Neighbours and Territories: What Do Creativity, Intelligence and Responsibility Have in Common? or Historical and current considerations about the socio-political responsibility of Science

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At scientific meetings and academic jubilees, results and achievements are always praised but responsibility is seldom discussed. Nevertheless, we know that to be a sound scientist requires more than being able to deliver research results and to teach the subject. In this respect also history of Science has to be more than the description of facts from yesterday. Especially those of us located in central Europe should know something about the traps of over-emphasising scientific achievements [1-3]. Fritz Haber [4], Adolf Butenandt [3], Richard Kuhn [5] and even Hermann Staudinger [6] are historically interesting scientists, and they were active in politically extremely difficult times.

Although the autonomy of our universities in Europe is no longer endangered in a political sense, they exist today in a turbulent atmosphere, driven by absurd saving plans, sometimes bizarre elitism and influenced by evaluation games and over-bureaucracy. And there is one more problem, surely at the heart of the matter: It is difficult for our universities to avoid being pulled into the nowadays only profit-driven speculations of the overdeveloped Neo-liberalism (Milton Friedman, Nobel Prize for Economy in 1976) with the sometimes brutally acting stock market as its accomplice. The "absolute open-market economy" and "laissez-faire capitalism" regard research and responsibility only as a money oriented short term amusement for our Fun-Society [7]. Certainly competition and world-wide activities do change our local situations. But many negative economic developments [8-10] cannot simply be justified by the slogan of globalization [11, 12] (Joseph Stiglitz, Nobel Prize for Economy in 2001).

What is the intrinsic value and meaning of knowledge? This question is nowadays often replaced by the question of what type of knowledge do we need to fulfil predetermined functions. This increasing misuse of Science –i.e. its transformation to

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mainly develop and support technology often for purely stock market effects– threatens to destroy its critical, purely truth-oriented function. The increasing connection between KNOWLEDGE and INTEREST –first discussed socio-critically by the German philosopher Jürgen Habermas– [13, 14] seems to have become the norm to such an extent that the value of Science is endangered to vanish in goals and reasons defined outside science: "Truth is what is useful". Does this not demand a response from our universities and research institutions?

Where is all this taking us? We are in a transition state: In Europe we are under pressure to restructure our shaking Industrial Societies into Knowledge Based Societies! Because we cannot keep the basic industrial production in our developed countries, knowledge, originality, and richness of ideas are more in demand then ever for further developments. Thus, we need a science education system that is able to nurture creativity, and an uncomplicated fast and open exchange of scientific and technological aspects with industry. We cannot allow our universities to be instrumentalized: Neither politically –as in the Third Reich– nor now political-economically, e.g. by "laissez-faire capitalism". We are all responsible together for what is to come [15].

What is to come? "The best way to predict the future is to invent it" [16]: Independent universities and research institution are a prerequisite for the education of creative, courageous, non-aligned scientists, willing to accept their responsibility as citizens and as professionals [17].

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[16] *A quote of Richard Feynman,* Physic Nobel Prize 1965.
[17] But isn`t every professional a responsible citizen anyhow? Yes, but see the beginning of this abstract! Too often we scientists exchange our "citizen jacket" against our "lab-coat" as soon as we enter our laboratories and offices.