Targeted Law Enforcement in Camden, New Jersey:

Diffusion of Benefits and Displacement of Crime

Clairissa Breen
Dr. Jerry Ratcliffe

Temple University

Presentation overview

- A discussion of displacement

- The Weighted Displacement Quotient

- Buffers

- The Camden 28-Day Crime Suppression Program

- The SEPTIC Excel Spreadsheet

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What is displacement?

- Barr and Pease (1990)

- Displacement is
    - "a Frustrating Side Effect"
    - "a Predictable Effect of Specific Policies"
    - "a Manipulative Tool of Crime Control." (278)

- A reorganization of the space and time in which a potential offender comes in contact with a potential victim

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Types of displacement

- Hakim and Rengert (1981)
  - Temporal
  - Spatial
  - Tactical
  - Target
  - Crime Type or Functional
- Barr and Pease (1990)
  - Perpetrator Displacement
  - Benign vs. Malign

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Diffusion of benefits

- The displacement of crime prevention benefits to non-target areas

- Studies have found that there is often more evidence of diffusion than displacement.

    - See for example:

    - Ratcliffe, JH (2002) Burglary reduction and the myth of displacement, Trends and Issues in Crime and Criminal Justice, Paper 232, August 2002. Download from www.aic.gov.au
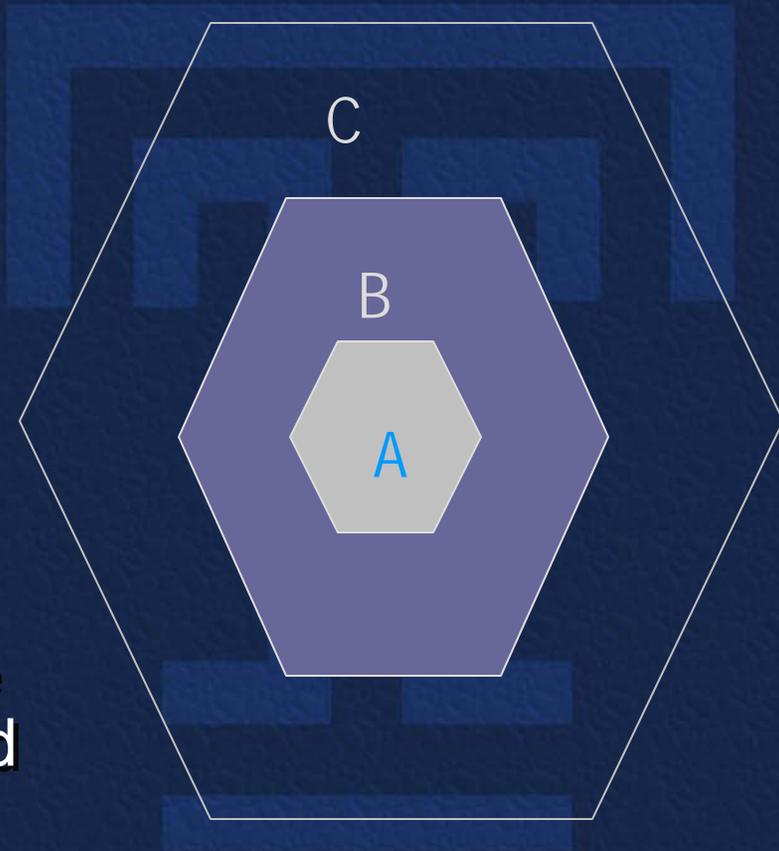
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The Weighted Displacement Quotient

- The WDQ Compares How Much Crime Occurs Between
    - the Target Area (A)
    - the Buffer Area (B)
    - the Control Area (C)
- …Before and during the operation to see how crime in those areas has changed
    - Bowers and Johnson (2003)

C

B

A

Determining a buffer

- There is no rule-of-thumb for determining a buffer

- When determining a buffer around a target area:
  - Look for natural boundaries
  - Communicate with local law enforcement
  - Be aware of neighborhood boundaries
  - Consider possible drug and/or gang territory
  - Be informed by local knowledge and theory

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Camden 28 Day Crime Suppression

- Began in 2005

- Focused on violence, drugs, vehicle crime and burglary

- Problem areas were identified throughout the city

- Each area was saturated for 28 days and a brief maintenance period

Camden 28 Days
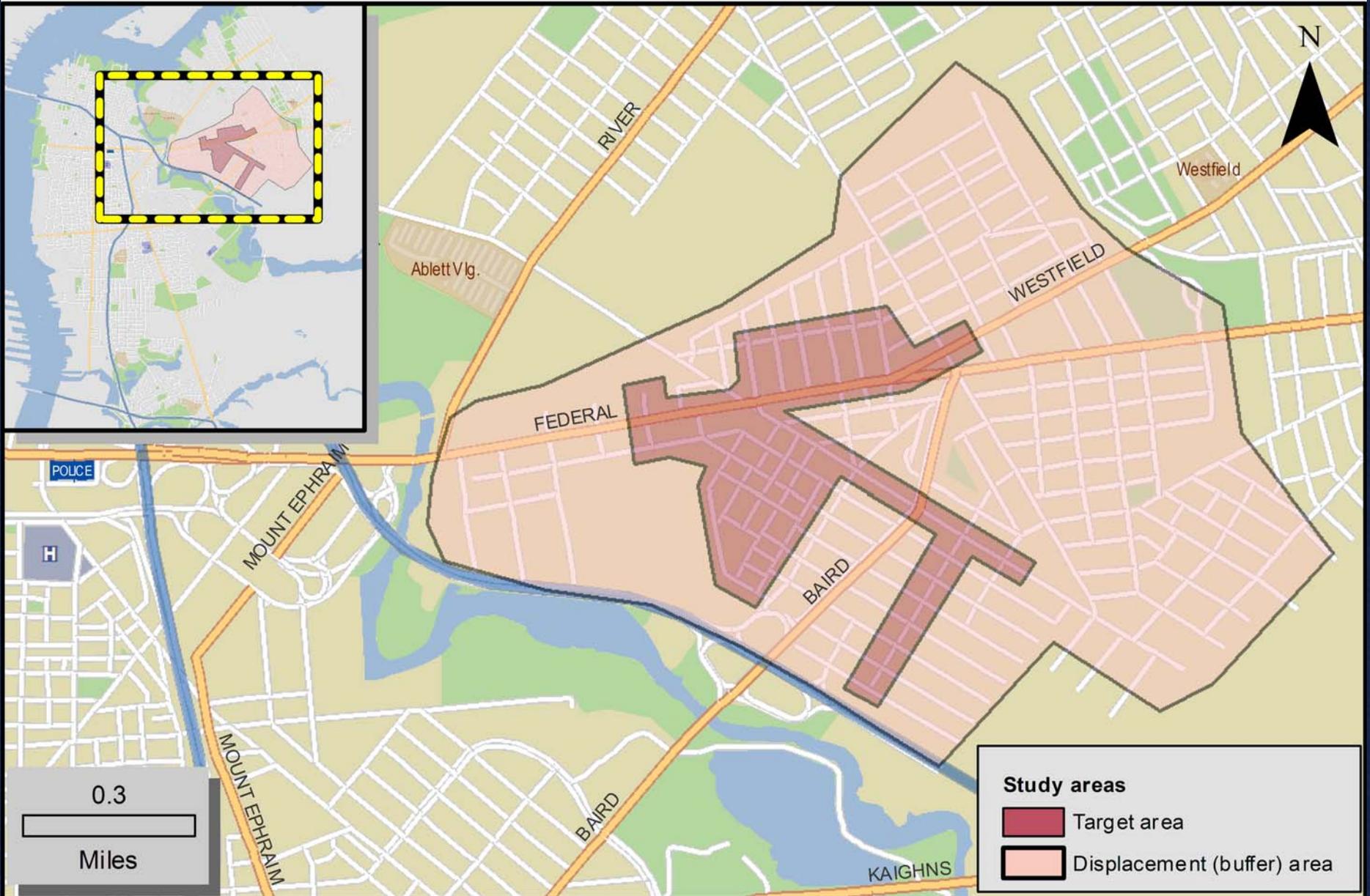
Results in Camden

	During	After
Drug crime		
Target	☹ ▲ 81%	☺ ▼ 66%
Buffer	☺ ▼ 25%	☺ ▼ 40%
Violent crime		
Target	😐 ► 7%	☺ ▼ 20%
Buffer	☺ ▼ 53%	☺ ▼ 30%

Results in Camden

	During	After
Vehicle crime		
Target	☺ ▼ 5.3%	☺ ▼ 31%
Buffer	☺ ▼ 3%	☺ ▼ 8%
Burglary		
Target	☺ ▼ 20%	☺ ▼ 50%
Buffer	☺ ▼ 40%	☺ ▼ 27%

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Results in Camden

- During the operation:
- Overall crime increased
  - Why?
- After the operation:
  - Overall crime decreased
  - Diffusion of benefits

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Why care about displacement?

- Public relations and community concerns

- Identifying new areas of concern

- Overall success of programs and initiatives

Caveats

- If the Buffer Zone is substantially bigger than the Target Area, the WDQ can be skewed

- Different types of crime may displace differently

- For a clearer picture run the analysis for each crime type of Interest

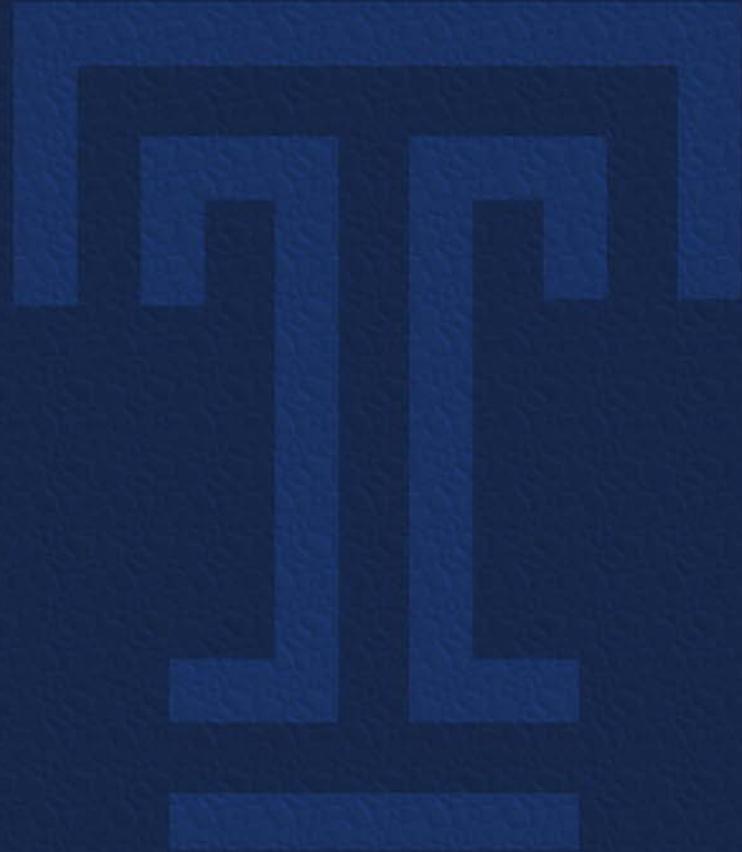www.temple.edu/cj

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The SEPTIC Program

- **S**patial
- **E**valuation of
- **P**olice
- **T**actics
- **I**n
- **C**ontext !

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Entering data in SEPTIC

Spatial Evaluation of Police Tactics In Context (SEPTIC)

Stage 1. Enter values into the following yellow cells:

	BEFORE operation	DURING operation
Target area (A)	55	45
Buffer area (B)	55	45
Control area (C)	24	67

Stage 2. Enter a name for your operation:

Operation Safer Streets

This entry will be used as a header for the results sheet (max 50 chars)
If no operation, then a location or police department name can be used.

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Spatial Evaluation of Police Tactics In Context (SEPTIC)
Spreadsheet by Jerry Ratcliffe and Clairissa Breen.
Version 1.5
For the latest version see www.jratcliffe.net

Instructions / Results /

Results tab

- Once the analysis has run a results page with full explanations of the statistics involved is produced

Operation Safer Streets
Outcome evaluation

Crime overview (a): During the operation...
Reported crime in the target area decreased by 18.2 percent.
Reported crime in the buffer area decreased by 18.2 percent.
Reported crime in the city increased by 179.2 percent.

Geospatial trends (b)
The buffer displacement measure was -1.620
The success measure was -1.620
This means that: Crime in the target area was down, and the target area outperformed the city.

Displacement effects (c)
The weighted displacement quotient was 1.000
This means that: The buffer area and the target area both had the same level of benefit.

Statistical outputs (e)
Due to small values in the cells, a Fisher's Exact test was employed.

The Fisher's Exact test shows the changes were statistically significant (p<0.05)
The Phi measures the association between the target and buffer areas
The Phi value is 0.000
When the Phi is close to zero the target and buffer have little effect on each other.

Summary (d)
Crime in the combined buffer and target area decreased by 18.2 percent.
Crime in the target area was down, and the target area outperformed the city.
Overall, there was a positive benefit to the operation.

Source data (f)

	Before operation	During operation
Target area (A)	55	45
Buffer area (B)	55	45
Control area (C)	24	67

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Jerry Ratcliffe's homepage

Welcome! I'm a former police officer turned academic (courtesy of a mountaineering accident), with research interests in the areas of spatial crime analysis and crime mapping, and how these, and other, techniques integrate with law enforcement criminal intelligence and the drive for crime reduction. I've also worked for a number of years in the education area of strategic criminal intelligence. I'm an associate professor at Temple University in Philadelphia.

Jerry's top ten tips

PowerPoint advice, presentation tips, essay writing guide, how to reference, how to study, Jerry's top ten mapping tips!
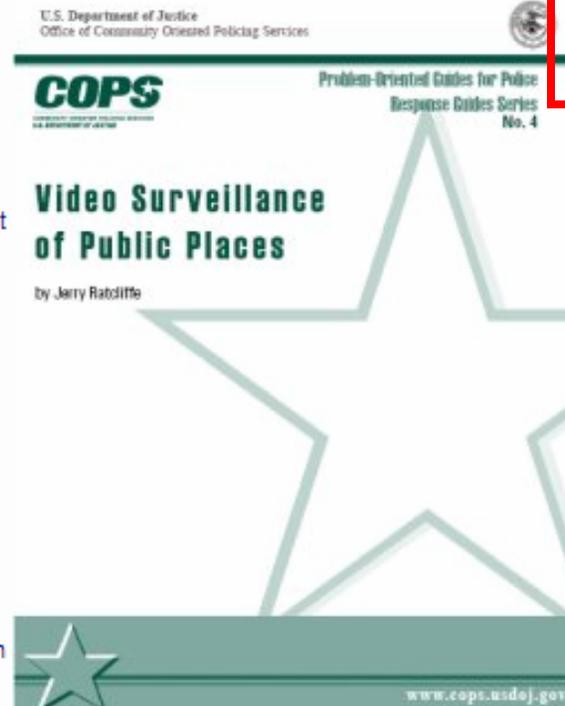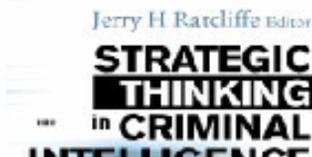
Research publications

A selection of recent publications written or co-written by the author. Most available to download in pdf format.

Research and spatial questions

Current research being undertaken by the author in the field of crime mapping/spatial and temporal analysis. Information about the Aoristic analysis, the Modifiable Areal Unit Problem and other current issues.

Published books

Recently published books exploring thinking in criminal intelligence, crime mapping, and illegal drug markets are now available. Details of these texts can be found here.

Jerry H Ratcliffe Editor

STRATEGIC THINKING in CRIMINAL INTELLIGENCE

U.S. Department of Justice
Office of Community Oriented Policing Services

COPS

Problem-Oriented Guides for Police
Response Guides Series
No. 4

Video Surveillance of Public Places

by Jerry Ratcliffe

www.cops.usdoj.gov

Recent additions to this site

Near repeat patterns in Philadelphia shootings

Draft available of new paper with the Security

Download software

A few MapInfo routines that you might find useful, and SPAM (the predecessor of HotSpot Detective®), the better program.

HotSpot Detective

Generate crime density maps from within MapInfo with minimum effort. Designed for police officers who may not have a GIS/spatial analysis background. Includes a geocoding address scrubber and temporal analysis graphers. HotSpot Detective® is a registered trade mark.

Contact details and cv

Snail mail contact details, and an on-line cv.
If you want an alternative resume from the stuffy professional one, **try looking here...**

Student links

Specific documents and data for my students.

Conference notes

Handouts, web sites referenced and general notes from selected conference presentations.

Top ten links

OK, so it might be difficult picking ten good links, but these are my favourites...

About crime mapping

A brief background to the theory and application of crime mapping. Be advised that this section is pretty dated now, but was updated for GIS and Crime

Questions?

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Thank you!

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