

# Interpreting and Critiquing Causal Evidence

## Day 5 - Constructive Critiques

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# Section 1

## Constructive Critiques

## Being Constructive

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  - ▶ We have a scholarly obligation to point out errors in reasoning
  - ▶ We learn collectively by collaborating
  - ▶ We learn individually by thinking critically about others' work
- ▶ There is no research project that cannot be improved

## Being Constructive

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  - ▶ To destroy valuable research
  - ▶ To release our own frustrations

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  2. In terms of content



## Section 2

# Constructive Style

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  - ▶ Have options for how to respond

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  - ▶ Recognize the inherent challenges and constraints of implementing the research
- ▶ So phrase your comment in terms of 'as I understand your argument'
- ▶ Or 'Could it be that something else is also happening?'

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- ▶ **Suggest an alternative**

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- ▶ If in doubt, use the feedback sandwich:
  1. Something positive/encouraging
  2. Critique
  3. Something positive/encouraging

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  - ▶ If you have not fully understood, take time to invest in understanding it before commenting

## Section 3

# Constructive Content



# Strengthening Causal Arguments

## 1. Multiple tests of theory

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2. Multiple methods

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6. Investigating Mechanisms

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- ▶ **Critical tests:** Ideally we want to focus on those tests that 'separate' theories, telling us which one is true

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  3. Whether the relationship holds even for diseases which could easily be cured with more income

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- ▶ These are all "Causal Process Observations" (Collier et al 2010)

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  - ▶ Are there spillovers (violations of SUTVA)? We can conduct a survey and find out how people interacted
  - ▶ Is a regression discontinuity threshold enforced neutrally? Or was the threshold chosen to make sure a particular unit passed?
  - ▶ Can people sort/migrate across a discontinuity? We can use administrative data on migration rates to assess if these differences might be large enough to explain our results

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  - ▶ To argue in support of the exclusion restriction for the instrumental variable: that plantations were set up in the Caribbean because of the climate, not because they were near the supply of slaves in West Africa

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  - ▶ We can expand our dataset and adjust our research question

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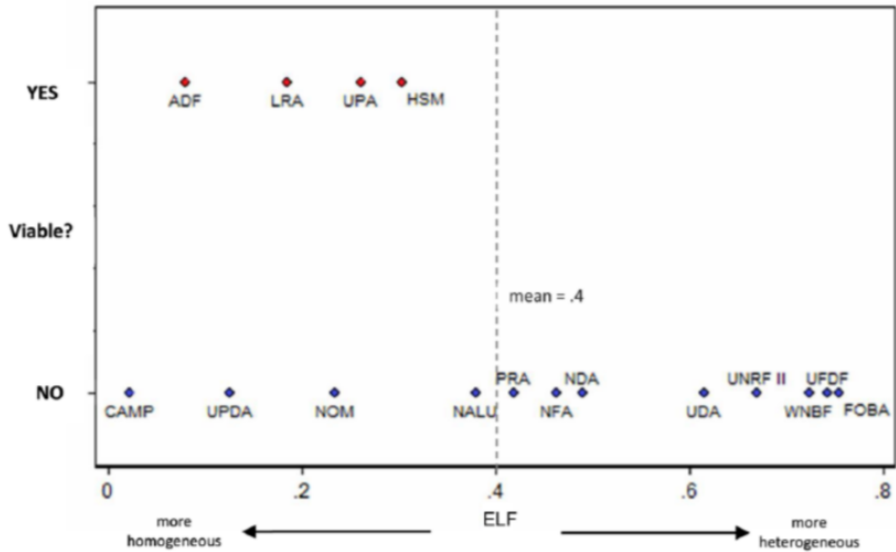
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  - ▶ Expanding the sample from 1-4 (in most datasets) to 15
  - ▶ Showing that ethnicity does *not* affect rebel group formation, but may affect their success



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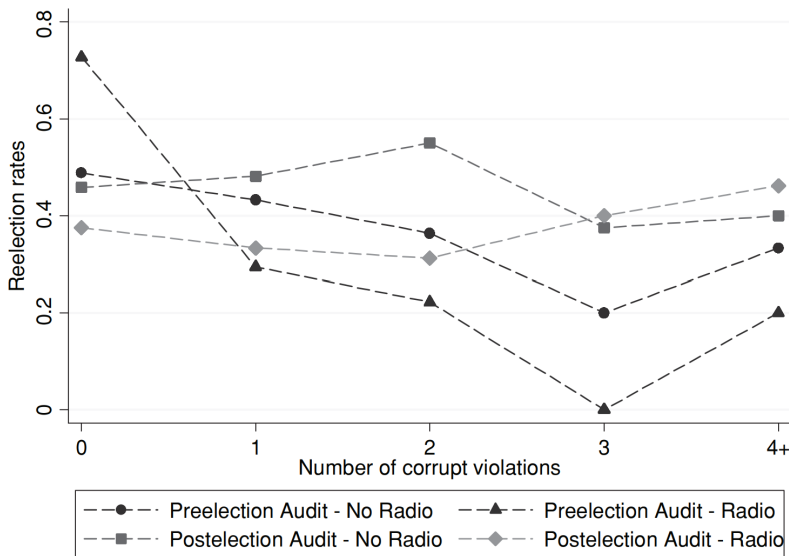
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- ▶ What other theory would be consistent with *all* of this evidence?

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- ▶ But we can also test the 'non-predictions' of our theory, when there should *not* be an effect
- ▶ If we found an effect where there should *not* be one, we might think something is weird in our data/methodology and have less confidence in our main result
  - ▶ Placebo Treatments
  - ▶ Placebo Outcomes
  - ▶ Placebo Populations

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- ▶ We expect there *not* to be a 'jump' effect when winning margin=10%
- ▶ So we can apply our regression discontinuity again and measure the effect at winning margin=10%
- ▶ If we still find an effect, there might be something wrong with our data/method

## 5. Placebo tests

FIGURE 4. Local Linear Regression: Difference in Resistance Activity

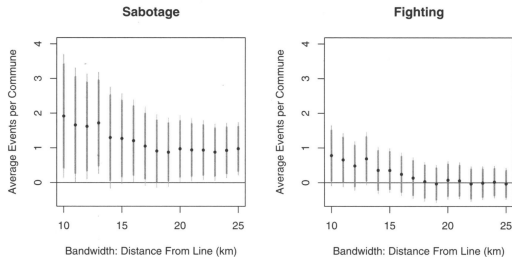
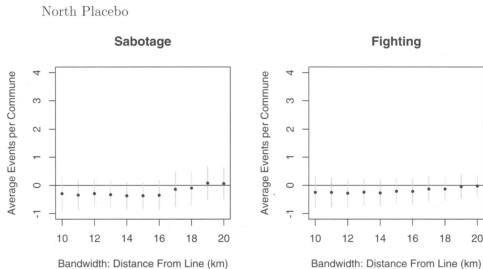


FIGURE 5. Robustness Check: Placebo



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- ▶ If we were estimating the effect of a treatment that applied to some units on 5th August 2012, we expect no effect on 3rd July 2009
  - ▶ Or on 4th August 2012
  - ▶ Or on 6th August 2012
- ▶ The more tightly the data are consistent *only* with your theory, the more credible is your theory

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- ▶ We want to assess the effect of presidentialism on reducing party cohesion
- ▶ A good comparison is between the USA (presidential) and Canada (parliamentary)
- ▶ But we also gain confidence if we can show that other similar parliamentary systems have cohesive parties (Britain, Australia, etc.)



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  - ▶ But that leaves an empty black box between treatment and outcome
- ▶ Really we want to test **theories**, which include a clear mechanism connecting the treatment and the outcome
- ▶ To show that a specific theory is operating, we want to trace every step of the mechanism

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  - ▶ Co-ethnics found their target 43% of the time, non-co-ethnics only 28% of the time

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- ▶ Brady estimates that at most 224 people did not vote due to the media announcements