## Summary

- The only way to answer causal questions about our systems is to think about them scientifically
- Statistics can not differentiate between causal and non-causal associations (we are only measuring differences)
- Model comparison, significance, and other statistical tools are useful, but can't replace scientific reasoning

- Use DAGs liberally to think about the causal relations you are attempting to measure
- Use the back-door criteria to decide which variables should be included a model, depending on the question you are trying to answer:
  - Which effect do you want to estimate?
  - Different estimates of interest might require different models