

## **Week 2 Response: *Morgan & Winship 2015, Ch. 4***

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I have not encountered the “back door criterion” before, but it was extraordinarily satisfying to work my way through it, because it helped me to actually understand the Bayes’ Ball algorithm. Previously, to be honest, I had mostly memorized Bayes’ Ball as an abstract set of rules, with only a vague understanding of the reasoning behind them. I had a tenuous grasp on the “aliens/broken watch” notion, but somehow framing things in terms of a collider variable really made it click. I found the college admissions example especially helpful.

In applying these concepts to my own problem, I think I may still struggle, however. One of the problems is that nearly all of the edges in any graph I attempt with my data could potentially be bidirectional. I also think one of the main conclusions of the back-door criterion – that one does not need to condition on all the variables in a causal chain to account for omitted variable bias – is something that is not generally followed in the social sciences, where the general ethos typically resembles something more like “the more control variables, the better.” As such, in practice I think you tend to find a lot of violations of Condition 2. Of course, in the social sciences, the goal tends to be identifying the existence of a causal effect, rather than getting a precise estimate of the ATE, so any conditioning variable that will bias the estimated ATE downwards is considered a conservative action and will generally not be challenged.