Ferguson and Police Use of Deadly Force

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Themes

- Why Ferguson? Ferguson in context
- Is there a “Ferguson effect” on crime?
- Research on police use of force
  - St. Louis study
- “Expanding the narrative”
  - Focus on violent situations
- Building new data systems
Why Ferguson?

Ferguson in Context
## Demographic Context

<table>
<thead>
<tr>
<th></th>
<th>Ferguson</th>
<th>St. Louis Co.</th>
<th>St. Louis City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>21,203</td>
<td>998,954</td>
<td>319,356</td>
</tr>
<tr>
<td>% Black</td>
<td>67.4</td>
<td>23.7</td>
<td>49.2</td>
</tr>
<tr>
<td>% Unem</td>
<td>12.2</td>
<td>8.6</td>
<td>14.3</td>
</tr>
<tr>
<td>% Poor</td>
<td>24.9</td>
<td>10.9</td>
<td>27.4</td>
</tr>
</tbody>
</table>

Source: American Community Survey (2009-2013)
Crime Rates per 1,000 Population, 2013

<table>
<thead>
<tr>
<th></th>
<th>Ferguson</th>
<th>St. Louis Co.</th>
<th>St. Louis City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homicide</td>
<td>0.094</td>
<td>0.037</td>
<td>0.376</td>
</tr>
<tr>
<td>Violent</td>
<td>4.76</td>
<td>2.82</td>
<td>15.9</td>
</tr>
<tr>
<td>Property</td>
<td>53.1</td>
<td>24.8</td>
<td>66.8</td>
</tr>
</tbody>
</table>

Source: MO Uniform Crime Reporting Program
“Ferguson Effect” on Crime?
Monthly Homicides in St. Louis, 2013 - 2014

Michael Brown Killing

2013

2014

January February March April May June July August September October November December

Michael Brown Killing

January  February  March  April  May  June  July  August  September  October  November
Ratio of Monthly Property Crimes, 2014 v. 2013

Michael Brown Killing
Research on Police Shootings
Three Limitations of Prior Research

• Official counts of deadly force inaccurate
  – Vital Statistics and FBI’s SHR data undercount (a lot) and the error is not constant
• Dead bodies a poor indicator of deadly force
  – Most OIS’s cause non-fatal or no injuries and ratios are not constant
• Large spatial aggregations (cities and states) mask substantial heterogeneity within units
St. Louis Study*

• Outcome: All intentional officer-involved shootings, 2003-2012 within city boundaries (N=230)
• Unit of analysis: Neighborhoods (census block groups) N=355
• Range of n’hood OISs (0-5)
  – 0  208  (58.6%)
  – 1  92   (25.9%)
  – 2  36   (10.1%)
  – 3+ 19   (5.4%)

OISs by Neighborhood Violence and Racial Composition
Key St. Louis Findings

• Neighborhood violence drives deadly force
  – but only to a point
  – Racial comp and SES exert indirect effects thru violence

• Relationship between violence and OIS nonlinear – more OISs at mid-levels of firearm violence

• Possible explanations
  – Savvy Suspects
  – Mindful Officers
Future Directions

• Replicate in other cities
  – Will the nonlinear effect hold?

• Savvy suspects and mindful officers?
  – Rooted in sound theory and research in other areas, but presents research challenges
  – Points to complexity of topic; how space might shape officer and citizen perspectives on danger and violence

• Why *not* Ferguson?
“Expanding the Narrative”

• Common refrain among Ferguson protesters
• Individual-level remedies
  – Better training
  – Reduce implicit bias
• Greater emphasis needed on situations
  – What circumstances distinguish police-citizen encounters that involve deadly force from those that end peacefully?
  – Violence is hard, not easy.
    • Violence requires overcoming “confrontational tension and fear” (Collins 2008).
    • What conditions produce “forward panic” by police (Collins 2008)?

Recommendations

• The Department of Justice should establish a database on *all* police shootings that includes, at a minimum:
  – Number and characteristics (sex, age, race, ethnicity) of officers and civilians
  – City and street address of the incident
  – Outcomes: fatal and nonfatal injuries
• Eventually, the system should include all incidents in which less-lethal weapons or physical force capable of producing serious injury is used.
Without Comprehensive and Comparative Data on Police Use of Force, the National Debate Will Continue to be Based on Myths, Half-Truths, and Political Ideology
Appendix: St. Louis Study
Incident Types

- Suspicious persons or vehicles (n=49)
- Person with gun/shots fired (n=45)
- Robberies (n=28)
- Stolen vehicles (n=17)
- Car prowls (n=16)
- Burglaries (n=13)
- Traffic stops (n=13)
- Others fewer than 10 cases (e.g., domestics)
# Selected OIS Descriptives

Table 1. Selected Characteristics of Police Shooting Incidents in St. Louis, 2003 – 2012

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Sd</th>
<th>Min</th>
<th>Max</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Officers present</td>
<td>2.00</td>
<td>1.58</td>
<td>1</td>
<td>12</td>
<td>225</td>
</tr>
<tr>
<td>Officers firing</td>
<td>1.37</td>
<td>.94</td>
<td>1</td>
<td>8</td>
<td>230</td>
</tr>
<tr>
<td>Shots by officers</td>
<td>6.50</td>
<td>12.46</td>
<td>1</td>
<td>132</td>
<td>226</td>
</tr>
<tr>
<td>Suspects present</td>
<td>1.65</td>
<td>1.10</td>
<td>1</td>
<td>5</td>
<td>228</td>
</tr>
<tr>
<td>Suspects fired at</td>
<td>1.05</td>
<td>.25</td>
<td>1</td>
<td>3</td>
<td>228</td>
</tr>
<tr>
<td>Suspects struck</td>
<td>.53</td>
<td>.60</td>
<td>0</td>
<td>4</td>
<td>230</td>
</tr>
<tr>
<td>Suspects killed</td>
<td>.16</td>
<td>.38</td>
<td>0</td>
<td>2</td>
<td>230</td>
</tr>
</tbody>
</table>

Source: SLMPD
Officers and Suspects

- 315 shooters across 230 cases
  - 71% had ten or fewer years on job
  - Mean age=34 (range 22-56)
  - 96% male
  - 66% white, 34% black (nearly identical to racial composition of SLMPD)

- 373 suspects
  - 244 fired at by officers
  - 123 hit by gunfire, 37 fatalities
  - Mean age=24
  - 96% male
  - 93% black (nearly identical to racial composition of murder suspects and victims)
### Bivariate Relationships

#### Table 2. Block Group Characteristics by Number of Officer-Involved Shootings

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>( p^a )</th>
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<tbody>
<tr>
<td>Index of firearm violence</td>
<td>.752</td>
<td>1.33</td>
<td>2.05</td>
<td>2.22</td>
<td>3.03</td>
<td>2.21</td>
<td>.000</td>
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<tr>
<td>Percent black</td>
<td>38.6</td>
<td>59.7</td>
<td>78.9</td>
<td>85.4</td>
<td>71.6</td>
<td>92.7</td>
<td>.000</td>
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<tr>
<td>Percent Hispanic</td>
<td>2.90</td>
<td>2.93</td>
<td>1.26</td>
<td>4.78</td>
<td>0.00</td>
<td>1.13</td>
<td>.309</td>
</tr>
<tr>
<td>Percent age 18-24</td>
<td>8.35</td>
<td>10.9</td>
<td>9.18</td>
<td>11.4</td>
<td>6.04</td>
<td>18.6</td>
<td>.037</td>
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<tr>
<td>Percent age 50 and over</td>
<td>28.4</td>
<td>30.0</td>
<td>29.5</td>
<td>24.2</td>
<td>29.2</td>
<td>29.6</td>
<td>.514</td>
</tr>
<tr>
<td>Percent same hh 5 yrs.</td>
<td>66.6</td>
<td>66.0</td>
<td>72.1</td>
<td>62.3</td>
<td>62.1</td>
<td>75.1</td>
<td>.229</td>
</tr>
<tr>
<td>Percent owner-occ. hh</td>
<td>44.9</td>
<td>38.4</td>
<td>35.8</td>
<td>23.0</td>
<td>20.7</td>
<td>35.4</td>
<td>.001</td>
</tr>
<tr>
<td>Percent college</td>
<td>25.7</td>
<td>18.1</td>
<td>13.8</td>
<td>10.4</td>
<td>17.9</td>
<td>6.79</td>
<td>.000</td>
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<tr>
<td>Percent unemployed</td>
<td>7.15</td>
<td>8.48</td>
<td>9.68</td>
<td>8.60</td>
<td>21.6</td>
<td>6.34</td>
<td>.267</td>
</tr>
<tr>
<td>Median income ($)</td>
<td>38778</td>
<td>33699</td>
<td>29263</td>
<td>23913</td>
<td>34696</td>
<td>33518</td>
<td>.002</td>
</tr>
<tr>
<td>(N)</td>
<td>(208)</td>
<td>(92)</td>
<td>(36)</td>
<td>(16)</td>
<td>(3)</td>
<td>(3)</td>
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</tr>
</tbody>
</table>

Source: SLMPD; American Community Survey

\( ^a \) Evaluated by F-test
## Poisson Regression Results for Officer Involved Shootings

### Table 5. Poisson Regression Results for Officer Involved Shootings

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
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</thead>
<tbody>
<tr>
<td><code>faviol</code></td>
<td>.520**</td>
<td>.520**</td>
<td>.522**</td>
<td>1.45**</td>
<td>1.26**</td>
</tr>
<tr>
<td></td>
<td>(.062)</td>
<td>(.062)</td>
<td>(.060)</td>
<td>(.256)</td>
<td>(.294)</td>
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<tr>
<td><code>pctblack</code></td>
<td>.589+</td>
<td>.478</td>
<td>.591*</td>
<td>-.064</td>
<td>-.054</td>
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<tr>
<td></td>
<td>(.303)</td>
<td>(.971)</td>
<td>(.297)</td>
<td>(.333)</td>
<td>(.488)</td>
</tr>
<tr>
<td><code>mdS</code></td>
<td>.012*</td>
<td>.012*</td>
<td>.024</td>
<td>.012*</td>
<td>.007</td>
</tr>
<tr>
<td></td>
<td>(.006)</td>
<td>(.006)</td>
<td>(.015)</td>
<td>(.005)</td>
<td>(.007)</td>
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<tr>
<td><code>pctownocc</code></td>
<td>-.660+</td>
<td>-.674+</td>
<td>-.726*</td>
<td>-.267</td>
<td>-.361</td>
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<tr>
<td></td>
<td>(.348)</td>
<td>(.370)</td>
<td>(.361)</td>
<td>(.345)</td>
<td>(.416)</td>
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<tr>
<td><code>petcollege</code></td>
<td>-1.12+</td>
<td>-1.12+</td>
<td>-1.18+</td>
<td>-.960</td>
<td>-.441</td>
</tr>
<tr>
<td></td>
<td>(.624)</td>
<td>(.628)</td>
<td>(.619)</td>
<td>(.607)</td>
<td>(.771)</td>
</tr>
<tr>
<td><code>spatial lag</code></td>
<td>.153</td>
<td>.151</td>
<td>.154</td>
<td>.105</td>
<td>.003*</td>
</tr>
<tr>
<td></td>
<td>(.117)</td>
<td>(.118)</td>
<td>(.117)</td>
<td>(.109)</td>
<td>(.001)</td>
</tr>
<tr>
<td><code>pctblack^2</code></td>
<td>---</td>
<td>.098</td>
<td>---</td>
<td>---</td>
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</tr>
<tr>
<td></td>
<td>---</td>
<td>(.847)</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><code>mdS^2</code></td>
<td>---</td>
<td>---</td>
<td>-.0001</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>---</td>
<td>---</td>
<td>(.0001)</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><code>faviol^2</code></td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>-.174**</td>
<td>-.140**</td>
</tr>
<tr>
<td></td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>(.047)</td>
<td>(.050)</td>
</tr>
<tr>
<td>pseudo R^2</td>
<td>.208</td>
<td>.208</td>
<td>.209</td>
<td>.225</td>
<td>.246</td>
</tr>
<tr>
<td>Wald chi^2 (N)</td>
<td>226**</td>
<td>226**</td>
<td>230</td>
<td>218**</td>
<td>189**</td>
</tr>
<tr>
<td></td>
<td>(355)</td>
<td>(355)</td>
<td>(355)</td>
<td>(355)</td>
<td>(320)</td>
</tr>
</tbody>
</table>

Source: SLMPD; American Community Survey

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*a* Standard errors (in parentheses) adjusted for clustering within block groups.

*b* Shootings that occurred when the officer was off duty omitted.

**p < .01  *p < .05  +p < .10 (two-tailed)

See note to Table 3 for variable descriptions.
Selected Sources on Police Use of Deadly Force


