

PSC4375: Observational Studies

Week 2: Lecture 3

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 - **Control group**: readers of papers who didn't switch

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 - Observational studies often have larger/more representative samples that improve external validity

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 - one type: **selection bias** from self-selection into treatment

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- Could there be confounders?

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- Threat to inference: we can only control for observed variables \rightsquigarrow threat of **unmeasured confounding**

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- Threat to inference: **time-varying confounders**
 - Time trend: Labour just did better overall in 1997 compared to 1992

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 - Changes in vote of readers of non-switching papers roughly the same as changes that readers of switching papers would have been if they read non-switching papers
 - Threat to inference: non-parallel trends

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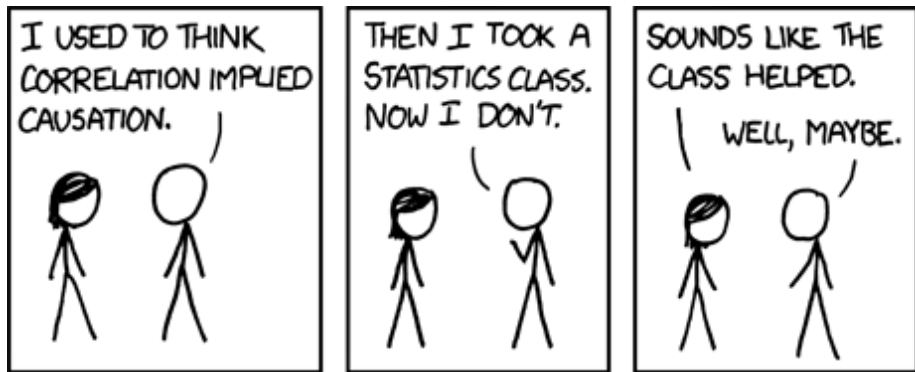
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 - ③ **Differences-in-differences** - Assumption: parallel trends assumptions
- Under this assumption, it accounts for unit-specific and time-varying confounding
- All rely on assumptions that can't be verified to handle confounding
 - RCTs handle confounding by design

Causality understanding check



See also: <https://www.tylervigen.com/spurious-correlations>