Intro, weird semester, pass/fail, build applied skills

Causal vs. predictive analysis

* Xi talked about this difference
* I’d say most published quantitative research in sociology, epidemiology, etc. asks causal questions, but do not use the word causal.
* I think this leads to a lot of confusion
* Either you’re describing or predicting trajectories, and that is your main result
* OR you’re inferring something about determinants, or causes, of differences in those trajectories or change
* Of course, as Xi said, it is often extremely difficult to identify causal estimates, especially with observational data. But as soon as you introduce an independent variable and make any sort of inference on the relationship between that
* When do we call things causes/effects?
  + Matthay 2020: lots of confusion and disciplinary language differences
  + Confounder-control vs. instruments
    - All have assumptions and threats to identification and causal validity
    - Different fields rely on different methods
    - As Xi said in class, you usually want to start with your theoretically motivated question and then figure out how to answer it
    - In my opinion, some fields only use specific methods and try to find questions they can answer with those methods (econ)
    - Other fields start with questions and try to answer them as best they can while acknowledging limitations (epi)
    - Soc falls somewhere in the middle and uses all these methods