karl-Otto (1980): Towards a Transformation of Philosophy. London, Boston and Henley: Routledge & Kegan Paul.

Apel, Karl-Otto (1984): Understanding and Explanation. A Transcendental-Pragmatic Perspective. Cambridge, Massachusetts, and London, England: MIT Press.

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