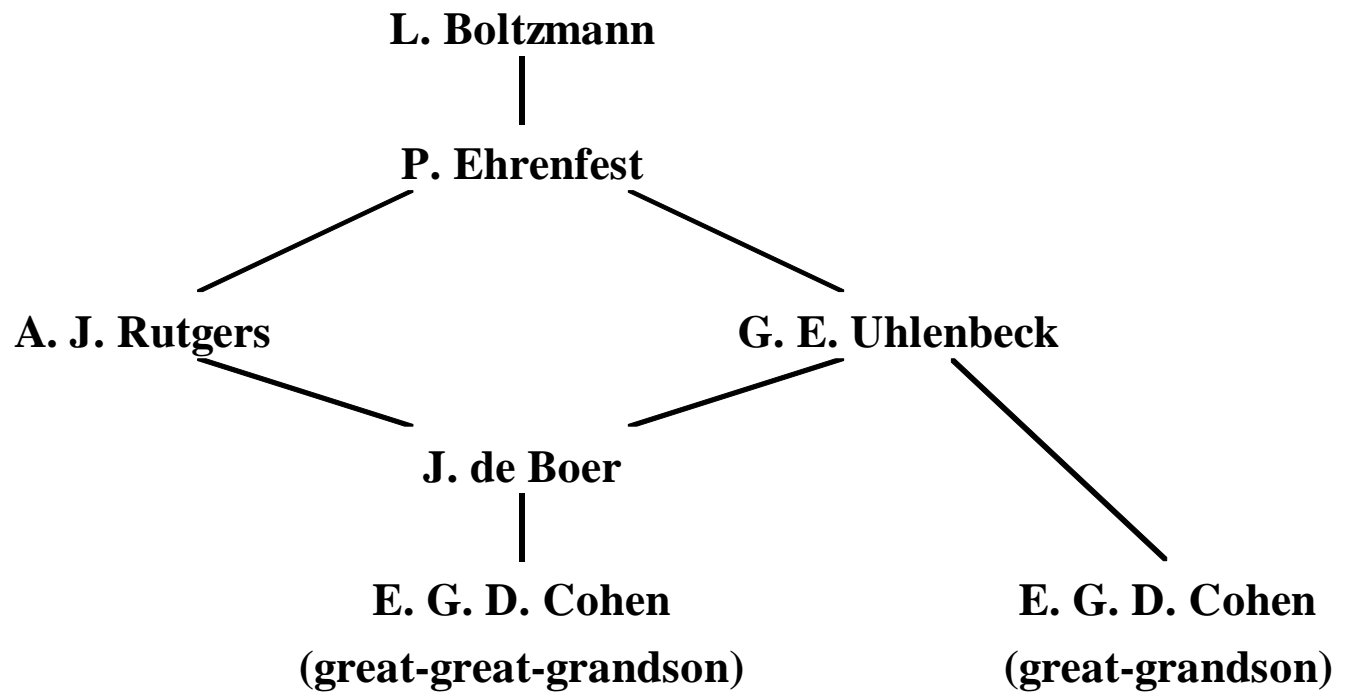


# My Scientific Genealogical Tree



1. E. Fermi's law: "A lecture cannot be too simple"
2. G. Uhlenbeck's law: "A lecture should last no longer than 50 minutes, the span of human attention."
3. L. Boltzmann's remark: "Elegance is for tailors."
4. E.G.D. Cohen's remark: "There are no stupid questions."
5. R. Oppenheimer: "Chatting is the lifeblood of physics."
6. J. de Boer's remark: "Be (very) honest to yourself as to whether you have *really* understood something."
7. E.G.D. Cohen's remark: "If you can explain something to yourself very simply and very honestly to your own satisfaction, you have understood it."
8. Oswald Avery: "If you do science, you have to blow bubbles, but you have to prick them yourself!"

9. E.G.D. Cohen's remark: "What you think you have understood at time  $t$  may not hold for time  $t + \Delta t$ , where  $\Delta t = \text{finite}$ ."

1. You often think that if something looks or sounds familiar, you *know* it. However, only you *recognizes* it! To really know it again, you may well have to refresh your memory (which is a useful bother, often) and rethink it with the knowledge of later!
  
2. You must try to be 100% honest to yourself (only)!
  
3. In particular in physics, as to whether you have *really* understood something: How do you know that?  
  
For that, repeat to yourself how you would simply and logically explain for yourself (and for others) *ab initio* and with all logical (and critically evaluated) steps, the case at hand. You have to be ruthlessly 100% honest to yourself (as best as you can).

Galileo Galilei: “Dialogues Concerning Two New Sciences:” or  
“Discourses and Mathematical Demonstrations Concerning Two  
New Sciences Pertaining to Mechanics and Local Motions”

Loren Graham and Jean-Michel Georg Cantor: “Naming Infinity”

Thornton and Marion: “Classical Dynamics of Particles and  
Systems” Thomson-Brooks/Cole

Nicholas Wade: “Before the Dawn” (2006) Penguin Press, NY

Oswald Avery: “When you do science you have to blow bubbles  
(have ideas), BUT you have to PRICK them yourselves.”

John Avery: “Info Theory and Evolution” – World Scientific.