

*Some of the 'Electric Universe' endnotes are a bit detailed, but this one riffing off of Pauli's Exclusion Principle I always found fun. It comes after a discussion of electrons in atoms:*

...The strange thing is that two of them can't have the same energy, just as two people can't occupy the same point in space. If one electron does already occupy a particular energy state, it can actually stop another electron from moving up into it – much like blocking a particular rung on a ladder.

Pauli's principle [which develops that] is immensely powerful, for atoms are almost entirely hollow, and without this restriction on the way electrons can overlap we'd be in trouble. Even when you just hit your fingertips on the table in a vainly time-wasting drum roll, the great empty spaces in the atoms of your finger would travel right through the great empty space in the atoms of the table – if it weren't for the Pauli principle.

Your feet would start sinking through the floor, just as your posterior would tumble through the chair. There might be a brief moment of reappearance – as your body fell into the airspace of any room below – but when you reached the floor of that room, you'd simply sift through again, a process that would be continued to distressingly great depths in the planet below.

That's why our whole life is, safely, spent hovering, we hover over the floor when we walk, and we hover over a chair when we sit. Even a dedicated couch potato, slumped as slothfully as possible on the sofa before a screen, is also being propped up in the air by the wonders of quantum mechanics: his body kept floating by this resistance of his electrons to sharing too many energy states with those of the couch.