



Ludwig Eduard Boltzmann
(1844-1906)



Boltzmann's bust in the courtyard of
the main building, University of Vienna



Mach held that scientific laws are summaries of experimental events, constructed for the purpose of human comprehension of complex data. Thus scientific laws have more to do with the mind than with reality as it exists apart from the mind. Mach opposed Boltzmann's atomic theory of physics: Since atoms are too small to observe directly, and no atomic model at the time was consistent, the atomic hypothesis seemed to Mach to be unwarranted, and perhaps not sufficiently economical.

Ernst Mach (1838 – 1916), Austrian Physicist and Philosopher



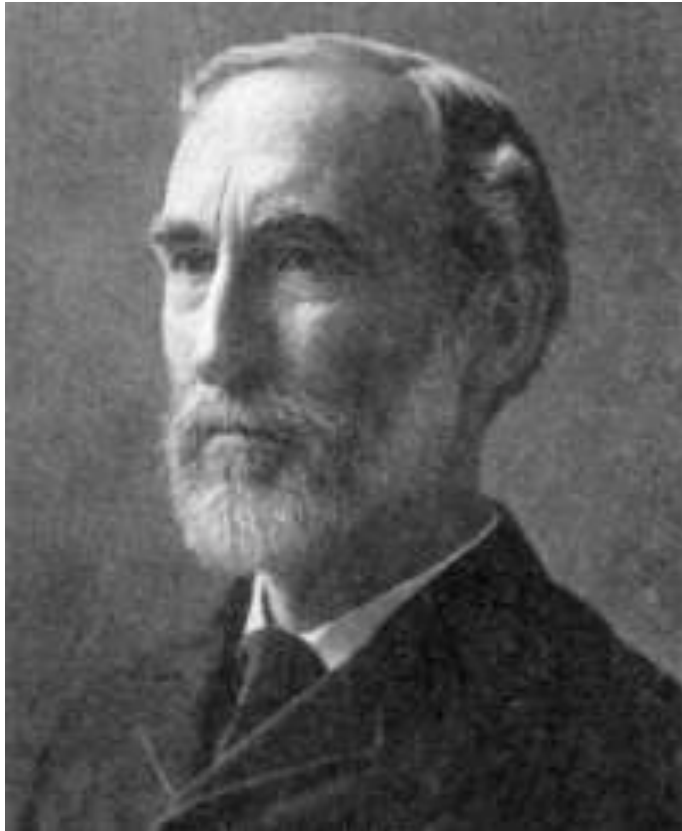
Ernst Zermelo did his habilitation thesis under Max Planck, and studied hydrodynamics. Immediately thereafter, he was appointed as a lecturer at Göttingen on the basis of his contributions to statistical mechanics and to the calculus of variations. He later made a big change in research direction and worked on set theory.

Ernst Zermelo (1871 – 1953), hydrodynamicist and mathematician



Friedrich Wilhelm Ostwald was Russian-German chemist who is considered one of the principle founders of physical chemistry. He almost single-handedly organized physical chemistry into a nearly independent branch of chemistry. Nobel Laureate (1909) in Chemistry in recognition of his work on catalysis and for his investigations into the fundamental principles governing chemical equilibria and rates of reaction, best known to electrochemists for the theory of electrolyte solutions.

Wilhelm Ostwald (1853-1932), A Russian-German Physical Chemist



Josiah Willard Gibbs, the co-founder of statistical mechanics, was a preeminent theoretical physicist, chemist and mathematician. He devised much of the theoretical foundation for chemical thermodynamics as well as physical chemistry and was an inventor of vector analysis. He spent his entire career at Yale, which awarded him the first American Ph.D. in Engineering.

Josiah Willard Gibbs (1839-1903), American mathematical physicist



James Clerk Maxwell's most significant achievement was formulating a set of equations — now Maxwell's equations — which unified the basic laws of electricity and magnetism. He also developed the Maxwell distribution, a statistical means to describe aspects of the kinetic theory of gases. These two discoveries helped usher in the era of modern physics,

James Clerk Maxwell (1831-1879), a Scottish Natural Philosopher



Boltzmann's grave in the Central Cemetery of Vienna, with his entropy formula