Feynman und Pauli-Prinzip

Advanced

- Wer Feynman aus seinen populärwissenschaftlichen Büchern kennt, weiß, daß er es als persönliche Niederlage empfunden haben muß, das Pauli-Prinzip nicht "erklären" zu können. In den "Lectures" (Band **3**; Kapitel **4-3**) schreibt er:

> This brings up an interesting question: Why is it that particles with half-integral spin are Fermi particles (...) whereas particles with integral spin are Bose particles (...)?
> *We apologize for the fact that we can not give you an elementary explanation.*
> An explanation has been worked out by Pauli from complicated arguments from quantum field theory and relativity. He has shown that the two must necessarily go together, but we have not been able to find a way to reproduce his arguments on an elementary level. It appears to be one of the few places in physics where there is a rule which can be stated very simply, but for which no one has found a simple and easy explanation. (...)
> This probably means that we do not have a complete understanding of the fundamental principle involved. For the moment, you will just have to take it as one of the rules of the world.

- So be it!
  - Wer es aber trotzdem ein bißchen genauer wissen will, der möge den Link betätigen