



**TERRORISM INSURANCE AS INSURANCE  
AGAINST THE FAILURE OF COUNTER-TERRORISM:  
ISIS ATTACKS IN PARIS AND SAN BERNARDINO**

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**ABSTRACT**

Two ISIS terrorist attacks towards the end of 2015 against Paris and San Bernardino, California, shed light on the strategic confrontation between a terrorist organization and the forces of counter-terrorism. For the attack in San Bernardino, a home-grown Jihadi couple, unknown to the US authorities, were able to perpetrate their shooting rampage without their plot being interdicted. For the larger scale more ambitious attack in Paris, three teams of operatives were deployed to attack the Stade-de-France, the Bataclan concert hall, and local bars and cafés. The rationale for the precise targeting and meticulous attack scheduling is explained.

ISIS exploited the Syrian refugee crisis to infiltrate several terrorists into Europe, and took advantage of lax Belgian security to despatch four Belgian operatives across into France. The most lethal attack against the Bataclan concert hall was carried out by three French terrorists, combat hardened in Syria. For this attack, ISIS made a strategic decision in using Syrian returnees rather than other radicalized but less trusted French Jihadis. With this risky but operationally effective strategy, all the Bataclan operatives were known to the French authorities, who thus had a good chance of interdicting their attack.

## **1. COUNTER-TERRORISM DEFENCE**

Nation states are powerless to stop earthquakes and windstorms; the forces of Nature are greater than those of mankind. However, nation states do have military, intelligence and law enforcement capabilities to stop terrorists before they move towards their targets. Once terrorists are allowed to attack a target, loss mitigation will depend on the site security, and ultimately the local building vulnerability to the specific weapon mode of attack. Measures can be taken to harden targets through entrance screening, hiring extra security guards, security landscaping, blast-proofing of buildings etc., but from a national security perspective, counter-terrorism has failed once terrorists move to attack. If a designated target proves too hard, it can be substituted by one that is softer. There is an abundance of crowded public places that offer potential soft targets for terrorists seeking to maximize casualties.

For a terrorism insurer covering a portfolio of properties within a country, terrorism insurance is essentially insurance against the failure of counter-terrorism. Unless there is some technical deficiency or malfunction in attack execution, there will be a terrorist pay-off if a plot is not interdicted. Insurers therefore need to have a solid understanding and general knowledge of the process of terrorist plot interdiction. Unlike natural hazards, terrorism is subject to state control, the extent of which varies from state to state.

Whereas information about terrorist organizations fills many pages of current affairs journals and hours of media commentary, there is far less information publicly available about plot interdiction. Operational secrecy is the rationale for maintaining confidentiality. If there is some preliminary intelligence about a forthcoming plot, clearly any information leak might jeopardize efforts at stopping the plot, arresting the operatives, and gaining a court conviction. However, once arrests have been made, and the legal process has been duly followed with a court case and subsequent conviction, information can then be made public about the terrorist danger averted. For insurers, this is satisfactory. They do not need plot information in real time. It is not their task or responsibility to stop the next terrorist plot, rather they need to be able to assess the medium term risk. In this respect, the situation is similar to windstorm insurance. State meteorological offices are responsible for forecasting extreme weather in real time. Insurers are concerned with evaluating the medium term risk.

### **1.1 Plot Interdiction**

It is the responsibility of national intelligence and security organizations to interdict terrorist plots. Integrity, professionalism and competence are key to counter-terrorism capability. These virtues may vary quite widely from one country to another. Within its volatile political environment, the Pakistani security agency, ISI, has actively supported Islamist militants, exploiting their guerrilla role in border disputes with India. Accordingly, terrorists in Pakistan have been able to attack at a very high tempo, and Osama bin Laden was able to hide out for years in Abbottabad. Pakistan's neighbour, Afghanistan, is also seriously affected; many Taliban leaders live in and around Quetta, Pakistan. Cross-border movement

of terrorists is at the core of the challenge of controlling terrorism, as will be clear in the discussion of the ISIS attacks in Paris on 13th November 2015.

Also important for plot interdiction are resources of staffing, equipment and funding of intelligence and security agencies. Such resources come under pressure during periods of financial austerity, such as experienced over the past eight years within the Eurozone. Alain Winarts, the head of Belgium's domestic intelligence agency from 2006-2014, has complained that his budget was far below the necessary level. The agency had only 600 employees, covering both operations and analysis, and was in need of at least 120 to 150 more people to function properly.

Elsewhere amongst the western democracies, the Five Eyes Alliance is the world's foremost intelligence cooperative, formed of the Anglophone nations of USA, UK, Canada, Australia and New Zealand. This alliance has a massive annual budget of \$100 billion, and mastery of the internet through the pre-eminent global communications expertise, eavesdropping and code-breaking skills of the American NSA and British GCHQ.

Whereas for a totalitarian state, ruthless anti-libertarian measures can be routinely taken to suppress terrorism, for a democratic state, there is a fine balance between protection of civil liberties and the control of terrorism. Any notable erosion of civil liberties would in itself be perceived as a terrorist gain. However, the safety of its citizens is the first priority of a democracy, and terrorists cannot be allowed to attack at will. Accordingly, stringent counter-terrorism measures are adopted in the western world to interdict significant terrorist plots. Such measures are reinforced after the shock of a terrorist attack, and may be relaxed during episodes of successful plot interdiction with little terrorism loss. Terrorist plots can be interdicted in a number of different ways. These are listed below.

#### *[a] Informants*

Intelligence agencies infiltrate their agents within terrorist organizations to act as informants. These agents will typically have the same social, religious and cultural background and identity as the terrorists themselves. Some may be reformed extremists, or ex-convicts whose sentences have been reduced on condition of serving as an informant.

Terrorist organizations resist the intrusion and reduce the effectiveness of informants by partitioning their operations within small independent terrorist cells. The damage to a terrorist network by an informant would then be limited, and not compromise the overall organizational structure. Centrally planned attacks are particularly vulnerable to disruption by informants.

#### *[b] Agents Provocateurs*

Intelligence and law enforcement agencies may use their own staff to act as agents provocateurs, who openly solicit expressions of terrorist support, either online or in activist meetings and gatherings. They actively engage with supporters in the planning, preparation

and even simulated execution of terrorist acts, with the objective of securing sufficient evidence to convict them of terrorist offences. As a recent example, on New Year's Eve 2015, an FBI sting operation thwarted a lone-wolf ISIS attack in Rochester, New York.

Agents provocateurs are especially effective at curbing the activities of self-starter lone wolves, who are not part of an existing terrorist cell, and lack the expertise and resources to perpetrate their own terrorist attack without assistance from the agent provocateur. Such agents would not be likely to entrap the better trained and experienced terrorists.

#### *[c] Tip-offs*

Observation of suspicious behaviour or activity may result in a tip-off to the police or other authorities from vigilant strangers, or merchants or vendors from whom some unusual purchase of goods or services has been made. In some instances, a tip-off may be made from those who have some acquaintance with the suspect: a neighbour, imam, colleague, friend or even family member may contact the police.

Tip-offs are a valuable crowdsourcing self-organized supplement to professional counter-terrorism efforts. However, they are hit-and-miss and random, and cannot be depended upon to interdict plots. In particular, some of the Paris assailants on 13th November, e.g. Bilal Hadfi, were recognized by those closest to them to be on an irreversible path to increasing radicalization, but family loyalty came before national security.

#### *[d] Surveillance of known terrorists*

Known terrorists ought to be kept under active and intensive human and electronic surveillance, so that any recidivist activity that might be linked with future terrorism can be tracked and any potential plot disrupted at an early stage.

Tight border security is important to prevent known terrorists from crossing the border into a target country from a host country that might be a failed state, or one that is a terrorist safe haven. In particular, those on 'no-fly' lists should be excluded from entry by other means.

#### *[e] Surveillance of supporters of terrorist organizations*

The biggest challenge for counter-terrorism officials is the threat emerging from within a large population of terrorist organization sympathisers and supporters. Sizeable numbers of them would swamp the resources available for human surveillance. For each suspect, a number of agents would be needed to mount 24 hours personal surveillance. Instead, electronic eavesdropping and communications surveillance are essential to identify links with terrorist cells.

Tracking may require contact chaining, i.e. finding out who are in contact with known or suspected terrorists. The process of tracking communications involves the type of mass collection of communications meta-data disclosed by the NSA whistle-blower Edward Snowden. Following the revelations of Edward Snowden, terrorists have made greater use of encryption and the dark web in their communications. Furthermore, civil libertarians have demanded curbs to indiscriminate state snooping. Updated legislation, and protests from large tech companies, have reined back the authorized powers of the US and UK intelligence agencies in conducting mass surveillance. But an enterprising response to defending national security should be expected from the ever resourceful intelligence community.

## 1.2 Too many terrorists spoil the plot

Whatever the mode of plot interdiction, it is clear that the more operatives involved in a plot, the greater is the likelihood that the counter-terrorism services will tag one of them and, through this human portal, gain access to the plot details. A plot can only avoid interdiction if every single one of the operatives manages to avoid any communications that might compromise the plot. The chance of this happening is the product of the individual probabilities, and diminishes progressively as the plot is enlarged. Obviously, lone wolf plots have the smallest communications footprint and the lowest chance of interdiction.

Through terrorist social network analysis, RMS has evaluated the likelihood of a plot being interdicted through the type of systematic and highly intensive electronic surveillance and contact chaining exercised by US and UK intelligence services. This increases with the number of operatives as indicated in Table 1 below:

Table 1: Surveillance interdiction probability as a function of cell size

Cell Size	1	2	3	4	5	6	7	8	9	10
Interdiction Probability	0.26	0.46	0.60	0.70	0.78	0.84	0.88	0.91	0.93	0.95

These probabilities are augmented by random tip-offs, and the activities of informants and agents provocateurs. Highly elaborate ambitious plots capable of inflicting catastrophic insurance loss would typically involve so many operatives as to have a very high likelihood of interdiction. This would be wasteful of terrorist resources and damaging to terrorist morale. Discouragement of Jihadi plots against the US homeland involving double-digit operative numbers has come from Osama bin Laden himself in a message from his Abbottabad hideout: *'For a large operation against the US, pick a number of brothers not to exceed ten.'* The more operatives there are, the greater is the chance that one of them will compromise the terrorist venture: too many terrorists spoil the plot.

## **2. THE SAN BERNARDINO TERRORIST ATTACK OF 2ND DECEMBER 2015**

In terrorism risk analysis, it is instructive to introduce the concept of a macro-terror attack. This is a terrorist attack where the number of fatalities attains a threshold of fifty, or where the economic loss exceeds a billion dollars, or where a highly iconic symbolic target is struck. Such attacks require a substantial amount of planning, and a significant logistical burden of human, equipment and financial resources. The terrorist pay-off for the extensive planning involved and the resources committed needs to be substantial. Accordingly, the targeting for macro-terror attacks is focused on major cities with international name recognition, such as Paris on 13th November 2015.

A classic example of focused macro-terrorism targeting is the London transport bombings of 7th July 2005. The key operatives lived in a small provincial town in northeast England. Rather than bomb their home town, they drove several hundred miles south to London to launch their attack during the peak of the morning rush hour to maximize commuter casualties. In all countries of the western alliance since 9/11, the targeting of macro-terror attacks has focused on the principal cities, and can be represented by an evidence-based target tier distribution.

By contrast, so-called micro-terror attacks can, and do occur essentially anywhere. These are less ambitious than macro-terror plots, and often involve a choice of target local to the terrorist home base. The attack logistical burden is lower, with easier reconnaissance and weapon transport. The archetypical attack mode of a macro-terror attack is the vehicle bomb, which has been called ‘the terrorist’s air force’. Instead of a vehicle bomb, a micro-terror attack often involves the home manufacture of pipe bombs, requiring only small quantities of explosive. In the USA, grenades might potentially be used as an off-the-shelf alternative. They can be purchased, but only with a special tax stamp and FBI background check, which would be a terrorist deterrent. Assault rifles are comparatively easy to purchase, and would be stock weapons of the micro-terrorist arsenal.

Assault rifles and pipe bombs were the weapons used in the micro-terror attack on 2nd December 2015, in San Bernardino, California. Fourteen died and twenty two were seriously injured at a San Bernardino County Department of Health training event and holiday party, held at the Inland Regional Center. One of the victims was Hal Bowman, who once worked at CREATE, the national Homeland Security terrorism risk center at the University of Southern California. For a micro-terror attack, there is a vast number, literally many tens of thousands, of soft unprotected targets that might be struck. As with other mass shootings, a personal grudge could prioritize the targeting. But this was no ordinary mass shooting. More than one shooter was involved, which is extremely rare.

Anyone who has shared an office with a devout Muslim of Pakistani descent, who has spent time in Saudi Arabia, knows how careful and sensitive one needs to be in discussing Islamist militancy. Just a coffee-break talk about Middle East politics can cause grave personal offence. From his experience at CREATE, where terrorism is studied, Hal Bowman may have appreciated the need for discretion. For if a work colleague happens also to be radicalized, then the level of offence caused by such small talk can trigger a change in

psychological state from calmness to anger and even violence. The fact that Syed Rizwan Farook ultimately took out his rage on his colleagues, and terminally censored what he perceived to be blasphemous and insolent back chat, would not surprise psychologists of terrorism.

## **2.1 Counter-terrorism perspective**

Terrorism is as much about counter-terrorism as the terrorists themselves. Lone-wolf attacks perpetrated by a single individual are difficult to interdict through electronic surveillance, because very little communication of any kind is needed to plan and prepare for an attack. As exhibited in Table 1, a plot involving two operatives is also hard to stop through electronic surveillance. The amount of electronic communication between operatives is reduced still further if the pair of terrorists happen to be close family. This was the case with the Boston marathon attack Tsarnaev brothers in April 2013; the Charlie Hebdo Paris attack Kouachi brothers in January 2015; and the San Bernardino attack Farook couple in December 2015.

Farook's accomplice was his wife, Tashfeen Malik, another Pakistani with Saudi links. She had professed her Jihadi sympathies online back in 2012, before she married Farook. However, US immigration officials do not regularly check the social media accounts of visa applicants. This has been regarded by the Department of Homeland Security as a violation of free speech and freedom of expression. Ways to include social media reviews in the vetting process are being considered for the future.

The rifles used by the couple were legally purchased in 2011, and subsequently illegally modified to boost their killing power. The buyer was Enrique Marquez, a friend and neighbour of Farook, who allegedly plotted several terrorist attacks with him. But neither of them were terrorist suspects, and the plots were shelved without either coming to counter-terrorism attention. When Farook resumed his terrorist activities with Tashfeen Malik, there would only have been a modest chance of their plot being interdicted through surveillance. No informant could have stopped the attack either, unless Farook's partner had herself been co-opted by counter-terrorism services – a scenario familiar from the East German Stazi era of police state repression, when family members spied on each other.

With luck, there might have been a tip-off from the public. The couple had amassed a large stockpile of weapons, ammunition, and bomb-making equipment in their home. Indeed, unusual garage activity late at night had been spotted by one observant neighbour, but was not reported to the police for fear of being construed as profiling.

From a counter-terrorism perspective, Syed Rizwan Farook was one of many Muslims who left little trace of their personal radicalization. His colleague, Hal Bowman, with his pioneering CREATE work experience, was not sufficiently concerned about him to tip-off the authorities. On Twitter, Farook followed accounts associated with the Muslim Brotherhood, including the official accounts of the Free Syrian Army and the Syrian Revolution Network, but not the ISIS-affiliated social media feeds that might have attracted notable counter-terrorism interest. His accomplice, Tashfeen Malik, might have been denied her visa, had her social media profile been investigated.

Overall this was a micro-terror plot that, in a free democratic society without tight gun control, always has a reasonable chance of escaping detection. Mass shootings in an office context may potentially result in a substantial workers compensation claim, especially if the death count were compounded by large numbers of long-term injured. But neither the San Bernardino attack, nor the alleged earlier shooting plots by Farook and Marques at Riverside Community College, where they studied, and on the 91 Freeway during afternoon rush hour, would have caused a notably large insurance loss. Like the San Bernardino attack, the putative plots would most likely have been classified as micro-terror attacks.

### **3. THE PARIS TERRORIST ATTACKS OF 13TH NOVEMBER 2015**

On 7th January 2015, French liberty itself was attacked by the assassination of the editorial committee of the satirical magazine Charlie Hebdo. At the time, this was the worst terrorist attack in France for half a century. This was superseded ten months later on 13th November, when 130 died in Paris from another deadly terrorist attack by ISIS. Most of the victims were at the Bataclan concert hall, where they were being entertained by the American band: Eagles of Death Metal. When the three terrorists stormed in past the unarmed security staff, the band were playing their hit number 'Kiss the Devil'. Some in the audience responded with a devil's horn hand gesture. Charlie Hebdo, champions of democratic freedom of expression, and opponents of religious fascism, noted wryly from tragic experience in January: *'Invoke his name, and he will come'*.

Two longstanding security fears became deadly reality in the terrorist attacks on Paris on the evening of 13th November. The first is of European Jihadi support for ISIS blowing back to strike Paris or London. The second is of a coordinated mass gun attack as struck Mumbai seven years previously, in November 2008. The reason why this attack had not happened before is because of the great success of the western security services in stopping terrorist plots. Reviewing the catalogue of terrorist plots against the western alliance since 9/11, more plots have actually been stopped than might have been expected. Citizens of the western alliance have been lucky. The director-general of the British security service, Andrew Parker, has urged a strengthening of surveillance powers, (weakened after the Snowden revelations), so as to counter the ISIS threat.

The *raison d'être* of ISIS is to establish an Islamic State within the borders of Syria and Iraq where the governments in Damascus and Baghdad have left many Sunni Muslims resentful of being disenfranchised. To the politically excluded it offers marginalized Iraqi Sunnis an alternative to Shia rule in Baghdad; to dispossessed Syrians an alternative to the sectarian repression of President Assad; and to Muslims treated as second class citizens in Europe the prospect of a new life in the caliphate.

Since July 2014, ISIS has published a magazine that aims to establish the legitimacy of its caliphate, and to encourage migration. The name of the magazine is Dabiq, which is a small town in northern Syria mentioned in a saying of the Prophet (hadith) about Armageddon.



ISIS believes Dabiq is where Muslim and infidel forces will eventually face each other. After the infidel forces are defeated, the apocalypse will begin. Muslim migration to the new Islamic state is partly driven by the pull of being on the cusp of history.

ISIS has threatened that foreign powers that seek to thwart their caliphate ambition through military intervention will be targeted for terrorist attack. For Russia, a major Moscow public transportation plot and the bombing of a Russian passenger aircraft over Sinai were the beginning in October 2015. Following the loss of 224 lives, almost all Russian air passengers and crew, more attacks were anticipated against the ‘crusader’ countries intervening in Syria and Iraq. Less than a fortnight later, the justification for attacks was expressed directly in a terrorist declaration at the Bataclan: *‘We are the soldiers of the Caliphate. It is all Hollande’s fault. You attacked our women and children in Syria. We are defending ourselves by attacking the women and children in France.’*

### **3.1 Target selection**

Macro-terrorism targeting is deliberate and purposeful. This principle is affirmed by the ISIS communiqué:

*A group of believers from the soldiers of the Caliphate set out targeting the capital of perversion, the lead carrier of the cross in Europe — Paris. Eight brothers equipped with explosive belts and assault rifles attacked targets in the heart of the capital of France, which had been precisely chosen in advance. These targets included the Stade de France stadium during a soccer match between the teams of Germany and France, both of which are crusader nations.*

The primary target was the Stade-de-France, where President Hollande was attending a friendly soccer match between France and Germany. Terrorism against international soccer matches in France has been plotted since the 1998 FIFA World Cup in France, and there are now security fears for the forthcoming UEFA EURO 2016 tournament. Based on terrorist plot intelligence, a friendly match between Netherlands and Germany in Hannover scheduled for 17th November 2015 was cancelled.

There was high security at the Stade-de-France on 13th November 2015, with 150 security guards specially deployed. Fortunately, one of these guards spotted somebody trying to enter by tailing a ticket-holder. He was prevented from entering the stadium. He was a Syrian arrival on the refugee route via Turkey and the Greek island of Leros. A fellow Syrian traveller was the second suicide bomber, and the third was Bilal Hadfi, who had journeyed from Belgium to Syria in early 2015. The terrorist plan was for the first bomber to detonate his suicide vest inside the stadium, and for the other two to kill spectators as they rushed out of the stadium in panic. Due to the vigilance and professionalism of the security guard, (a devout Muslim himself), the death toll was limited to a single Portuguese fan. Although there were some serious injuries, including a scarf-vendor and his wife hit by shrapnel from the third suicide vest, a major loss had been averted. The timings of the detonations might

have been altered to cause more carnage, but they were fixed with the objective of drawing first responders away from the Bataclan.

A key principle of terrorist modus operandi is target substitution. The Russian Metrojet 9268 brought down over Sinai several weeks earlier on 31st October 2015 was a substitute for a plane from the US-led western coalition, because the Russian plane security was more easily compromised at Sharm-el Sheikh airport. Because of high security, an attack on the Stade-de-France was ambitious, but not very likely to be successful. Had this been the only target, ISIS would not have gained the media coverage desperately sought to sustain recruitment. ‘Half of Jihad is media’ is a driving slogan of their attack strategy.

One of the benefits of a multi-target attack strategy is that if one attack fails, others may succeed. The second main target was the Bataclan, No. 50 Boulevard Voltaire in the 11th arrondissement of Paris. One of the most illustrious historical concert venues in Paris, for forty years until September 2015, this concert hall was owned by two Jewish brothers. For this, the Bataclan had been targeted several times; terrorists have a habit of re-visiting sites of previous plots. In 2004, an Israeli hip-hop duo performed there despite threats, but in 2006, a return show had to be cancelled. In 2007 and 2008, the Bataclan received threats over hosting events for Jewish organizations, such as the Israeli frontier police. In 2011, a Belgian man confessed to planning an attack against the Bataclan. If any further anti-zionist motivation were needed by the terrorists for attacking the Bataclan, the band ‘Eagles of Death Metal’ had themselves played in Israel in July 2015, in defiance of a pro-Palestinian boycott.

For the assault on the Bataclan on 13th November 2015, a team of three French operatives were selected: Sami Amimour, Ismael Mostefai and Fouad Mohamed-Aggad. Amimour was known to be a terrorist, the other two were known to be radicalized. All three were known to have been to Syria. They killed ninety in the audience of more than a thousand. They called out for the American band; but all the band escaped. The terrorists were specifically looking to assassinate the lead singer, Jesse Hughes, who is nicknamed ‘the devil’. Ironically, he is a strong supporter of US gun ownership.

A glance at the Bataclan concert hall billing for November 2015 shows Michael Schenkar on 1st and 3rd; Hannah Lou Clark and K’s Choice on 4th; Piano Opera on 7th; Young Thug on 10th; and St. Germain on 12th. Music is anathema to Islamist extremists, but none of these acts would have been nearly as compulsive a target as the Eagles of Death Metal concert – the first gig of their French tour. Indeed, this concert was explicitly described in the ISIS communiqué as a festival of perversion.

Even without the international game that fateful Friday evening at Stade-de-France, the appearance of this particular band at a noted terrorist target venue might well have pressed French counter-terrorism officers to go on high alert. At the least, the Bataclan security should have been stepped up to a far higher level.

Synchronous events are particularly attractive for terrorism strategy. This is because security is typically heightened after a successful attack. Thus if the Eagles of Death Metal concert had been scheduled for the following day, Saturday 14th November, the suicide bomb attack

at Stade-de-France the previous night would have automatically raised security at all major public venues in Paris, including the Bataclan. As it so happened, when the 2015 Paris sports and music calendars were overlaid, both events were scheduled for exactly the same evening – and at the same hour. This turned out to be a coincidence too good for ISIS to pass up. But with these being very attractive honey-pot targets, why would ISIS complicate a double attack plot by including any other targets, especially those not in the same league of name recognition? This requires analysis and explanation.

Gilles Kepel, a French authority on militant Islam, has quoted the Jewish Dutch 17th century philosopher Spinoza: *'In order to preserve in political science the freedom of spirit to which we have become accustomed in mathematics, I have been careful not to ridicule human behaviour, neither to deplore nor to condemn, but to understand.'* The ISIS terrorist attacks in Paris were deplorable and condemnable - but also understandable. The latter is key for terrorism risk assessment. The more that can be understood of the past, the more that should be understandable about future threats.

Apart from partly being a Jewish quarter, with many Jewish-owned stores, the area around the Boulevard Voltaire is noted for the liberal lifestyle that is so despised by ISIS as decadent. Although not a posh part of town, it is a trendy *bourgeois-bohème* (*bo-bo*) area with a high density of bars and cafés. In the Parisian annals of terrorism, there have been a few attacks on public restaurants. The most notable was an attack on 9th August 1982 by the Palestinian Abu Nidal Organization on a Jewish restaurant, Chez Jo Goldenberg, in the Marais district, where Jews who arrived from Eastern Europe lived. Two assailants threw a grenade into the dining room, then rushed in and fired machine guns, killing six patrons.

There is no shortage of Kosher restaurants around the Boulevard Voltaire. But none of these were targeted on 13th November 2015. Nor were any Kosher supermarkets struck, as Amedy Coulibaly had done on 9th January 2015 soon after the Charlie Hebdo attack. Instead, a series of bars and cafés were attacked in a sequence which is explainable in terms of the overall logistics of the attack scheduling, as elucidated in the next section.

Fifteen died at Le Carillon and across the street at Le Petit Cambodge, where their patrons often dined. Also there was a heavy death toll of nineteen at La Belle Equipe, a popular bistro opened at the end of 2014. Besides these 34 fatalities, 5 died in shooting at La Café Bonne Bière and across the street at La Casa Nostra.

Ibrahim Abdeslam terminated the shooting spree at Le Comptoir Voltaire, on the Boulevard Voltaire, by detonating his suicide vest, seriously injuring a waitress and some patrons, but managing to kill only himself. This café location is shown with all the others on Figure 1 below. The event timings are also indicated. These are significant for understanding the logic of the overall operational strategy. With just a few minutes shooting time allotted at each bar or café, and several minutes average drive time to reach the next location, there was only time for three geographically separate locations to be attacked before the final suicide vest detonation at Le Comptoir Voltaire at 9.40pm.

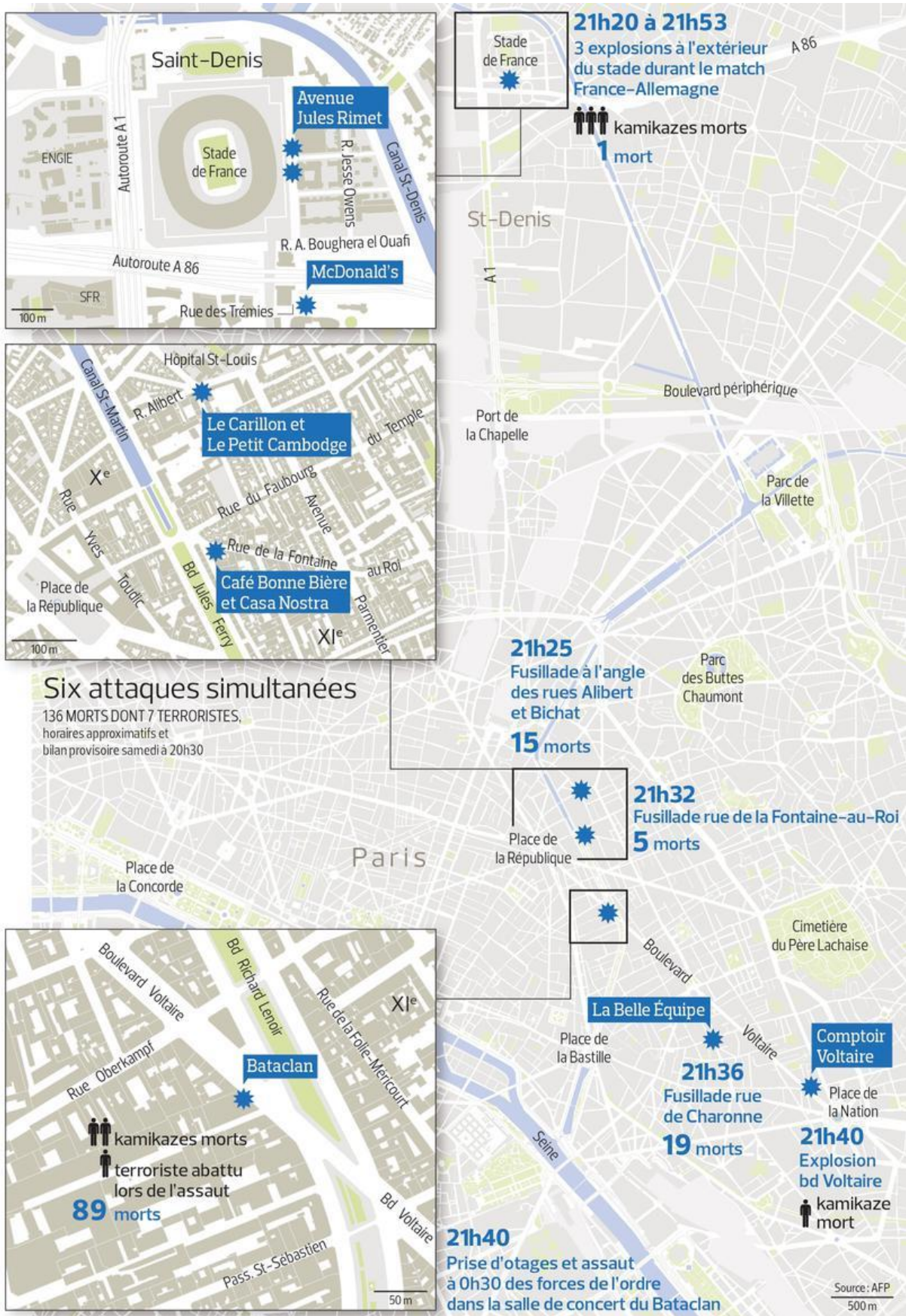


Figure 1: Paris attack chronology [Source AFP; reproduced in Le Figaro: 14/11/2015]

### 3.2 Precision attack scheduling

The ISIS attack communiqué describes the targets as being chosen in minute detail. This would not be apparent by considering each individual bar and café. Prurient Islamist sensibilities might have been offended by La Belle Equipe, managed by four girls, or Le Carillon, which was highly recommended as a dive bar. But Paris is the historical home of the restaurant, with some of the world's finest and most exclusive restaurants. None of the targets were known except to the local 'bobos'. Out of all the many thousands of eateries in Paris, why would an ordinary Italian pizza outlet like La Casa Nostra be shot at? Le Petit Cambodge had a young and trendy clientele, but was no fine-dining Michelin star establishment. Why was this ethnic restaurant attacked?

The ISIS communiqué makes no mention of the decadence of the bars and cafés that were attacked. The rationale for target selection was not based on decadence or other attribute an Islamist would condemn, but rather on the intricate spatial-temporal logistics of attack scheduling. The Bataclan assailants would have about fifteen minutes of free shooting without armed response, unless some police happened to be in the vicinity at the time. A brief drive-by shooting spree around the Boulevard Voltaire was precisely scheduled before the Bataclan assault as a deceptive diversion to cause local chaos all around the general neighbourhood of the Bataclan, and draw police and emergency services away from there. This was a classic ploy out of Sun Tsu's Art of War: '*All warfare is based on deception*'.

The timing of this strategic smokescreen was meticulously synchronized with the precision of a pyrotechnic display, and did not allow for dallying to shoot more patrons inside restaurants, or despatch the wounded on the terrasses, or even to shoot at more drinkers and diners, or pedestrians. The logistical factors that dictated the selection of bar and café targets were as follows:

- Attacking on side streets to minimize the chance of prompt police intervention.
- Attacking at or near crossroads to ensure an unblocked getaway.
- Attacking places known to be crowded on a Friday evening.
- Attacking people outside on terrasses to minimize shooting time.
- Attacking adjacent pairs of restaurants to maximize target opportunity at each stop.
- Attacking restaurants both north and south of the Bataclan, to absorb capacity of the local emergency response, and to cause traffic congestion.
- Attacking away from the vicinity of the Bataclan, to avoid a security alert there.
- Ending the shooting spree with a suicide bombing on the Boulevard Voltaire, synchronized with the Bataclan assault, to distract and delay the emergency response.

The choice and sequence of bar and café targets can be posed as a mathematical problem familiar in operational research. What is the optimal route, complying with these eight logistical factors, which could be traversed within the tight operational time window of about fifteen minutes, after which an encounter with armed police would be expected? The terrorists found a viable shooting solution: striking two pairs of targets north of the Bataclan in two stops, then driving southeast on Avenue Parmentier to reach La Belle Equipe. The

specified constraints do not quite uniquely determine the designated targets. But they reduce the range of possible Parisian street targets from more than 10,000 to just a few. Actual driving reconnaissance of the short-list would have narrowed down the choice to an optimal sequence of bars and cafés which could all be targeted within the set tight operational schedule, with alternative getaway options if a street were blocked. The importance of having alternative exits was clear from the January attack on Charlie Hebdo; the assailants' vehicle was blocked in by a police car and they had to shoot their way out.

After the Stade-de-France, the primary target in central Paris was evidently the Bataclan, both because of the venue and the band on the playbill. The impact on selected bars and cafés around it might be interpreted as collateral damage at a micro-terror level. It is extremely unlikely that any of these small eating and drinking establishments would have been primary terrorist targets, but they fell within the extended spatial footprint of the macro-terror shooting attack on the Bataclan. The possibility of small businesses suffering collateral loss as secondary targets in this indirect manner should be recognized by terrorism insurers.

The need to keep rigidly to the precise strategic scheduling meant that the toll of deaths and injuries in local bars and cafés was lighter than it might otherwise have been. At 9.25pm, the shooting started at Le Carillon and Le Petit Cambodge, at the crossroads junction of Rue Bichat and Rue Alibert, as shown in Figure 2.

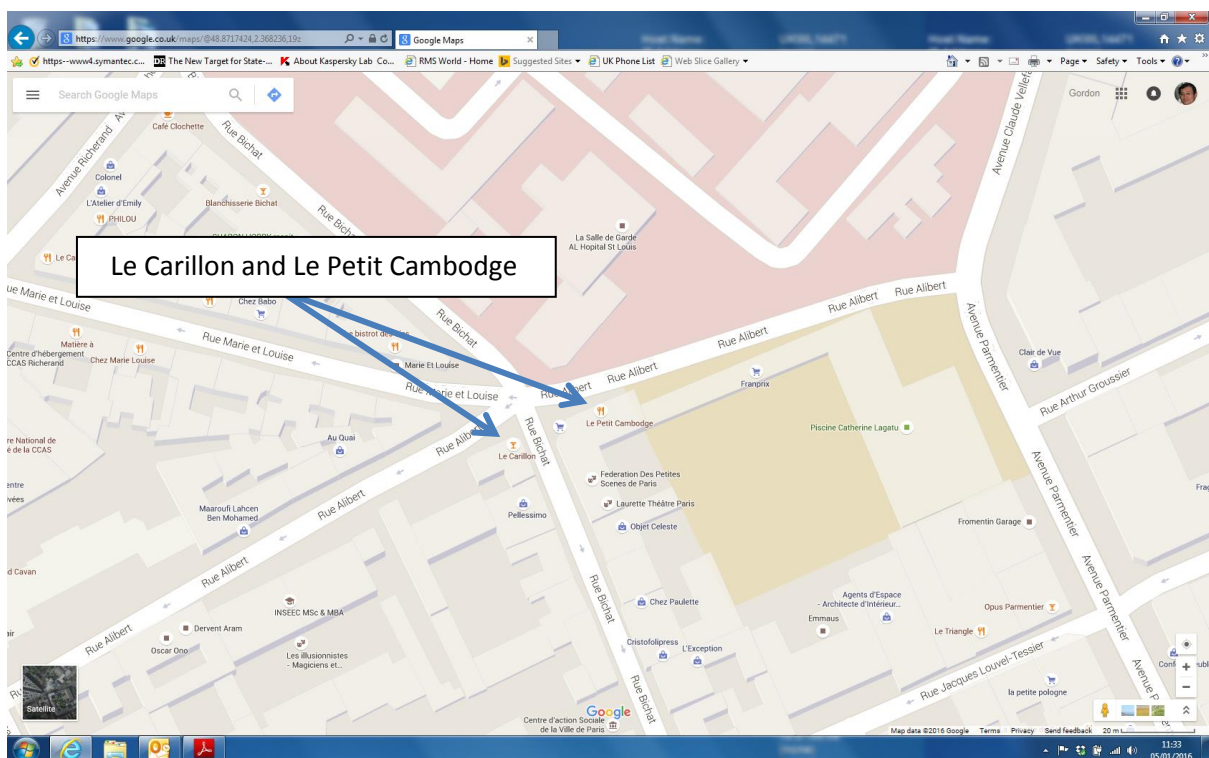


Figure 2: Crossroads attack on Le Carillon and Le Petit Cambodge

A few streets away at 9.32pm, La Café Bonne Bière and La Casa Nostra were struck at the junction of Rue du Faubourg du Temple and Rue de la Fontaine au Roi. Several of the seriously wounded might have survived if the emergency medical response had been better equipped; stretching critical care facilities was a strategic aim of the attack strategy. At La Cosa Nostra, Salah Abdeslam was caught on CCTV shooting at patrons, but left when his AK47 misfired. Driving a few kilometres southeast, past the Bataclan, at 9.36pm the shooters next targeted La Belle Equipe on Rue de Charonne at the junction with Rue Faidherbe. The front seat passenger got out and did the shooting, the driver provided cover with his AK47. There were also casualties at the adjacent Sushi Maki Japanese restaurant.

At 9.40pm, Ibrahim Abdeslam ended the shooting spree at Le Comptoir Voltaire, situated at the other end of the Boulevard Voltaire from the Bataclan. This final café attack was synchronized with the start of the assault on the Bataclan to surprise and confuse the first responders. As it happened, the fire and the SAMU emergency medical service had a terrorism training exercise that morning.

There were still five AK47 magazines left, after eleven had been used in the firing of hundreds of bullets. But by this time, the chance of armed police response was high, so rather than continuing shooting until the very end, Ibrahim Abdeslam detonated his suicide vest. According to the ISIS communiqué, another suicide vest detonation in the 18th arrondissement, perhaps around Montmartre, seems to have been planned for the north of Paris. But Ibrahim's brother, Salah, deviated from the attack plan and abandoned his car in Place Albert Kahn in the 18th arrondissement. He phoned local friends from Molenbeek to pick him up and drive him back to Belgium.

According to police sources, all the terrorist shootings at the Bataclan took place before 10pm. To have saved more lives, the police response would have had to have been swifter. But any local police would have drawn to the bars and cafés attacked. It was only just before 10pm that a brave commissioner from the BAC (Brigades-Anti-Criminalité) arrived at the Bataclan and managed to shoot one of the terrorists, even though he was not equipped to deal with criminals armed with assault rifles.

At about 10.15pm an elite team appeared on the scene from the BRI (Brigades de Recherche et d'Intervention) to relieve the BAC. BRI is a special unit of the Paris police department, intervening only within and around the capital. They are expertly trained for stakeouts and surveillance. The BRI chief, Christoph Molmy, had been notified of the Stade-de-France suicide bombings and the attack on a bar in Rue de Charonne, and immediately mobilized his fifteen-man Rapid Intervention Force. They gathered at their landmark Paris office at 36, Quai des Orfèvres, before driving several kilometres to the Bataclan.

The security guard who stopped the first suicide bomber from entering the Stade-de-France was praised for saving France. The mitigating impact of his vigilance is all the greater in the context of the overall attack plan. For terrorism risk estimation, it is salutary to contemplate the counterfactual scenario where the first suicide bomber succeeded in entering the stadium. After the first bomb explosion at 9.20pm, there would have been a number of severe

casualties, and panic leading to a disorganized exodus of 80,000 from the stadium. A subsequent explosion at 9.30pm would have struck exiting spectators. A major police alert would have been raised, sweeping in armed response from BAC and BRI. A further bomb explosion at 9.53pm would have raised the alarm level and increased the sense of uncertainty and dread around Stade-de-France yet further. The initiation of the Bataclan attack at 9.40pm might then have taken advantage of the extra time available to shoot even larger numbers of the sell-out audience before the armed police intervention. The overall death toll might then have been a catastrophic multiple of the actual number.

### **3.3 Choice of weaponry**

The two stock terrorist weapons for maximizing casualties in crowded public spaces are improvised explosive devices and assault rifles. Both were deployed in Paris. The eight operatives each wore a suicide vest containing triacetone triperoxide (TATP) explosives. TATP is highly volatile, and the blast impact is variable. At the Stade-de-France, only one bystander was killed, even though three suicide vests were detonated. Salah Abdeslam's unused suicide vest was found discarded in a dustbin in Montrouge. The bomb-maker was identified quickly as Mohammed Khoualed from Roubaix in northern France.

More reliable than an Improvised Explosive Device is the AK47. It was this weapon that caused almost all the casualties. There were 130 fatalities and more than 350 injured. As is common with terrorist attacks in crowded public places, the young and middle-aged were the main victims. Of the dead, 25% were in the age range of 35-39; 20% were in the age range of 30-34, and also 25-29. About 10% were in the age range of 20-24 and also 40-44.

Outside international arms dealers, it is not widely known that, since the Napoleonic era, Belgium has been a centre for weaponry. When it comes to re-modelling of light military weapons, Belgium has the 'savoir-faire'. One-third of EU small arms sales to the Middle East and North Africa come from Belgium. Large quantities of re-modelled AK47s from Yugoslavia are on the Belgian market, and have been used for both criminal and terrorism purposes. The transport of such weapons across continental Europe is facilitated by the Schengen area agreement, which removes border checks within the European Union. The ready supply of weapons makes Brussels a European terrorist arms bazaar and supermarket. Ayoub El Khazzani was armed with a re-modelled AK47 when he attempted to shoot passengers on the Thalys train from Brussels to Paris on 21st August 2015.

### **3.4 Failure of Belgian and French counter-terrorism**

Since 9/11, there have only been two major successful macro-terror attacks against the Five Eyes Alliance of USA, UK, Canada, Australia and New Zealand. These were the London transport bombing of 7th July 2005 and the Boston marathon bombing of 15th April 2013. Through the technical excellence and international coverage of counter-terrorism



surveillance, dozens of terrorist plots against the Five Eyes Alliance have been interdicted since 9/11. As disclosed by the NSA whistle-blower Edward Snowden, suppression of terrorist plots is expedited by the covert process of contact chaining: if any conspirator contacts somebody who is in contact with a known terrorist, the conspirator will be placed under communications surveillance. The larger a conspiracy, the greater is the chance that one of the conspirators will be under communications watch. Accordingly, due to oppressive covert surveillance, a high proportion of the plots against USA and UK have been lone-wolf plots.

The fact that so many plots have been foiled owes much to the capability and professionalism of the American and British security services, and also to an element of luck when the police are tipped off about suspicious behaviour or randomly search a car or property. For both the 2005 London and 2013 Boston bombings, at least one of the terrorists was known to the security services, but none was a proven terrorist. There was some failure of counter-terrorism, but not on the scale that allowed three teams of three terrorists to attack at will across Paris on the November evening of Friday 13th – the day when counter-terrorism luck ran out.

Two months earlier, on 11th August, a French supporter of ISIS, Reda Hame, was stopped on his return from Syria and detained for plotting a mass-casualty attack on a concert hall. In September, French officials were actually warned of an imminent attack by their American counterparts, who have superior international communications intercept and electronic eavesdropping capabilities. But they were blindsided by the attack being plotted across the border in Belgium, which is a country lacking an intelligence culture. At the highest level of the domestic intelligence agency (Sûreté de l'État), it is recognized that there is a lack of interest or even mistrust against the intelligence service among politicians and the public. This negative situation has been aggravated by Edward Snowden's disclosure that GCHQ hacked into Belgacom, Belgium's largest telecommunications provider, to install spying malware allowing GCHQ to tap Belgian phone calls.

The 13th November Paris attack was planned from the run-down Molenbeek immigrant district of Brussels, with 30% unemployment, notorious for being the Jihadi capital of Europe and weapons trafficking centre. The mastermind was Abdelhamid Abaaoud (aka Abu Omar Al Belgiki), a Moroccan-Belgian, who was a self-confessed terrorist, well known for his involvement in a number of terrorist plots. In his absence, he was sentenced to 20 years by a Belgian court. Even if terrorists are elusive, and their whereabouts uncertain, surveillance can be undertaken of their communications. In January 2015, Abaaoud's cell phone was reportedly traced to Greece from calls made to Jihadi contacts in Belgium.

No terrorist plot of any complexity can be planned and executed without a substantial amount of electronic communication. Regrettably, Belgian capability in communications surveillance has been limited, even primitive. Before 2010, the domestic security agency was legally unable to use standard intelligence gathering methods such as bugging, video

surveillance, phone taps and computer hacking. Only with the passage of a new law in 2010 were these basic intelligence-gathering techniques allowed.

To make security even more challenging, Belgium has highly fragmented administrative systems. In Autumn 2013, three Jihadi training camps were identified in the Ardennes by the Belgian intelligence service. However, this information was not transmitted to the local police. Brussels itself has six policing zones, which impedes information exchange. To compound the cross-border counter-terrorism dysfunction, the French internal security service, *General Directorate for Internal Security (DGSI)*, did not share its extensive list of Jihadis in Syria with its Belgian counterpart.

Belgium has provided a comparatively safe haven for terrorists within Europe. A Belgian lapse in counter-terrorism might only have repercussions within its borders, except for the Schengen agreement. Belgian terrorists could drive the 150 miles from Molenbeek to Paris as if the French border did not exist. The superior French counter-terrorism capability was negated by the Belgian terrorist threat source. To deter Belgian terrorists from striking France again, President Hollande of France has called for major security reforms that will stretch the interpretation of the Schengen agreement.

Within the context of US Homeland Security, the national fragmentation of continental European security would be as if both the National Security Agency and the Federal Bureau of Investigation were abolished, and each state of the union had its own separate security and law enforcement detective agency. The smaller states would have far less resources for their own state agencies. Through inter-state freedom of movement, this would diminish security in the larger states, where the US terrorist targets are mostly concentrated. The prospect of heavily armed terrorists based in rural Vermont crossing over at will into New York State and towards Manhattan would alarm and could surprise the New York Police Department, and contract the US terrorism insurance market.

### **3.5 Network of operatives**

According to the ISIS communiqué, eight brothers wrapped in explosives belts, and armed with machine rifles, targeted sites in the heart of the capital of France. Their leader, Abdelhamid Abaaoud, was present in Paris to oversee the attacks, and is believed to have participated in the bar and café shootings. Abaaoud's fingerprints were on an AK47 in the black Seat Leon shooters' car abandoned in Montreuil. It is known from CCTV that he took the metro back into Paris from Montreuil, where the car used for the bar and café shootings was found. He was a notorious Belgian terrorist, one of 500 jihadists for Syria and Iraq to have emerged from a Belgian population of only 11 million — the highest figure per capita in the European Union, and twice as high as France. He was summarily brought to justice during a police raid in Rue Corbillon, Saint-Denis, a few days later.

The Paris terrorist attack force was comprised of three teams tasked with striking the Stade-de-France; the Bataclan concert hall; and neighbouring bars and restaurants. At the Stade-de-France, two operatives were brought in from Syria via the refugee trail from Turkey to Greece. They were accomplices to Bilal Hadfi, who was the last of the three to detonate his suicide vest. Bilal Hadfi, a French national, living in Molenbeek, had openly posted his Jihadi sentiments on Facebook in June. Like his two accomplices, he had a Syrian connection. After his departure for Syria early in 2015, Belgium issued an international arrest warrant for him.

Molenbeek was the Belgian base for the bar and café shooting team, which comprised the Abdeslam brothers, Ibrahim and Salah, and Abdelhamid Abaaoud. The inclusion of a Molenbeek friend in the Stade-de-France team was important for Abaaoud's control of the attack plan. Bilal Hadfi was in phone contact with Abaaoud for much of the forty minutes before the first suicide bomb detonation.

Molenbeek is the source of the highest concentration of jihadi foreign fighters in Europe. In 2001, it was in Molenbeek where the assassins of Afghanistan's anti-Taliban commander Ahmad Shah Massoud had stayed. It was also a haven for Hassan El Haski, one of the masterminds of the 2004 Madrid train bombings. Mehdi Nemmouche, the principal suspect in the Jewish Museum attack in Brussels in May 2014, also stayed there. Ayoub El Khazzani, the shooter in August 2015 on a Paris-bound Thalys train from Amsterdam, stayed in Molenbeek with his sister before boarding the train in Brussels. His re-modelled AK47 jammed, and he was overpowered by several passengers. Otherwise his rampage might have been so deadly that the export of terrorism from Molenbeek to Paris could then have been placed under tight control.

The third 3-man attack team was entirely French. First, there was Sami Amimour, a noted French terrorist, who defaulted on his weekly obligation to report to a police station, and was under international arrest warrant. Secondly, there was Ismael Mostefai, who was marked by French authorities as being radicalized, and whom the Turkish authorities had warned the French about, whilst travelling to Syria. The third was another Syrian veteran Fouad Mohamed-Aggad. At the end of 2013, Fouad Mohamed-Aggad travelled to Syria with his brother Karim, and a group of friends from Strasbourg. Most were arrested in Spring 2014 when they returned to France. But he stayed in Syria, not wishing to go to prison in France. He made his final return to France for the Bataclan attack.

The Paris attacks were planned across the border in Belgium, which has an inferior capability in counter-terrorism surveillance, and where weaponry is a thriving business sector. Without any border checks between France and Belgium, because of the Schengen area agreement, Molenbeek terrorism could be covertly exported to France. Furthermore, the two suicide-bomber Syrian operatives swept in to western Europe with a tide of destitute refugees via the porous Greek island border with Turkey. This Syrian duo along with the Molenbeek terrorist

quartet were not only trusted and dependable ISIS operatives, but they also had a comparatively low counter-terrorism profile in France.

Thus the effective number of plot operatives potentially visible to DGSI was reduced from nine to just three: the Bataclan terrorist trio. But it was this French trio who were responsible for the bulk of the carnage on 13th November. The Stade-de-France suicide bombings essentially failed, with just one passer-by killed. Furthermore, when considered purely on their own, the bar and café shootings amounted to a Belgian micro sub-attack diversion for the police and emergency services, with lesser value property targets than for a macro-terror attack.

### **3.6 Bataclan terrorist team selection**

At about 10%, France has the highest proportion of Muslims in the population of any western European country. Amongst French Muslims, there is substantial minority support for ISIS. There may be as many as 20,000 who hold radical Islamist views, and who might be a threat to French national security. According to Prime Minister Manuel Valls, intelligence services have files on 10,500 individuals who have been radicalized to a greater or lesser extent. Of these, as many as 7,000 are on a severe terror watch list. About a thousand French nationals have travelled to Syria and Iraq to fight with ISIS. Of these, about 150 have died and will never return.

The Bataclan attack team might have been drawn from the ample reserves of radicalized French Muslims, with little or no counter-terrorism profile, and who had never visited Syria. There would have been clear security advantages, but there would have been doubts about their combat capability, dependability and trustworthiness. By contrast, Syrian veterans would have been trained, battle-hardened, and have already demonstrated their commitment. The trade-off between operational secrecy and effectiveness was decided by ISIS in favour of the deployment of Syrian returnees. All three of the Bataclan shooters were not only French but also well known to DGSI as Syrian fighters.

The eight hundred surviving French ISIS combatants might well have been prioritized for communications surveillance, given their combat suitability as team members for an ISIS attack in France. There must have been a substantial amount of electronic communication between the Bataclan trio. It is known that on the evening of 13th November they received tweet messages sent from an ISIS tweet account @op\_is90. Electronic surveillance might have picked up some of this communication. It is confirmed that before the 13th November attacks, encrypted messages were sent by terrorists via WhatsApp and Telegram App. But even if communications were encrypted, the meta-data on the communications might have raised the French counter-terrorism alert.

Notwithstanding civil liberties restrictions on eavesdropping on communications in France, a significant percentage of known French ISIS combatants can be intensively surveilled. Given the size of DSGI, with several thousand officers, it seems realistically plausible that tight surveillance could be maintained over at least several hundred Syria returnees, which is approximately a quarter of the number of French Jihadis who survived fighting for ISIS. Even if only one quarter of known French ISIS combatants were electronically tracked by DSGI, there would then have been about a 60% chance that the plot would have been compromised through one of the three operatives being detected before moving towards the Bataclan. ISIS pushed their luck with using three operatives all of whom were known already to the French counter-terrorism services, rather than using 'clean skin' radicalized individuals with no Syrian combat experience.

#### **4. CONCLUSIONS**

After the October 1984 Brighton bombing which came very close to assassinating the UK prime minister, Margaret Thatcher, the IRA famously taunted: *'We only have to be lucky once, you will have to be lucky always'*. Both Belgium and France have been lucky to have interdicted as many terrorist plots as they have since 9/11. But the Paris attacks on 13th November 2015 exposed gaping weaknesses in European border security, and were a major joint failure of Belgian and French counter-terrorism.

The terrorists too were lucky to get away with deploying so many Belgian and French operatives known to the authorities, without their ambitious brazen plot being interdicted. On 13th November, ISIS boldly fielded four operatives known to the Belgian authorities, and three known to the French authorities. Just two Syrian suicide bombers were additional to the Belgian and French operational team.

In 2006, Al Qaeda plotted to bring down seven transatlantic aircraft using liquid explosives, in what chief strategist Ayman Al Zawahiri boasted would be the biggest multiple terrorism strike since 9/11. This was interdicted through the combined capabilities of the UK and US counter-terrorism forces. Had this plot originated in Molenbeek, Belgium, rather than Walthamstow, England, and targeted flights departing from Paris rather than London, the outcome might have been very different.

After the terrorist attacks in Paris, western intelligence services stepped up their surveillance. They intercepted communications between Abdelhamid Abaaoud and Islamic State leadership in Syria. Furthermore, through discovery of a cell phone near the Bataclan with contact details for Hasna Aitboulahcen, the cousin of Abaaoud, a planned second Paris attack phase at La Défense was completely disrupted, and the operatives killed, including Abaaoud himself.

The European Union does not function as a police state such as the former East Germany, where all suspected dissidents were under oppressive surveillance by the feared Stazi. Track cannot be kept of all ISIS supporters. Strategic thinking could prioritize surveillance resources, in particular in respect of Syrian returnees. Those with Syrian experience are trained, have shown commitment, and can be trusted. By contrast, those who are radicalized but have not taken the initiative to fight in Syria may not be as reliable, neither in terms of technical capability, nor in terms of being able to maintain tight plot secrecy.

Individual countries within the Schengen zone, like Sweden and Denmark, are reinstating their own border controls to protect against illegal migration through porous European external borders. As an immediate response to the counter-terrorism failures, new measures to tighten European border security are to be introduced. One is the creation of a standing European border force and coastguard to take control of external frontiers. Another is the creation of a European passenger name record system for air passengers entering or leaving the European Union.

Furthermore, the European Commission will adopt a European Agenda on Security which will reorient the EU's internal security to meet the challenges posed by current criminal and terrorist threats. This will strengthen cooperation between Europol and other European agencies and threat assessment bodies, notably EU INTCEN (European Intelligence and Situation Centre). It will also reinforce the exchange of information at EU and international level on illegal firearms. Until these measures take effect, the terrorism risk in continental Europe will remain significant. Assistance from UK should be valuable.

Lord Carlile, overseer of UK counter-terrorism legislation has commented to Newsweek: *'The security services in Belgium are nothing like as good as the French security services. Plainly, what is needed is cooperation within the EU to ensure security services and intelligence agencies are on the same page about threats to shared security. It is vitally important that the Belgian government reassures security services and police in the rest of Europe that it has the capacities to deal with similar plots. If not, they should be willing to accept our assistance. I would suggest the UK security services have demonstrated themselves to be superbly competent to assist.'*

These countries of the Five Eyes Alliance collectively have superior intelligence, eavesdropping and decryption capabilities than exist in the Eurozone, and USA and UK assume more sweeping surveillance powers, and far-reaching objectives. For example, GCHQ states an ambition to exploit any phone, anywhere, any time. Crucially, with long coastal national boundaries, border security is far tighter in the English-speaking western democracies than within the Schengen zone where most land borders can be crossed without challenge.

The barrier to entry into USA, UK and Australia is very much harder. But the intent to attack these countries is clear. The ISIS communiqué ended with a stark threat: *This attack is just*

*the start of the storm, and a warning to those wishing to contemplate and draw lessons.* Abdelhamid Abaaoud is believed to have visited UK in August 2015, using a false passport. On his cell phone, there were pictures of the Birmingham Bullring, the city's most popular tourist venue. Shopping malls like this and Les Quatre Temps in La Défence are prime targets for terrorist armed assaults. A number of radicalized Muslim youths from Birmingham are known to have joined IS in Syria. The highest ranking of these was Junaid Hussain, leader of ISIS's cyber caliphate wing. He was killed in an air strike in August 2015.

For ISIS to perpetrate a major multi-pronged terrorist attack within UK, USA or Australia, they would need to push their luck much further than they did in Paris. Already a number of ISIS plots in UK have been interdicted. This should give insurers confidence in the capabilities of the Five Eyes Alliance to deal with the evolving ISIS threat. Insurers need to keep faith with the security services of the countries in which they have terrorism risk exposure. The terrorism threat is persistent and opportunist; always seeking to exploit any weaknesses in security and deficiencies in intelligence gathering. Ultimately, it is the occasional counter-terrorism failure to interdict a macro-terror plot that insurers are providing coverage for.

#### **4.1 Lessons for terrorism insurers**

In a bygone 20th century terrorist threat era, the IRA provided bomb warnings to avoid civilian casualties that would have alienated their Catholic support base in Ireland. A high percentage of warnings were hoax calls intended to cause economic dislocation. Causing economic loss and massive property damage were the significant impacts that the IRA leveraged with their bombing campaigns, rather than a high toll of civilian deaths and injuries.

With Islamist militants, especially ISIS, killing infidels is not just acceptable, it is their principal desire and objective, rather than inflicting property loss. (Ayman al Zawahiri, the Al Qaeda leader, commented that the economic cost of ever tighter homeland security was in itself a severe economic burden inflicted by militant Islam.) On 2nd November 2011, the Charlie Hebdo office in Paris was petrol-bombed by a molotov cocktail at 1am, the day after it had named the Prophet Mohammed as its editor-in-chief for the week's issue. The local impact of this property damage and business disruption was as nothing compared with the shock and horror that resonated around the world at the assassination of the Charlie Hebdo committee on 7th January 2015.

Insurers should always seek to learn new lessons from events that occur. It is well appreciated from international experience of terrorism that lethal micro-terror armed attacks against occupants of small businesses, (such as shops, restaurants and offices), can occur essentially anywhere. The San Bernardino attack on 2nd December 2015 killed fourteen

workers attending a small nondescript office party in a town with a population of two hundred thousand.

A new lesson from the Paris attacks of 13th November 2015 is that there can be noteworthy micro-terror collateral loss within the overall footprint of a macro-terror strike. Irrespective of the specific weapon attack mode used at the Bataclan concert hall, (whether armed suicide attack; back-pack, vehicle or incendiary bomb), there was an operational rationale for ancillary small arms attacks nearby. These would divert any police who happened to be nearby, to ensure the Bataclan assailants would have fifteen minutes of unanswered shooting.

Establishing such a secondary micro-terror smokescreen around a primary terrorist target comes at a price to a terrorist organization. More operatives are required to go on a local shooting rampage. Increasing the number of operatives inevitably increases the likelihood of plot interdiction. In the case of the Paris attacks, the security price was low: the shooting team acquired weapons easily in Belgium, rented cars with Belgian number plates, drove across the open Belgian border from Molenbeek, and were almost invisible to the French counter-terrorism authorities. Outside the Schengen zone, foreign terrorists would be harder to infiltrate, but the threat of ancillary small arms attacks within a macro-terror footprint remains a prospect within the western alliance that needs to be considered by terrorism insurers.

Whereas the effect on a scenario estimate of Probable Maximum Loss may not be so significant, it should alert terrorism underwriters to the coverage requirements of small businesses. Insurers have long known that collateral damage to small businesses may arise within the blast radius of a nearby vehicle bomb targeted at an attractive target. The extent of the blast radius depends on the explosive yield of the vehicle bomb.

But any macro-terror attack may generate an extended footprint of intermittent collateral loss. As demonstrated by the Paris shootings of 13th November 2015, this footprint may stretch for several miles. Given the high density of attractive terrorist targets within an urban environment, a corollary is that all small businesses would be advised to have some terrorism coverage for the contingency that they happen to be attacked along with a large corporation or similar principal terrorist target.