

Dear Participants of the First International Spring School on Particle Physics and Philosophy!

On behalf of the Executive Board of the University of Wuppertal I would like to extend a very warm welcome to all here today at the conference center "Maria in der Aue".

Ever since I was invited to the CERN in Geneva by Peter Mättig the year before last, the focus of the LHC (Large-Hadron-Collider)-Experiments and their social implications have been on my mind. Anyone – especially the layperson - who grapples with the sheer enormity of the questions, that the experiments raise, must certainly be fascinated.

The desire to gain a more accurate understanding of the development of the basic conditions that led to our existence is surely as ancient as mankind itself. And as always it has been theory and empirical work, thought and feeling that have alternately motivated new insights. Thus, the understanding of where we come from and where we're going to is accompanied and governed by scientific evolution. This becomes more comprehensible when you look at the anthropomorphic wording used, for example, in the Biblical genesis and also at the highly elaborate theories of modern sciences.

However, the essence of those key questions hasn't changed: how can man in a scientifically legitimate manner gain an appropriate understanding of nature at its most elusive? In how far does epistemology enable us to fully comprehend?

Today, we talk about particles, no bigger than one ten thousandth, of a nucleus. And we talk about gigantic amounts of data, which we produce. Yet we analyze and begin to understand only a fraction.

This takes us to the next questions: what changes in the layers of theories building on one another like a pyramid do we neglect to repeatedly review and thus draw incorrect conclusions? In other words, is our ability to evaluate sufficiently granular? This implies: does the data collected match the questions asked? Are the experiments configured appropriately? Do we even ask the right questions? And even in case we collect the right data set, do we then select the right data from it?

Ladies and Gentlemen, I am not a physicist, nor a philosopher, nor a science historian. Therefore hopefully, my deliberations do not appear to be presumptuous. However, I am especially enthusiastic regarding this topic and thus convinced of the meaningfulness of your scientific pursuit. I am proud, that the organization team of the University of Wuppertal has succeeded in setting up this Spring School. My sincere thanks to you! Nothing is more exciting than the ability to discuss those questions – which I can only pose as a layman – in direct response to the experiments and in direct discourse with the experimenters.

It is only left for me to wish you a lively debate and fruitful discussions.