

CSCI-B490: Quantum Programming  
Homework 1  
Due: Tues, Jan 21

Your assignment this week is to read [1], to think about it for a long, undistracted moment, and then to write a short piece on it.

In a magic show, the appearance of magic typically requires little or no explanation. Saw an assistant in two and reassemble the two halves into an unharmed assistant minutes later: no one needs to be *told* to be surprised by such a spectacle. But not all magic is so accessible:

These statistics may seem harmless enough, but some scrutiny reveals them to be as surprising as anything seen in a magic show. [1, 402]

First, explain in your own words how scrutiny reveals the unexpected in Mermin's experiment. Make your exposition as simple as you can.

Second, discuss what Mermin means by “connections”, the importance of their non-appearance, and the explanatory burden that remains. What is your view?

Hand in your homework on paper at the beginning of class.

## References

- [1] N. David Mermin. Quantum mysteries for anyone. *Journal of Philosophy* 78, 7 (Jul. 1981), 397-408.