



Randomization in the tropics revisited: a theme and eleven variations

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RCTs as the gold standard?

- Problems faced by researchers when making use of RCTs
- RCTs can hold dangers and drawbacks
- RCTs as a useful tool - importance of correct-context use
- No one-size fits all approach
- Hierarchy of evidence not worthwhile

Statistical inference

- Statistical inference is not simpler in RCTs
- Conduction is work/time intensive and requires specialized skills
- Inference misconceptions
 - Randomization does not balance observations between treatment and controls
 - Computation of p-values often wrong

External validity

- It's about the property of circumstances in which a study is used
- A study whose results does not apply elsewhere does not imply invalidity

Experimentation

- The key laboratory experiments in economics did not use randomization, it is unhelpful for experimentation,
- There's in an endless configuration of treatments that could be use to figure out what is optimal for the bird, so testing each configurations is not feasible
 - In the case of the angry bird, the variables are the **angle, redirection, and speed**
- There are many kinds of experiments where randomization is not required, or would obscure the results
- If the treatment is dependent on like a multitude of variables, and the variables are like continuous and not discrete/ binary, it's hard to gauge what configuration of treatment is optimal

Other methods

- Methods mentioned: instrumental variables and regression discontinuity
- Quasi-experimentation design - methods for purging unwanted variance from x , and creating two groups that were deemed to be identical apart from treatment
- In randomization: we used to run regressions of y on x , with much too little discussion of what generated the variation in x
- Hypothetico-deductive model works in the natural science
- Whatever method of building causal models, needs careful attention to mechanisms, and with a language that emphasized causal structure

Small vs Large

- Quoting Lant Pritchett on poverty reduction: driven by economic growth and by globalization
- At the individual level, the treatment works and spill-overs on others are small and often cannot be (or are not) measured
- At the aggregate level, the sum of the individually small spill-overs can negate or reverse the effect
- Micro level RCT trials rarely scale to macroeconomy, due to omitted spill-overs, such as market distortions
- The remedy was to switch from the small to the large, to fix the distortions first, and to get the macroeconomy right before doing project evaluation. Impactful progress

Models and Causality

- Modelling are used to find what is researched and factors that might have an effect
- Interpreting an RCT always requires assumption, we need to assume that it is only the treatment that matters
- It's impossible to guarantee without careful policing of post-randomization confounding
- There are many assumptions that need to be made to get from the data to the conclusion of causality
 - Can be just causal in one case, not to be generalized
- It's better to refrain from causal judgements in general

Ethics

“How is informed consent handled when people do not even know they are part of an experiment? “

“Foundations and altruists often “know” what is good for poor people, and have the best intentions, but provide little evidence that poor people agree with their assessments or value their remedies...”

“The technocrats believe that they can develop other people’s countries from the outside, because they know how to find out what works”

*“Engineering poverty reduction is at best hopeless, and at worst disastrous. Development agencies today use the word “partnership” a great deal, **but there is no genuine partnership when all the money is on one side.** Nor can there be genuine informed consent in an RCT when aid money is at stake.”*

“It makes no sense to spend resources randomizing schools or medicines when the President, facing an election, is imprisoning his foes or inciting violence against his tribal and political enemies.”

“When the RCT methodology is used as a tool for “finding out what works,” in a way that does not include freedom in its definition of what works, then it risks supporting oppression.”

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