

Q: Parallel action with a solenoid

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17 May 2015

Parallel currents attract each other and anti-parallel currents repel each other. But according to my corrected magnetic force law, these forces can be parallel to current, see [Theory about parallel action experiment](#). So, for the rectangular coil in the front plan of the solenoid in Figure 1, the upper current is parallel to that in the front side of the solenoid and the lower current is anti-parallel. So, there would be a torque created by the forces parallel to current and the coil should rotate.

However, the magnetic field outside a solenoid is zero and cannot act any force on a current. Moreover, there cannot be force parallel to current for classical theory.

So, If I do this experiment, will the coil rotate or not?

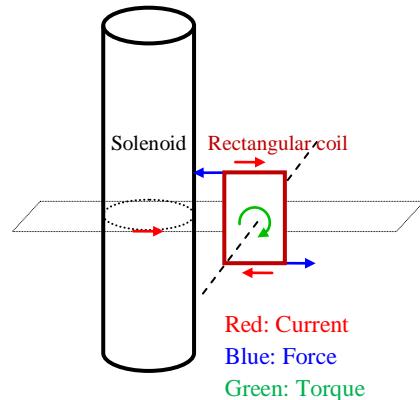


Figure 1