

## Personal History Statement

*Angrist, Joshua D., Guido W. Imbens, and Donald B. Rubin. "Identification of causal effects using instrumental variables." Journal of the American statistical Association 91.434 (1996): 444-455.*

Let's revisit LATE.

Joshua, Imbens and Rubin used the LATE framework to reinterpret the instrumental variables approach that had been used in the social sciences for decades. Their profound insight is that, recognizing that people are very different and that the impact of an intervention (a policy, a drug) can vary greatly from person to person, LATE does not estimate the average effect of an intervention, but rather the impact of the fraction of people who are encouraged to accept the intervention. Because the encouragement is exogenous, the estimated effect is causal.

A typical example of LATE is the impact of minimum wage on unemployment. The difficulty is unemployment is affected by many factors, so how do you remove others? The answer is the so-called DID. Just look for two groups of residents near the border of New Jersey and Pennsylvania.

In short, go for the breakpoint of fate.

In econometrics lecture, the professor explained this remarkable paper with great passion, and I marveled at such a subtle and concise method but realized its cruelty when I started doing research. Economists can't do natural experiments with their own hands, so they do quasi-experiments by the hand of God. The results are still just as cruel, but the ethics committee can't blame economists. Since then, a lingering subconscious thought was the realization that I happened to be placed in the more fortunate set at most of life's discontinuity point. If X, if Y, if Z... there are a million what-ifs that would make my life very different today. Would I still be me then? Can I still comfort myself that I am still me at that time?

Only one kind of equality is the true equality, which is when you stand at the edge of tons of unpredictable tipping points, look around at those rotating astrolabes and crystal balls scattered all over the place, not knowing how fate will label you in a hypothesis test for future economists.

'Endogeneity' is the only muffled mumble you can hear from the universe. Then you dizzily dive headfirst into a foggy fork in the road.