

# Transportation, Terrorism and Crime: Deterrence, Disruption and Resilience

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Although still relatively rare, terrorism has been a real threat both domestically and abroad. As witnessed in several separate incidents in the past few years, some terrorists have adopted vehicle ramming as an attack tactic likely because it can be carried out by an individual (or “lone wolf terrorist”), with little to no specialized training who needs only the ability to drive a car and determine locations for creating maximum carnage. Considering the rise in this tactic and others, studies of terrorist activities against transportation assets that have been conducted will help law enforcement agencies prepare their communities, create mitigation measures, conduct effective surveillance, and respond quickly to attacks.

This study reviews current research on terrorist tactics against transportation assets, with an emphasis on vehicle ramming attacks. It evaluates some of the current attack strategies, and the possible mitigation or response tactics that may be effective in deterring attacks or saving lives in the event of an attack. It includes examples of terrorist attacks that can be used as educational tools for understanding terrorist methodologies, as well as case studies of ordinary emergencies that might become a terrorist’s blueprint.

## Study Methods

This research includes an extensive literature review, field research in places where terrorist attacks and ordinary emergencies have occurred, and practical experience working within the response structures and systems. Researchers interviewed first responders and witnesses to some of the events described.

## Findings

1. Terrorists continue to find transportation an attractive target and weapon. A self-motivated machine can be turned into a self-destructive machine, and thus an easy weapon, by redirecting its energy.
2. A car or truck is an easily-acquired lethal weapon able to be used by most people. Vehicle ramming is a recent variation on the theme of vehicles as weapons. Pedestrians on any street, and crowds at large gatherings, make easy targets for these tactics. ISIS advocated using the car or truck as a “mowing machine”.
3. Terrorist attack modalities have changed little over the last one hundred years, from Buda’s Wagon to the suicide bomber attacks at the airport in Brussels, Belgium. Field-level lessons and tactics for deterring and interdicting terrorist activities have been developed and then lost because they were not written down, demonstrating the need for better documentation of methods used successfully against specific types of attacks. As law enforcement personnel become more adept at responding to one modality, terrorists rotate their methods, and responders must use lessons learned earlier to respond successfully to the tactic when it is reintroduced.
4. Law enforcement personnel in the 20th century became adept at infiltrating and monitoring terrorist cells with listening devices, wire taps, and undercover agents. This effective strategy drove the terrorists to using smaller groups, and ultimately the “lone wolf.” They have reorganized to keep personnel dispersed, using webzines to promulgate radicalization and promote tactical advice. While using lone wolf tactics does not prevent the orchestration of attacks, it does reduce the capacity to inflict carnage.

## Vehicle Ramming Attacks

4/2018, Toronto, Canada (rented van driven into pedestrians in North York Centre Business District for 2.2 km)

10/2017, New York City (rented Home Depot pick-up truck driven 1 mile on Hudson River Greenway limited access bike trail, hitting bicyclists and pedestrians)

8/2017, Barcelona, Spain (van driven into pedestrians on Las Ramblas, a crowded tourist boulevard)

6/2017, London (van driven into pedestrians on London Bridge; terrorists ran to Borough Market and began stabbing people)

## Casualties

10 killed, 16 injured

8 killed, 11 injured

13 killed, 130 injured; attacker was killed by police later

11 killed (including 3 attackers), 48 injured (including 4 unarmed police officers who intervened)

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### Policy Recommendations

Law enforcement must keep a constant inventory of terrorist strategies and tactics, and the counterterrorism steps used successfully against them. Detailed historical documentation coupled with periodic trend analysis is needed to determine best practices for future use against evolving or re-emerging terrorist threats.

### About the Authors

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### To Learn More

For more details about the study, download the full report at [transweb.sjsu.edu/1896](https://transweb.sjsu.edu/1896).



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