Shading Out The Gun:

How Baltimore City Greenspace Relates to 2013 Homicides

2015 Undergraduate Geospatial Technology Skills Competition

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Baltimore City, Maryland

Murder Rates
Source: FBI, Census, Police Departments

- Chicago
- New York
- Detroit
- Los Angeles
- Philadelphia
- Baltimore
- Houston
- New Orleans
- Memphis
- Dallas

Zadrozny, 2014
Highcharts.com
Null Hypothesis:

There is no correlation between the location of homicides and the quantity (trees vs forest) and quality (mature vs. young/stressed) of urban green spaces.
**Literature Review:**

**Attention Restoration Theory** (Kaplan 1995):
Proposes that exposure to nature can reduce mental fatigue created by the many tasks of modern life that require effortful problem solving and reasoning.

**Mental Fatigue** (Kaplan 1995):
A state characterized by inattentiveness, irritability, and impulsivity due to poor information processing in the brain. This can result in social behavior that is thoughtless and tactless, which can cause small conflicts to spiral out of control.

**Barriers to “crime trips”** (Peters and Efflers 2010):
Barriers to “crime trips”, for example trees as a psychological barrier, do exist but they are most significant when less than 500 meters from the criminal’s origin location.
Project Workflow: Methodology

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Project Workflow: Methodology

Data Preparation

Sorted Crime Data for 2013

Selected by Attribute
[Description] = ‘Homicide’
Add to current selection
[Weapon]= ‘Firearm’ OR ‘Knife’ OR ‘Other’

Geocoded Homicide Locations

Combined Green Space

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Project Workflow: Methodology

Analysis

500 meter Homicide Buffer

Greenspace within Homicide Buffer

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Questions?

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