



Geospatial and Temporal Patterns of Lone Actor Terrorism

Brent L. Smith, Paxton Roberts, Jeff Gruenewald, Brent Klein

Terrorism Research Center in Fulbright College
University of Arkansas
September 19, 2014

This research was supported by the U.S. Department of Homeland Security (DHS) Science and Technology Directorate's Office of University Programs and Human Factors/Behavioral Sciences Division (HFD) through START. Any opinions, findings, conclusions or recommendations presented here are solely the authors' and are not representative of DHS or the United States Government. Portions of this research have been supported by the following grants from the National Institute of Justice: 2003-DT-CX-0003, 2005-IJ-CX-0200, 2006-IJ-CX-0037, 2012-ZA-BX-0003, 2013-ZA-BX-0001.

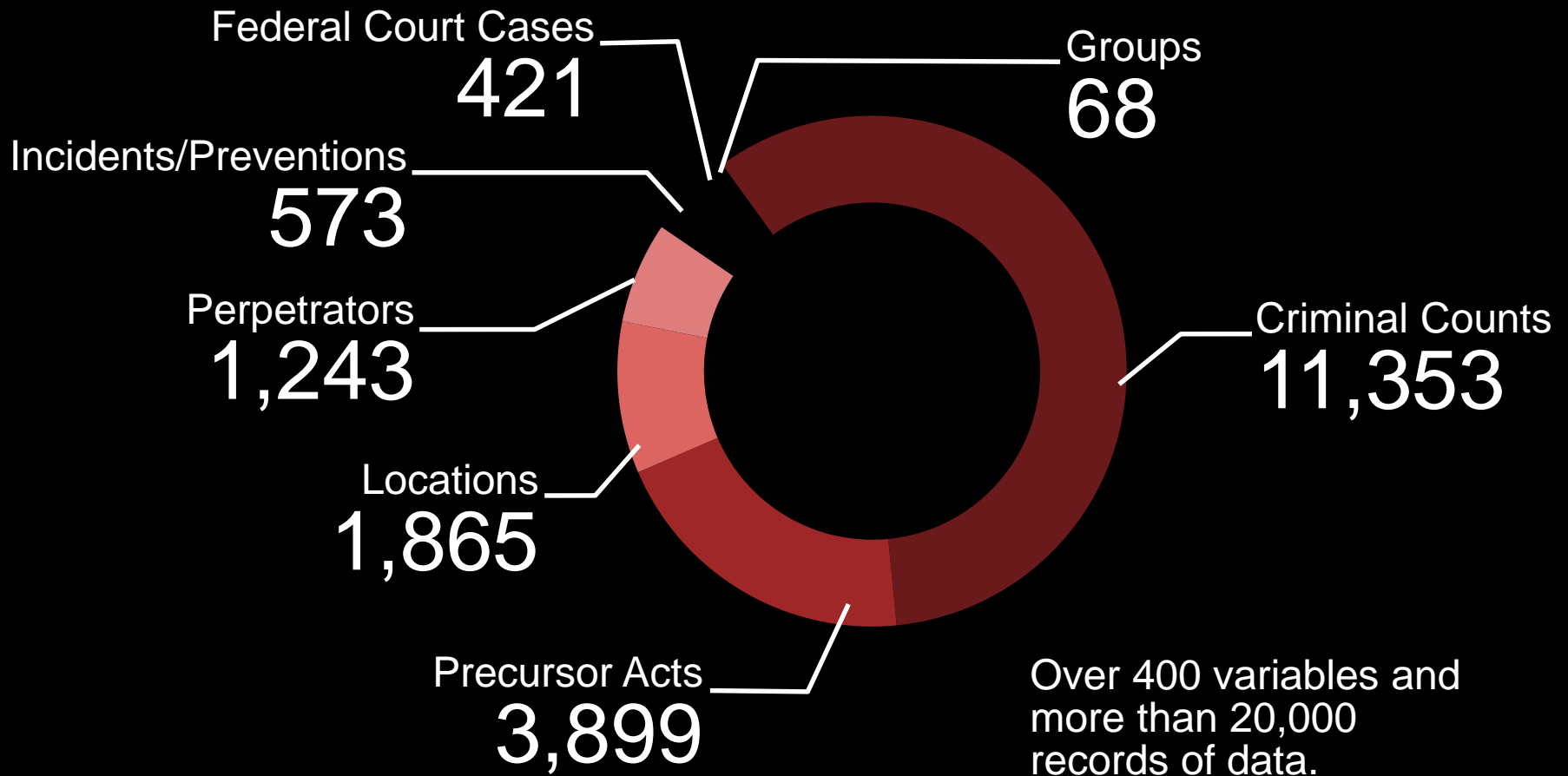


Methodology: Since its inception in 1988, the ATS has used official federal terrorism-related court cases to construct a dataset for the analysis of terrorism incidents and preventions, precursor activities of these incidents, and subsequent court cases.

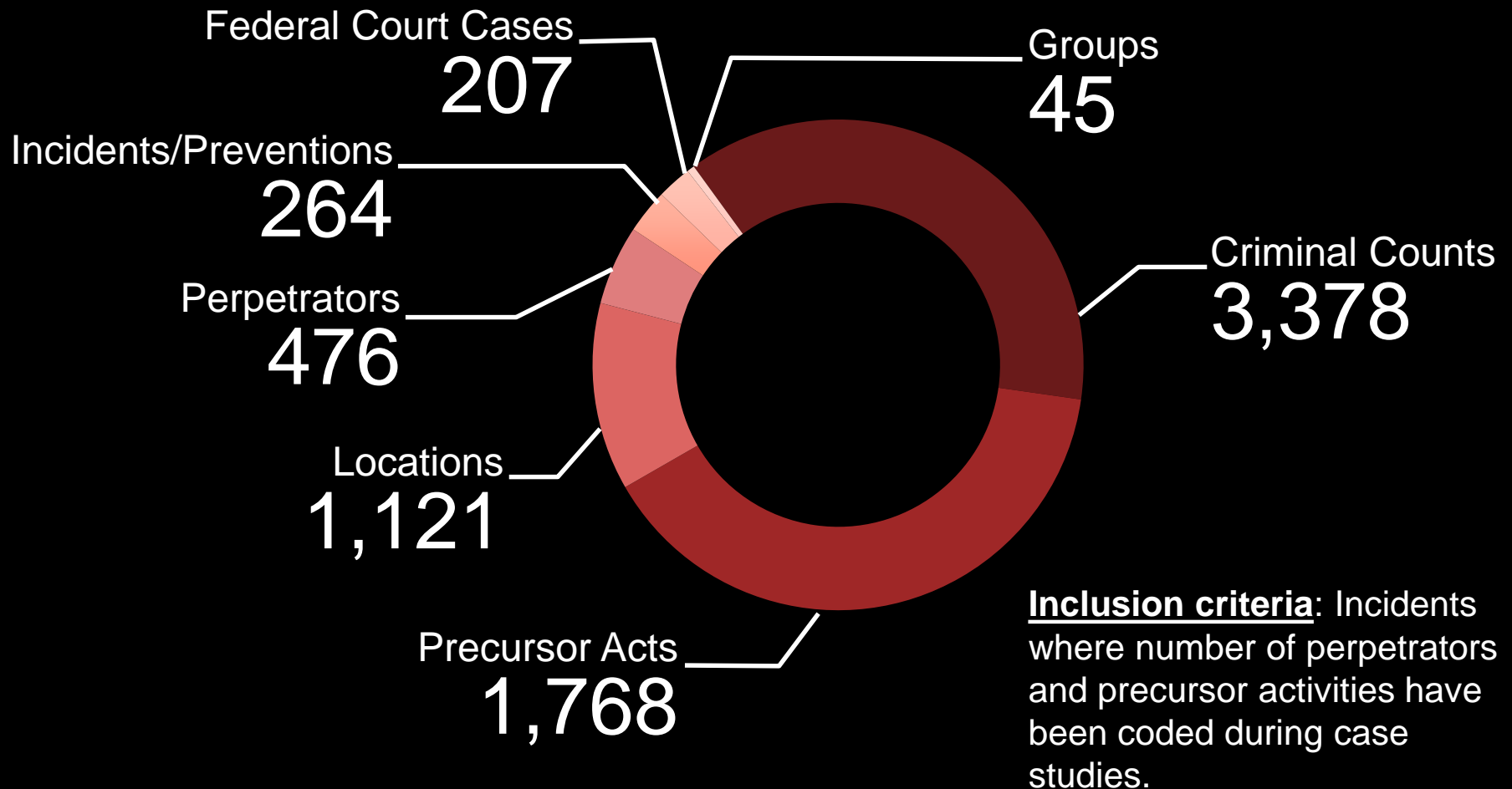
Sources of data include:

- Court case documents from federal indictments resulting from official FBI terrorism investigations.
- Open source media documents to supplement information found in the court cases.

American Terrorism Study (ATS) Database



Data used in this Analysis

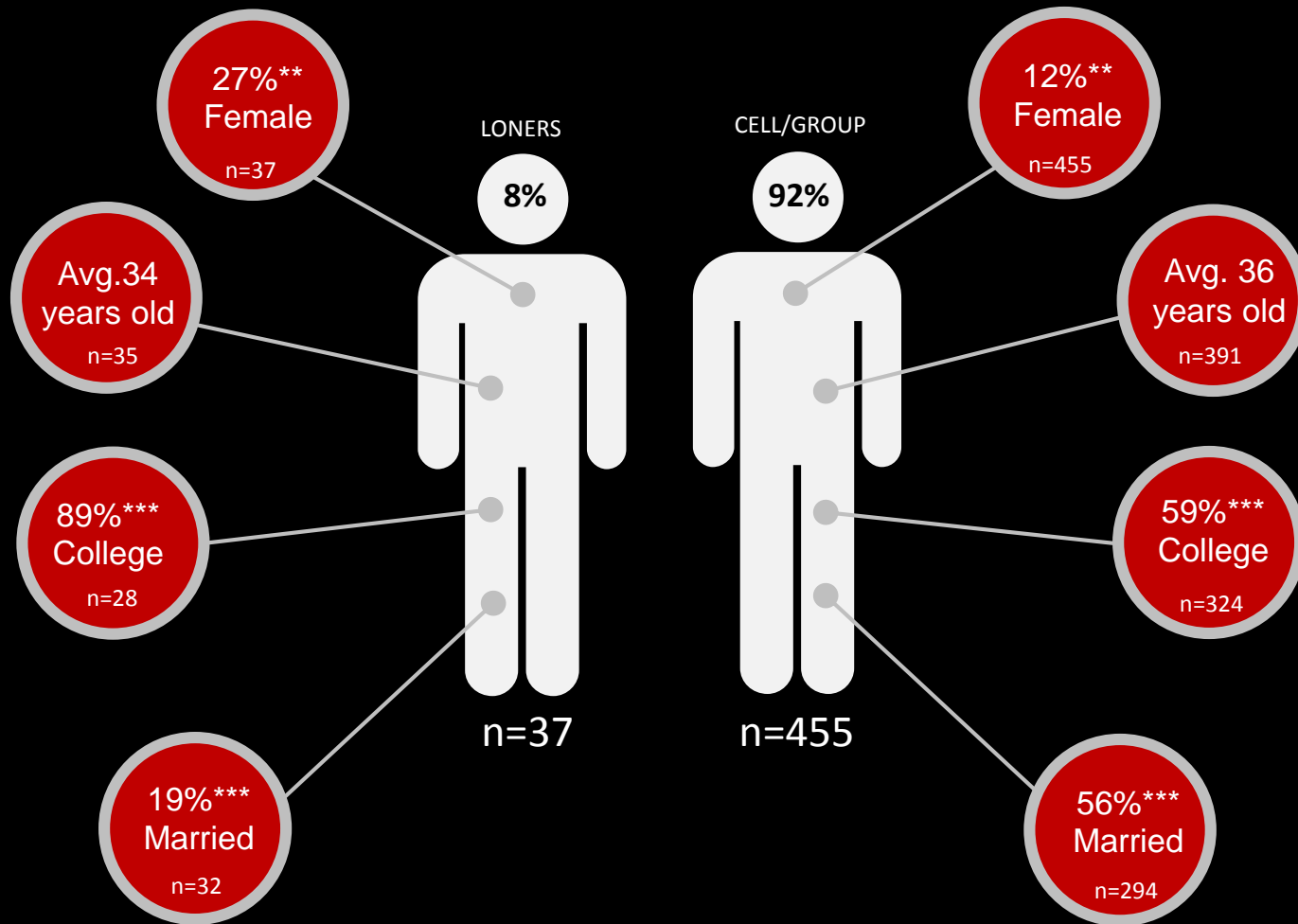


Participatory Typology



	LONERS		CELLS/GROUPS	
	Loners	Affiliated Loners	Lone Conspirators	Cells/Groups
Had Help Committing Incident	✗	✗	✗	✓
Had Help Committing Precursor Acts	✗	✗	✓	✓
Movement/Group Affiliation	✗	✓	✓	✓

Demographic Characteristics



p<.01, *p<.001

Attack Completions

Incidents were coded as “completed successfully” if the attack was carried out and all known objectives were met.

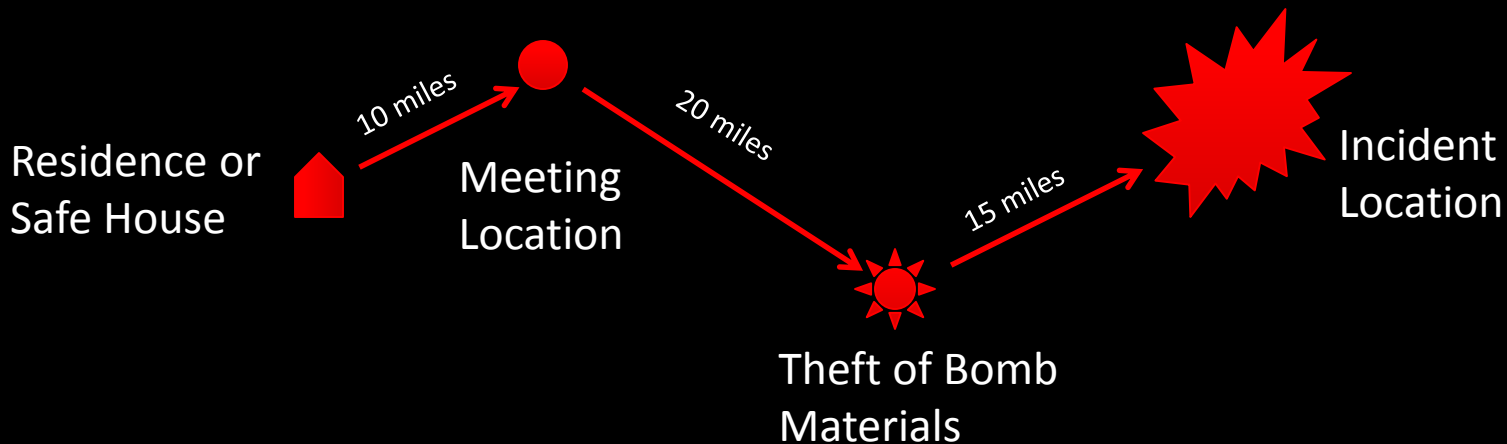
	Incident Completion	
	Attack Completed Successfully	Not Completed Successfully
Loner Incidents	34%	66% <small>n=65</small>
Cell/Group Incidents	44%	56% <small>n=199</small>
All Incidents	42%	58% <small>n=264</small>

p < .10

Differences in Attack Preparation

	Precursor Acts	Incidents	Precursor Acts per Incident
Loners	162	65	2.49
Cells/Groups	1,675	199	8.42

p<.001



Incident Planning Cycle

Calculated using first known precursor act identified from the planning cycle timeline.

Length of Planning Cycle

Less than 3 months

3 months to 1 year

Longer than 1 year

Loner Incidents

33%

33%

33%

n=30

Cell/Group Incidents

33%

31%

36%

n=154

All Incidents

33%

31%

36%

n=184

Spatial: Residence to Antecedent



Theft of Bomb Materials

Residence or Safe House	Loners	Cells/Groups	All Perpetrators
Average Distance	454 miles	444 miles	445 miles
Median Distance	170 miles	79 miles	88 miles
Standard Deviation	638	669	666
Minimum Distance	0 miles	0 miles	0 miles
Maximum Distance	2,571 miles	2,696 miles	2,696 miles


Spatial: Residence to Antecedent



Theft of Bomb Materials

Residence or Safe House	Loners	Cells/Groups	All Perpetrators
0 – 30 miles	23%	41%	39%
31 – 90 miles	12%	11%	11%
91 – 270 miles	23%	13%	14%
271 – 810 miles	20%	13%	13%
811 + miles	21%	23%	23%
	n=264	n=3,012	n=3,276
			ns

Spatial: Antecedent to Incident



Weapons Theft Location	Loners	Cells/Groups	All Perpetrators
Average Distance	241 miles	378 miles	365 miles
Median Distance	69 miles	88 miles	88 miles
Standard Deviation	371	547	534
Minimum Distance	0 miles	0 miles	0 miles
Maximum Distance	2,307 miles	2613 miles	2613 miles

Spatial: Antecedent to Incident



Spatial: Residence to Incident



Residence or Safe House	Loners	Cells/Groups	All Perpetrators
Average Distance	604 miles	374 miles	403 miles
Median Distance	328 miles	118 miles	132 miles
Standard Deviation	685	543	567
Minimum Distance	0.57 miles	0.32 miles	0.32 miles
Maximum Distance	2,563 miles	2,696 miles	2,696 miles

Spatial: Residence to Incident



Residence or Safe House	Loners	Cells/Groups	All Perpetrators
0 – 30 miles	18%	37%	35%
31 – 90 miles	8%	11%	11%
91 – 270 miles	19%	14%	15%
271 – 810 miles	29%	19%	20%
811 + miles	26%	19%	20%

n=134

n=940

n=1,074

p < .001

Length of Terrorist's Life Cycle

Calculated using the number of days between first known preparatory activity and date of arrest or indictment.

	First preparatory act to date of arrest or indictment		
	Less than 3 months	3 months to 1 year	Longer than 1 year
Loners	8%	13%	79%
Cells/Groups	22%	28%	50%
All Perpetrators	21%	26%	53%

n=24

n=279

n=303

p<.001

Conclusions

- Lone terrorists are significantly better educated, more likely to be female, and less likely to be married than group terrorists.
- Lone terrorists commit fewer precursor behaviors and are less likely to successfully complete the attack than group terrorists.
- There is no difference in the length of the planning cycle for lone terrorists and group terrorists.
- Lone terrorists live significantly farther from where they prepare for an incident and where the incident occurs than group terrorists.
- Lone terrorists have a significantly longer “life cycle” than group terrorists.

Contact

Dr. Brent L. Smith
bls@uark.edu

www.start.umd.edu