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“Against the Mobility of Terror”

Have technologies and policies of counter-terrorism shaped transportation?

Dr. Victor Marquez

Director, Future Urban Mobility program Universidad Iberoamericana, Mexico City
vom2@cornell.edu

Abstract

In this paper I explore how risk –mainly related to terrorist attacks through history, triggered larger policies, discourses and technologies that inevitably have been responsible of shaping transportation and its infrastructure since the late 20th century. Along the paper I describe the alarming collateral damage of terrorist acts when these are directed to mobility systems; including mass transport, aviation and airports, trains and rail stations, subway systems, automobiles and buses, cruise and cargo ships, etc.

What is a terrorist targeting when attacking transportation infrastructures? This paper starts off from a compelling analysis of the touchstones of terror, those unspeakable acts of monumental consequences and collateral damages. Particularly I discuss the degrees of risk, the sociotechnical reactions, the response of designers and innovators, the construction of discourse, the establishment of policy, etc. The purpose of the paper is to open a larger discussion about the relationship of technological change and the illnesses of society. When terror takes place, ideologies collide. When terror points out to mobility, the State as a system becomes particularly vulnerable. Can we support a hypothesis, which sustains that terrorist counteractions, can materialize into spinoffs of mobility?

Since the early 70's transportation infrastructure has been a preferred target for large-scale terrorist attacks. Among the long list of events of this kind in recent history, it is undeniable that the phenomenon of terrorism has marked the discourse of the turn into the 21st century. Nonetheless, in spite of its paramount importance the specific discussion of how transportation intersects with this violent activity has been somehow overlooked. Many scholars would argue that this last sentence is questionable because each transportation mode has attracted its own stem of debate. True, however I claim that the relationship between of mobility and terrorism has not been discussed and analyzed in full depth.

The argument that I try to bring out to light is that beyond the more conventional discussions around the topic there lays a more complex set of relationships between the technologies of transportation, the nature of the machine, its public use and value and the subculture of terror. In addition, I will try to unfold later on the hypothesis that the rhetoric of terrorism in fact becomes a strong agent of technological change.

Spanning from 1967-2007 and based on statistics from the US Department of State, researcher Susan Pantell¹ has found that out of the total number of incidents involving transportation modes, 90.3% involve land transport (74.5% vehicles, 9.5% buses, 6.3% rail), 8.3% air transport, 0.9% maritime transport and a small 0.5% others. Thus, at least quantitatively there is a huge predominance for land transport means and more particularly for motor vehicles.

On the other hand her study reflects that out of those incidents the rate of mortality is 51.2% for private cars, 32.3% for aircraft, 8.1% for buses, 4.2% for rail, 2.9% for subway, 1.0% for ships, and 0.3% for others. In her study Dr. Pantell questions authorities for privileging air and rail travel when establishing security-tightening policies and even jumping to the conclusion that "priorities are misplaced"ⁱ. I would like to contest these results by means of a different analysis of the same data.

¹ Dr. Susan Pantell is with the Energy and Resource Group at UC Berkeley

This second set of data shows allows me to present a contrasting angle, when it comes to the number deaths resulting from this attacks, we can calculate a ratio of incidence as follows:

MODE OF TRANSPORT	INCIDENTS	NUMBER OF FATALITIES PER EVENT	RATE OF INCIDENCE
Aircraft	77	64	64%
Rail	32	20	20%
Subway	27	19	19%
Ships	8	18	18%
Buses	88	14	14%
Cars	691	11	11%
Other means	5	8	8%

If we count the number of total deceased victims in cases involving air travel and we add the events of 9/11, the rate of aircraft would pop to an alarming incidence of 102.98%. This quickly translates as a hidden “economy” of terrorist efficiency, meaning that you can mathematically calculate which attack will be deadliest.

It may be wise to ask now, what is terrorism? I am not going as far as back in the day of the coinage of the term in 1793 after the “rage of Terror” during the French Revolution, but it is worth to keep in mind the spirit of political “anarchy” against the ominous powers of the French State, and how that feeling triggered an underground chain of bloody events. More recently, according to *The History of Terrorism: From Antiquity to AL Qaeda* (Chaliand and Blind, 2007), “terrorism is a mode of warfare” and a “strategy of insurgency”. Hence, terrorism is not a synonym of crime, fraud, schemes, lunacy, accidents, or even war. Although it often is, it should not be used as an adjective, condemning or qualifying actions. I suggest though that linguistically, “terrorism” is a rhetorical tool that introduces an agent of insurgency, anarchy or subversion into the established discourse of a social group. It is a sort of “Trojan Horse”. Thus, in spite of the lack of consensus –because terrorism is better side-defined by its actors, supporters

or combatants, it is relevant to fix that the word *terror* is the sub text of any terrorist act.

The wider concept of “mobility” would oblige me to introduce in the discussion the exponentially growing terrorist incursions on the web, mobile devices, cellular phones, etc. However for space reasons, I must stick to the more orthodox, realm of mechanical “transportation”. I would like to at least left open the intriguing question of what would happen if in the recent future terrorists unleash cybernetic attacks trough virus or hacking into the partially vulnerable control centers that govern our real life transportation systems. That will be a matter of a separate study.

I have shown the existence of a quantifiable “rate of destruction” that terrorists most probably use and calculate with more sophistication than my modest chart. But back to my former question, why terrorists have a clear preference for attacking transportation infrastructures? If the end of these acts is the killing of many, why not targeting demonstrations, cinemas, stadiums, parades or any other kind of public concentrations? Hijacking an airplane seems to be way more difficult and elaborate than plotting against the crowds gathering at rock concert. I am very hesitant to follow the assumption that terrorists prefer transportation because they’ve found a way to get a high number of victims.

Indeed, in the past transportation systems were highly vulnerable at the turn of the 1970s. But this condition change more rapidly than gradually, and just a button is the immediate response of the Israeli State after the 1972 massacre at Ben Gurion Airport by the hands of the Japanese Red Army. The airport’s head of security, Raphael Ron became instantly the father of modern airport security, establishing the basics for protocols, systems, scanning devices, identity data, etc.

Therefore I claim that terrorism kept targeting transportation even when the discourse and materiality of security became a growing snowball. It appears to me that if terrorists use paramilitary tactics and the very basics of risk analysis they should have moved to

other well-unattended spheres of the civic life.

So I ask again, why transportation? What makes it worth the risk? (Even when terrorists immolate themselves, there is a higher risk to spoil the mission, like the British terrorist cell that put at stake thousands in 2006. That group *insisted* in attacking outbound flights rather than using their chemical weapons otherwise against the civil population in the well known for being crowded, London.

Credited scholars like Brian Taylor who directs the influential Institute for Transportation Studies in UCLA have classified in three (Taylor, 2001), the possible intersections between terrorism and transportation: First, "when transportation is the *means* by which a terrorist attack is executed; Second, when transportation is the *end*, or target, of a terrorist attack; or third when the *crowds* that many transportation modes generate are the focus of a terrorist attack. Although I do coincide with the previous classification, that does not explain the terrorist's need to face the counterintuitive challenge of a rising security paradigm. For example Corey Flintoff with the NPR (National Public Radio) has claimed that terrorist target transportation because they are vulnerable. I would dare to say the opposite. Think of the latest tragedy with Malaysian Airlines. Not even the sci-fi technology of today is able to figure out what happened. Perhaps the only thing we know is that a modern aircraft is designed and engineered in a way that when it mechanically fails, it leaves a trace. The more we tight the rope, the more elaborate the response be, and that what terror is about.

Others have claimed that terrorism is directed against or by transports because it is viable, available and low cost. Sure is. NATO (North Atlantic Treaty Organization) has found that a suicide car bombing cost \$150 dollars plus the value of the vehicle. However as the world continues fortifying itself, terrorist need to be more (perversely) creative and organized rather than necessarily heavily founded. The cost benefit of attacking transportation facilities is remarkable. For example in the previously cited London intended attacks with chemical weapons, the cost of the plot reached only

\$2000 dollars, an insignificant figure compared to the astonishing \$1,270,000 million dollars of damage that cost both the UK and USA governments alone.

Lastly, have technologies and policies of counter-terrorism shaped transportation? At least in the last four decades the answer is yes. New norms and standards have been issued worldwide since the 1970s and particularly after 2001. Planners have introduced all kind of strategies and have responded to those stricter regulations, this is highly visible in airports, train stations or cruise terminals. Designers and architects have complicated their designs to the point of making transportation buildings into baroque clockwise mechanisms. R&D bodies have focused their product engineers on the production of safer devices, being cars, planes or trains. The international legal system is building a super sophisticated network of global identity databanks at an astronomic cost. All kind of transportation means and their derivative infrastructures are now plagued with Orwellian CCTV systems of surveillance. Employees and personal are now trained with new protocols of reaction in case of incidents; we have reached the point of merging undercover agents everywhere. It looks a bit like the world in the film "The Matrix". Both culturally and materially those are true spinoffs of mobility.

On a different intellectual latitude of this analysis, it is also remarkable how fuzzy has been the task of crediting authorship in most terrorist attacks through history. Nowadays, it is a kind of game of opposites; either no organization claims nothing or too many groups prompt to raise their hands. It is even frustrating to read how few investigations have succeeded in coming up with hard evidence that could allow governments make someone accountable. Even in 9/11 the US response will not end with the killing of Osama Bin Laden, because it was evidently it was not perpetrated by a solely assassin. The fact that authorship it is not even "that relevant" is very disturbing. I hypothesize that there is a sort of "brotherhood" of terror that sees any insurgent act against others as plausible and justified. These obscure terrorist cells and groups seem not to target with great accuracy, but the contrary, their unspeakable acts

show a pitiful level of randomness. That is why they look for civilians and not institutions; their rage is directed instead to destroying values, achievements, and paradigms. What best than pointing out the guns (metaphorically) toward the new coming, global paradigm of mobility?

The most evident objective of any terrorist attack is to seed terror in society and that goal is generally materialized through the use of threats and the demonstration of power through planting fear. In a way, every user of any means of transport in contemporary society has been contagion by this disease; there is always floating in the air that slightly uncomfortable feeling of potential risk. This condition would explain why targeting transportation is so recurrent. Amongst the two big achievements of the new 21st century culture are the paradigms of *sustainability* and *mobility*, we will use them as ways to enhance our quality of living and reach better levels of personal and collective wellness. Transportation and Informatics are the flagships of the second paradigm. So even though we keep strengthening security and turning both into *closed worlds* we will never succeed in discouraging the terrorist's appetite for reaching the "Achilles tendon" of modern society. Transportation has represented one of the biggest achievements so far, it has allowed millions to travel, to work faster, to be freer; it has allowed man to reach the space and solar system. Transportation is perhaps the biggest icon of modernity, and regretfully its more visible target.

Comparative list of key (representative) terrorist attacks per mode of transport through recent history:

Trains (32 cases, 640 deaths)

Uta, USA 1853 (38) Pahvant Indians / Set fire / Surveyors and engineers / the Gunnison massacre

Bologna, Italy 1980 (85+200) Neo-Fascist Nuclei Armati Rivoluzionari / IED

Madrid, Spain 2004 (191+2050) Unclaimed / Bomb

Mumbai, India 2006 (209+714) Unclaimed / Bomb

Cars (+ 691cases, 7820 deaths)

Dublin, Ireland 1974 (33) Ulster Volunteer Force / Car bomb

Beirut, US Barracks- Lebanon 1983 (305) PLO (suspected) / Truck bomb

Buenos Aires, Israeli Embassy, Argentina. 1992 (29) Islamic jihad Organization / Car bombs

Mumbai, India. 1994 (257) Unclaimed / Car bombs

Oklahoma City, USA 1995 (168) "Unabomber" / Truck bomb

Nairobi, US Embassy, Kenya. 1999 (224) Egyptian Islamic jihad / Car bombs

Bali, Indonesia. 2003 (202) Jemaah Islamiyah Group / Car bomb

Baghdad, Iraq. 2007 (215) Shiite Militiamen / Car bombs

Yazidi, Iraq. 2008 (796) Shiite Militiamen / Truck bombs

Oslo, Norway 2012 (8) Anders Behring, a right wing extremist / Car bomb

Pedestrians (N.A.)

Yecheng, China 2012 (15+14) Abudukermu Mamuti Group / Axes (killing spree)

Boston Marathon, 2013 (4+264) Two Chechen-American students / IED

Bicycles (N.A.)

Jaipur, India 2008 (80+216) Islamic Holy War Movement from Bangladesh (suspected) / RDX on bikes (research department explosive)

Cruise Ships (8 cases, 150 deaths)

Egyptian Coastline, Italian MS *Achille Lauro* 1987 (1) Palestinian Liberation Front / Armed assault, hijack

Manila Bay, Philippines. Superferry 14 (116) Abu Sayyaf Guerrilla Group

Somalian Coastline, Seabourn Spirits CL 2005 (0, 320 at stake) Somali pirates / Armed assault, hijack

South Africa, The MSC Melody 2009 (0, 1500 at stake) Kenyan pirates / Armed assault, hijack

Buses (88 cases, aprox. 1240 deaths)

Hartshead, England. 1974 (12) Unclaimed / Bomb

Tel Aviv, Israel 1989 (16+27) Palestinian Islamic Jihad / Crashed into a cliff

Fukoka, Japan 2000 (1) Teen hacker / Armed assault

Mumbai, India. 2002 (2+50) Unclaimed / Bomb

Burgas, Bulgaria. 2012 (6+32) An Arab-Canadian and Arab-Australian citizens / bomb

Nairobi, Kenya 2014 (3+62) Unclaimed / Bomb

Airplanes (88 cases, 1240 deaths or 3240 including 9/11)

Cleveland, USA. United Airlines 1933 (10) Unclaimed / Bomb

Manila, Philippines. Philippine Airlines 1949 (13) Passional plot / Bomb

Denver, USA. United Airlines 1955 (49) Insurance scheme / Bomb

Chicago, USA. Continental Airlines 1962 (45) Insurance scheme / Bomb

Hanoi, Vietnam. Cathay Pacific 1972 (81) Passional plot / Bomb

Tel Aviv, Israel. TWA 1974 (88) Abu Nidal Organization (suspected) / Bomb

Havana, Cuba. Cubana de Aviación 1976 (84) CIA (suspected) Bomb

Abu Dhabi, UAE 1983 (117) Abu Nidal Organization (suspected) / Bomb

Montreal, Canada. Air India (329) Unclaimed / Bomb

London, UK Pan-Am 1988 (270) Libyan Government / Bomb

Medellin, Colombia. Avianca Airlines 1989 (107) Medellin Drug Cartel / Bomb

New York, USA. United Airlines & American Airlines 2001 (3,000) al-Qaeda / Aircraft used as projectiles

London, UK. 2006 (0, 1,500 at stake) ND British Cell / Liquid explosives

Kuala Lumpur, Malaysia. Malaysian Airlines 2014 (283) Unclaimed / Bomb (under investigation)

Subway (27 major cases, aprox. 450 deaths)

Tokyo, Japan 1995 (15+6252) Aum Shinriko Cult / Sarin Gas

South Korea DMS 2003 (200+147) Kin Dae-han (A taxidriver suffering from depression) / Set fire

London Tube, 2005 (52+700) ND Islamist Fundamentalist Group / IED

Moscow, 2010 (37+65) Caucasus Rebels / Bombs
