Using Stats to Spot
Racial Disparities in Policing

Daniel Martin

Assistant Professor

MEDS Department

Northwestern Kellogg

Using Stats to Spot Racial Disparities in Policing

- Common stat: Police action higher for minorities
  - African-Americans faced 42% of non-consented searches in San Francisco[*]
  - Black/Hispanic drivers asked to be searched 2x as much in Illinois[*]
  - Black/Hispanic drivers searched 4x as much in Chicago[*]

- Criticism: People argue minorities have lower SES & police action higher for lower SES (OVB!!!)

- Fix: Police action higher for minorities, <u>controlling for other factors</u>
  - Black drivers searched 2x as much in Ferguson, <u>controlling for non-race based factors</u>[*]

*Stats from "What the data really says about police and racial bias" *Vanity Fair*

Using Stats to Spot Racial Disparities in Policing

- Criticism: People argue minorities more likely to commit crimes, so should face more police action
  - "Statistical discrimination"

- Fix: Focus on "hit rates"
  - Conditional on being searched...
  - Blacks/Hispanics had lowest rates of contraband discovered in San Francisco*
  - Black drivers found with contraband 26% less often in Ferguson*
  - Hispanic drives found with drugs less often in Maryland**

- Better yet: "Hits rates" that control for other factors!

*Stats from "What the data really says about police and racial bias" Vanity Fair
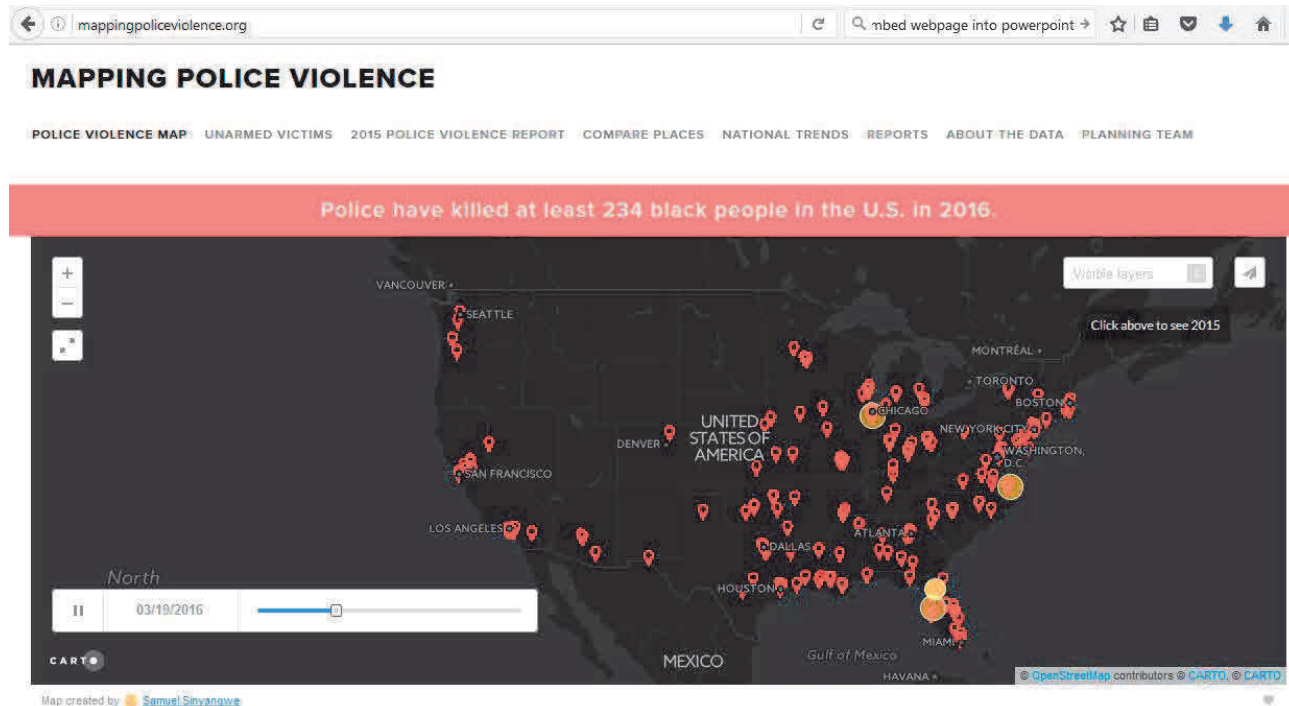** Knowles, Persico, and Todd, Journal of Political Economy, 2010

Using Stats to Spot Racial Disparities in Policing

- Let's apply this logic to deaths from police action

- Example: African-Americans are more likely to be shot by police
  - But what about OVB?

- Fix (add controls): African-Americans are 3.49 times more likely to be shot by police <u>when unarmed</u>*
  - But what about statistical discrimination?

- Fix (focus on hit rates): Conditional on dying from police action, how likely to be unarmed?

*Stats from "What the data really says about police and racial bias" *Vanity Fair*

Data source:
http://mappingpoliceviolence.org/

- Thanks to Ruthie Hubbard (in Prof. Klibanoff's DECS class) for sharing the source!
- Pros: One of the few data sources available
  - F.B.I. director James Comey has described the lack of data as "embarrassing and ridiculous"

- Cons: Incomplete data, potential bias in data gathering

Using Stats to Spot Racial Disparities in Policing

- "Hit rate": Conditional on dying from police action, how likely to be unarmed?

- Regressed unarmed onto dummy variables for race
  - Blacks 11 percentage points more likely to be unarmed than whites in 2015 (p<0.001)

- Even when I controlled for age, gender, criminal status, and showing symptoms of mental illness:
  - Blacks 10.1 percentage points more likely to be unarmed than whites in 2015 (p=0.001)
  - 95th confidence interval 4.4 to 15.8 percentage points

- If they died from police action, blacks 53% more likely to be unarmed than whites, controlling for other factors
  - Rate was 45% when I just considered gunshot deaths