Laying the Foundations of a New Science

I met Georg Maier 19 years ago, when I first attended a January physics meeting in Dornach. Since then I have seen him many times. What has struck me is his kindness, open mindedness, lack of dogmatism and lack of pomposity. In particular, though his approach to physics is extremely Goethean, he is also interested in other approaches, like my own. Two of my somewhat heterodox articles about science were published by Georg Maier in "Elemente der Naturwissenschaft" and I think he was very glad to do so.

I shall in this article briefly consider, what can be our approach to official science, as it now exists. Scientific predictions, even in my own field of astrophysics, are often very successful; we can mention as an example present ideas about the interior of the Sun. Modern technology, which dominates the world in many ways, is based on the results of modern science. It must in particular be emphasized that this science lies at the foundation of modern materialism and that any spiritual movement like Anthroposophy must look at whether another understanding of science and indeed another sort of science are possible. Such a refounding of science must not only involve intellectual thinking, but must be based on inner soul experiences, able also to deeply affect feeling and willing. There are in addition major contradictions between certain statements of Rudolf Steiner and generally accepted scientific ideas, which need to be properly looked at.

Present day civilization, including science, has tended more and more to treat all aspects of the world as a collection of lifeless unconscious objects. This is also true, for instance, in the case of the present form of economic globalization, which is extremely problematic. Science is now, to a very large extent, based on physics. Physics, as it is at present studied, involves the examination of measurements of distance and of time as measured by clocks. This means that, what is investigated, is mainly the space-like aspects of the world; though time is far from being only space-like, the form of time measured by clocks has still that property. Concepts such as force and energy in classical physics are based on what is space-like. The nature of space and time are no longer understood as in classical physics, but the foundations of physics, nevertheless, still involve dead completely unconscious space and time.

There are various approaches one can have in this situation. One is to study quali-

tative perceptions, now excluded from space-like science, by Goethean methods. Though scientists are often aware of Goethe (see for example the article "Exploratory Experimentation: Goethe, Land and Color Theory" in the July 2002 issue of "Physics Today"), they do not know what to do with Goethe's approach, which has had very little real influence on modern physics. In fact, much of present day science is not really concerned with nature, but rather with sub-nature. Other more spiritual approaches towards a different science, we can mention, have involved or may involve amongst others the search for unexplainable phenomena in the framework of official science, the examination of sensitive phenomena such as sensitive crystalization, the application of certain sorts of geometry to physics, artistic approaches, etc.

I shall summarize the nature of my own approach. It has notably involved experiencing deeply the contradictions between Rudolf Steiner and what is accepted as modern science. Certain basic aspects of Anthroposophy, such as for instance the "Foundation Stone Meditation", were very helpful. I came through this path, including, more than one experience, to understand the world as made of conscious beings, with extremely different sorts of consciousness, but as possessing kinds of "knowledge", abilities to act and of finding certain events more attractive than others. In this framework, where I have attempted to be rigorous, the beings of the world of quantum physics have an Ahrimanic nature. Other sorts of beings are able to act in situations of chaos, including those of living organisms. There are indications even of the presence of beings in the eternal world of pure ideas like those of mathematics. Such a conception can enable time to be understood in a different way, in fact suggested by indications of Rudolf Steiner. If correct, this type of approach must be taken much further. However I cannot claim to have overcome many of the contradictions between Rudolf Steiner and modern science, at best I can now look at many of them in a more positive light.

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