

In 1894 Professor Wilhelm Röntgen was elected to the high office of Rektor der Julius-Maximilians-Universität, attesting that he was concerned not only with the parochial activities of his own institute but that he took a broad interest in the wider functions of the Würzburg university. In his acceptance speech lay the foundation of his philosophy:

The university is a nursery of scientific research and of mental education, a place for the cultivation of ideals for students as well as for teachers. Her significance as such is much greater than her practical usefulness, and for this reason one should make an effort when filling vacant places to choose men who have distinguished themselves not only as teachers but also as investigators and promoters of science. For every genuine scientist, whatever his field, who takes his task seriously, fundamentally follows purely ideal goals and is an idealist in the best sense of the word. Teachers and students of the university should consider it a great honor to be members of this organization. Pride in one's profession is demanded, but not professorial conceit, exclusiveness, or academic presumptuousness, all of which grow from false egotism. One should feel strongly of belonging to a favored profession, which gives many rights but also requires many duties. All our ambitions should be directed toward a faithful fulfillment of duties toward others as well as toward ourselves — only then will our university be esteemed, only then shall we prove worthy of the possession of academic freedom, and only then will this valuable and indispensable gift be retained.

Only gradually has the conviction gained importance that the experiment is the most powerful and most reliable lever enabling us to extract secrets from nature, and that the experiment must constitute the final judgment as to whether a hypothesis should be retained or discarded. It is almost always possible to compare the results of ratiocination with practical reality, and this gives the experimental research worker the required assurance his work demands. If the result does not agree with reality, it must necessarily be wrong, even though the speculations that led to it may have been highly ingenious. Perhaps one may see in this necessity a certain inexorability, when one considers the great mental effort and the great amount of time required in the accomplishment of the result and the many fond hopes that must be destroyed in the process. Yet the investigator in natural sciences is fortunate to have such a touchstone, even though it sometimes brings great disappointments.