

Past Events: *in hindsight!*

20 years after - 9/11

ABSTRACT

This year, 2021, marks the 20th anniversary since 9/11, recorded as the ‘*day that changed the world.*’ Yet ironically, this year (and last) the world and aviation has faced another battle – a pandemic.

The starting premise of this research, is that, while there have been concerted efforts over the last two decades (since 9/11), it was undoubtedly the earlier failure at an international level, to appreciate such risks, that compounded the vulnerable position that the sector found, and arguably still finds, itself in. In doing so, the method applied is to revisit ‘*the past.*’ Reflection is given to key events, in the form of case studies, and comparison analysis is given to the USA and the EU responses to terrorism and other security challenges as a result of 9/11.

The findings are that nations inherently cling on to sovereignty in the form of control and that this impacts on a willingness to coordinate, coupled with this, there remains difficulties in sharing information and data, which invariably provides a risk to aviation.

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1. Introduction

This research paper is written in remembrance of all those life's lost on September, 11, 2001 and to all those families that lost loved ones as a result of this attack.

1.1. An overview

This year marks the 20th anniversary since the event – which was recorded as the ‘*day that changed the world.*’¹ The prevention of on-board terrorist attacks has been among one of the many challenges the industry has experienced. The events of 9/11 only too clearly showed this risk to aviation, and to society.

Security remains an area where governments and airlines are continuously struggling to stay ahead, but since 9/11 there have been other challenges to the air transport industry – not least Covid-19.

2020 was identified as the Year of Security Culture (YOSC²) for aviation. With the Covid pandemic severely impacting aviation in 2020, it was decided to extend the YOSC to 2021. It is acknowledged that with 2021 being the 20th Anniversary of 9/11, recognized as the worst acts of unlawful interference in the history of aviation, it remains imperative to understand the future threats and challenges to aviation. Inevitably this including learning from the past as well.

Attacks on aviation are not new – for while air travel is a relatively recent mode of transport, it was virtually within thirty years of the Wright Brothers taking to the air that it was directly targeted and exploited by criminals and terrorists.³ Since this time, aviation has remained a high-profile target.

States’ governments invariable aim to cling onto sovereignty of ‘*their skies*’ above, which is also apparent in terms of ownership rules and restrictions relating to airlines. This has led to airlines being seen as an extension of the State (despite subsequent deregulation and liberalization – across many areas and in many countries). This inevitably leaves airlines susceptible to attack, such attacks that are undeniably (in many

¹ Giovanni Bisignani (2013). *Shaking the Skies*, LID Publishing Ltd., London, UK

² The International Civil Aviation Organization (ICAO) - <https://www.icao.int/Security/Security-Culture/Pages/YOSC-2021.aspx>

³ Sarah Jane Fox (2015) ‘CONTEST’ing Chicago. Origins and Reflections: *Lest we forget!* *International Journal of Private Law*, (2015) Vol. 8, No. 1, pp. 73-98; Sarah Jane Fox (2015) ‘To practice justice and right’ – international aviation liability: have lessons been learnt? *International Journal of Public Law and Policy*, (2015) Vol. 5, No. 2, pp. 162-182.

cases) directed against the country and not the actual airline.

In life generally – ‘we’ can regret some of our decisions or, even an inability to act, or the actions taken in a given way. ‘*Only if*’ is a common phrase; and

“With the benefit of historical hindsight we can all see things which we would wish had been done differently or not at all.” – Queen Elizabeth II⁴

1.2. The scope and approach of this research paper

The starting premise is that, while there have been concerted efforts over the last decade and a half (noticeable since 9/11), it was undoubtedly the earlier failure at an international level, to appreciate such risks, that compounded the vulnerable position that the sector found, and arguably still finds, itself in.

This research paper, thus begins by exploring the early conventions – particularly the 1944 Chicago Convention,⁵ arguing that there was a lack of foresight to take early preventative measures and proactive (security) initiatives, as is evidenced by the fact that security was a later add-on, an afterthought Annex in the 1970’s.

High-profile tragedies – such as *Lockerbie*,⁶ as well as *9/11*,⁷ are reflected upon and the lessons learnt from events, such as these, are discussed. Approaches taken by the USA and the EU are also compared.

Discussions are also undertaken in regard to the lack of coordination and the sharing of information which has so often been criticized in subsequent enquiries (*after the event* or in ‘*hindsight*’ of a terrorist attack). As part of this, the research focuses on the Passenger Name Record (PNR) requirements – which have proved a highly contentious method of sharing data.

Thought is also given as to whether there still remains a lack of governance, structure and

⁴ Queen Elizabeth II: Wednesday, May 18th, 2011 by Queen Elizabeth II at a State dinner in Dublin Castle. Eire. <https://www.irishtimes.com/news/full-text-of-speech-by-queen-elizabeth-ii-1.876770>

⁵ Convention on International Civil Aviation, Chicago, 1944. Opened for signatories - 4 Dec, 1944, 61 Stat. 1180, 15 U.N.T.S. 295 (entered into force 4 April, 1947).

⁶ On 21 December 1988 Pan Am flight 103 exploded over the Scottish town of Lockerbie. The death toll was 243 passengers, 16 crewmembers and 11 local people on the ground.

⁷ The terrorist attacks on September 11, 2001 in the US – whereby terrorists hijacked four airplanes flying them deliberately into targets in the United States of America (US).

Departure points (airports): Boston - American Airlines 11 and United Airlines 175

Washington, Dulles – American 77

Newark – United 93

inevitably accountability and where we are in 2021.⁸

In presentation, the paper asks a number of questions as it progresses. These are not necessarily responded to in the paper – moreover, they serve as a thinking point and for other researchers to also reflect on.

2. Historical contextualization: *lessons from the past*

The first recorded aviation ‘hijacking’ occurred in the 1930’s when Peruvian revolutionaries seized a Pan American (Pan Am) mail plane with the aim of dropping propaganda leaflets over Lima.⁹ And, it was indeed Pan Am that was later to be the airline at the center of the 1988 bombing over Lockerbie. This attack, arguably, playing a significant factor in the ultimate demise of the airline.

In the 1931 incident, Peruvian mercenaries illegally commandeered (or according to some reports, attempted to commandeer¹⁰) a Ford Ti-motor aircraft for political revolutionary reasons.¹¹ Such early occurrences clearly served to provide an ominous indicator of events that were yet to face civil aviation, for, since this time, there has been a clear propensity to directly attack and disrupt air services through various means and methods.¹²

The question is: *Should we have anticipated the likelihood of some of these attacks?*

Throughout the short history of air travel, criminals (including terrorists and other ‘would-be’ fanatics with a cause) have continued to target both aircraft and airports as a convenient way and high-profile method to commit criminal acts. This has ranged from smuggling illegal and prohibited items, through to atrocities committed against this transport mode and the supporting infrastructure.¹³ However, it is undeniably national governments and the international community, which remains the primary focus for the more modern/newer, and more destructive and catastrophic, terrorist attacks that have

⁸ The scope of this paper is such that it does not delve into security risks in 2021 per se which is the focus of a secondary paper (linked paper: Sarah Jane Fox, Past Attacks – Future Risks: Where are we 20-years after 9/11? *Journal of Strategic Security* (in press).

⁹ Aviation Security Management [3 volumes] edited by Andrew R. Thomas, within Chapter 10, Mary, F Schiavo, ‘A Chronology of Attacks Against Civil Aviation. (Praeger Security International). Greenwood Publishing Group.

¹⁰ Michael Milde (2012) Essential air and space law (Page 219-220). Eleven International Publishing. Second Edition, The Hague, 2012.

¹¹ Paul Dempsey (2003) Aviation Security: the role of law in the war against terrorism.’ *Journal of Transnational Law*, Vol. 41, 2003, p. 654.

¹² D. Gero, (1997) *Flight of Terror: Patrick Stephens*, Somerset, UK. [SEP]A. Sinclair, (2003) *An Anatomy of Terror: A History of Terrorism*, Pan Books, London. [SEP]

¹³ In addressing the topic of security in this chapter – primary consideration is given to the act of terrorism and loss of life.

plighted aviation.¹⁴ As a consequence, security is now synonymously linked to aviation – much in the same way as the words - ‘fast’ and ‘global’ no doubt also are to air transport. There have undoubtedly been noticeable distinct periods and events that have shown the advancement and sophistication of criminal attacks and terrorism since the 1930s. And, twenty years ago, in 2001, there was to be the most devastating attack ever encountered (to date) showing the sheer magnitude of destruction, in terms the loss of life caused by the use of civilian aircraft under the control of terrorist extremists. As the former CEO of the International Air Transport Association (IATA) Giovanni Bisignani commented, September, 11, 2001 was “*the day that changed the world.*”¹⁵ Notwithstanding this, the history of aviation has shown the primary approach to security to be one of reaction and not foresight and pro-active prevention. In essence, this has, for most parts, resulted in delayed responsive mechanisms, whereby policies and practices have been put into place to largely mitigate the reoccurrence of attacks already experienced.

2.1. *Warning, opportunities and intervention*

Since the end of World War II, the western world – the developed countries, have increasingly taken to the skies. Air travel facilitates opportunities, whether these are for personal mobility, or for trade and business development, it allows borders and boundaries to be crossed with relative ease.

Arguably, in 2021, it could be said that the use of air travel has been significantly challenged by two (past and current) events – 9/11 and Covid – 19. Particularly, the latter has reduced, if not stopped, the freedom ‘*we*’ have taken for granted to fly across the globe.


In much the same way, air travel provides the same opportunities for criminal pursuits – global reach and high-profile targeting. The lack of ability to be able to fly in the period 2019-2021, due to Covid-19, could also provide the opportunity for planning of criminal ventures including attacks on the air industry.

2.1.1. *The past - Being prepared*

States have always resolved to protect the skies above their territories, appreciating the vulnerability that comes from above and staking a claim to the air space as an extension of their land. This protectionist approach predates the aircraft and is traceable back to the 18th century when balloons were used for military purposes to patrol the skies during the French Revolution, the Napoleonic wars, the US Civil War and the Franco-Prussian War. The potential risk emanating from the skies, including the opportunity to drop objects from airborne devices in order to target ground locations, lead to the call for the ‘prohibition of the discharge of projectiles from balloons’ during the 1899 First

¹⁴ Sarah Jane Fox (2014) ‘Security: *The influence of 9/11 to the EU Framework.*’ Research in Transportation Economics – Special Edition DOI: 10.1016/j.retrec.2014.07.004 Vol. 45 (2014), pp. 24–33.

Sinclair, A. (2003). *An anatomy of terror. A history of terrorism.* London: Pan Books

¹⁵ Giovanni Bisignani (2013). *Shaking the Skies*, LID Publishing Ltd., London, UK. 

International Peace Conference at The Hague.¹⁶

This was surely an early warning of the dangers from the sky not only in war but in peaceful times.

Indeed, it was the presence of German balloons crossing into France that led to the *1910 Paris International Air Navigation Conference*,¹⁷ which was called by the government of France so as to avoid international confrontations by means of regulating the operational issues of flight over a foreign territory.¹⁸ In this way, security of a nation should perhaps be cited as the primary reason for developing principles of international law relating to air navigation. However, while recognizing this to be the case, the world was noticeably different then than today and much less technologically advanced; and, while the intention may have been aimed at *international* negotiations, flight was restricted by the inability of the aircraft to actually undertake long flights and for this reason countries from other continents were not invited to attend this significant event (this included the USA). Controversial subjects such as ownership and the legal status of the air space above a territory were also primarily avoided but that said the Paris Conference still failed to draft an acceptable international convention.¹⁹ The reason for this failure is largely attributed, in the most part, to the disagreements relating to the right of foreign aircraft to fly over the territory of another nation and the national security and personal protection of the country and their subjects. However, noticeably there was advancement in terms of agreeing other areas, which led to the drafting of articles and annexes, for example - relating to the nationality of an aircraft and the respective registration of such, certification of aircraft (airworthiness), licensing of the flight crew, rules of the air, customs procedures, permissions required for the carrying of ammunitions and explosives used in warfare, etc. In essence, the areas where agreement could be reached served to inform and inspire later meetings and discussions.

The intervening World War of 1914-18 nevertheless delayed talks while advancing technology and capabilities of aircraft, particularly in terms of creating a more lethal weapon from which to use to inflict casualties on the ground as well as upon enemies in the sky. It is unsurprising therefore that in subsequent Conventions relating to regulation of Civil Aviation signatory states were dominant in reinforcing the need to protect the sky

¹⁶ Sarah Jane Fox (2014) *The evolution of aviation: In times of war and peace – blood tears and salvation!* [I]JWP (2014) Vol. XXXI No. 4 Dec. pp. 49-79.

See - "Hague IV," 29 July 1899

https://archive.org/stream/hagueconventions00inteuoft/hagueconventions00inteuoft_djvu.txt

<https://www.icrc.org/ihl/INTRO/145> and <http://www.hague-peace.org/index.php?action=history&subAction=conf&selection=when>

¹⁷ *Conférence Internationale de Navigation Aérienne*, Paris, 8 May-28 June, 1910.

¹⁸ Sarah Jane Fox (2014) *The evolution of aviation: In times of war and peace – blood tears and salvation!* [I]JWP (2014) Vol. XXXI No. 4 Dec. pp. 49-79.

¹⁹ Dr E. Faller, 'The Historical Significance of a Diplomatic Failure: The Paris Air Navigation Conference of 1910,' in *Beiträge zum Luft- und Weltraumrecht, Festschrift zu Ehren von Alex Meyer, Carl Heymanns Verlag* 1975, pp. 83-102.

above their territory. This led to the 1919 Paris Convention, reinforcing the principle of air sovereignty, although arguably it did not as such *create* the principle but merely recognized the practice as part of customary international law.²⁰ The later Chicago Convention,²¹ developed and formulated when the world was once again at war, reinforced this principle of airspace sovereignty through Articles 1 and 2 of the Convention.

3. The direction of travel - International recognition for aviation security

Given that the main impetus for the formulation and development of the principles of international law relating to air navigation was identified as security, it was perhaps surprising that the Chicago Convention only addressed this aspect from a *general security* perspective. Article 44 (entitled Objectives) cites the aims and objectives of the International Civil Aviation Organization (ICAO).²² Here, reference is made several times to the aspect of safety, however reference to security is clearly absent. This said, arguably there is an implied reference to ensuring secure air transport through the means to ‘*meet the needs of the people of the world for safe, regular, efficient and economical air transport*’ and by promoting the ‘*safety of flight in international air navigation.*’²³ In this manner safety is also deemed as including the concept of security – from the stance of ensuring the absence of danger that would compromise human life. It could also be argued that this also extends into safety for the environment and other property.

It is within the Preamble of the Convention where specific reference is made to *general security* – wherein, it is stated,

“*WHEREAS the future development of international civil aviation can greatly help to create and preserve friendship and understanding among the nations and peoples of the world, yet its abuse can become a threat to the **general security.***”²⁴

This reference to security therefore is recognized to be related to the principle of international peace as opposed to the later security issues encountered by aviation – most specifically security breaches stemming from acts of terrorism and other unlawful interference perpetrated by individuals (or groups) for various cited causes. It has been argued that the drafters of the Chicago Convention did not extend the scope past ‘general

²⁰ Convention Relating to the Regulation of Aerial Navigation. 13 October 1919. (The Paris Peace Conference of 1919 in the League of Nations Treaty Series Vol. XL, p. 173. Also see Vol. XXX *Annals of Air Law and Space Law* (2005), pp 5-15.)

Sarah Jane Fox (2014) The evolution of aviation: *In times of war and peace – blood tears and salvation!* [L]JWP (2014) Vol. XXXI No. 4 Dec. pp. 49-79.

²¹ Convention on International Civil Aviation, Chicago, 1944. Opened for signatories - 4 Dec, 1944, 61 Stat. 1180, 15 U.N.T.S. 295 (entered into force 4 April, 1947).

²² An organization identified within Article 43 of the Chicago Convention.

²³ Article 44 (d) and (h) respectively of the Chicago Convention.

²⁴ Emphasis added.

security,’ and include more specific reference to security aspects, as the modern day challenges that aviation now face could not have been envisaged in the 1940’s.²⁵ But, that said, The Convention noticeably came into being at the end of a world-war, which had seen developing warfare tactics being utilized (including advancement of guerrilla warfare) so conversely, it could also be argued that it was short-sighted for States not to have foreseen and anticipated further developments in terms of political terrorism and other ideologically motivated acts aimed at disrupting States’ stability (whether again politically or economically intended). After all, the pre-1944 attacks against civil aviation provided a clear indication of the manner and further potential to target aviation, and only too clearly indicated the vulnerability of civil aviation to unlawful acts, both when on the ground and in the air. Debatably, these early occurrences should have served as a clear warning of events that could be perpetrated. In essence, this was disputably an early failing of the international community to recognize and take collective measures to ideally prevent, or at least react to the targeting of aviation for these purposes.

ICAO also recognizes this as an inadequacy of the drafters of the Chicago Convention – but justifies this based upon the *benefit of hindsight*, as opposed to the lack of foresight.²⁶

3.1. The ICAO framework for aviation security

It was not until 1974 that the provisions for international aviation security were first introduced through Annex 17 to the Chicago Convention.²⁷ The impetus for adding this is said, by ICAO, to have arisen due to the security breaches against aviation in the late 1960’s.²⁸ In fact, this development by ICAO followed the adoption of several International Conventions in relation to offences committed against an aircraft.²⁹

One of the primary methods to minimize security breaches is via a method of *assistance*, whereby ICAO ‘*assists*’ Member States through guidance documents such as the Security Manual Safeguarding Civil Aviation Against Acts of Unlawful Interference.³⁰ Over the years, ICAO’s work on aviation security has arguably developed from the initial focus of developing Standards and Recommended Practices (SARPs) to a three-pillar focus, this being:

- (i) Policy initiatives.
- (ii) Audits – focusing on the Member States capabilities to oversee their own aviation security initiatives and activities; and,
- (iii) Assistance to States in addressing serious security deficiencies revealed through the ICAO audits (performed under the Universal Security Audit

²⁵ Sarah Jane Fox (2015) ‘CONTEST’ing Chicago. Origins and Reflections: *Lest we forget! International Journal of Private Law*, (2015) Vol. 8, No. 1, pp. 73-98.

²⁶ Emphasis added (related to the title of the paper) www.icao.int/Security/Page (Security and Facilitation)

²⁷ This has since been updated a number of times since.

²⁸ Sarah Jane Fox (2015) ‘CONTEST’ing Chicago. Origins and Reflections: *Lest we forget! International Journal of Private Law*, (2015) Vol. 8, No. 1, pp. 73-98.

²⁹ Ibid.

³⁰ Doc 8973.

Programme – managed by the Aviation Security Audit Section – ASA).

Between 1973 and 1985 there were, in the region of twenty-five, attacks against various airports across the globe, and as a consequence the Protocol for the Suppression of Unlawful Acts of Violence at Airports, supplementary to the Convention for the Suppression of Unlawful Acts Against the Safety of Civil Aviation (1971, Montreal) was signed at Montreal on 24 February 1988.³¹ Undoubtedly, these attacks were also instrumental in leading to the establishment of the ICAO Aviation Security (AVSEC) Panel in the late 1980's.³² The Panel consists of a group of experts who advise and address evolving threat to civil aviation.

That said, many of the significant changes to aviation security have come as a direct result of tragedies, which have not been prevented or even predicted, or near misses that have revealed fallibilities in the current security measures – particularly in relation to screening techniques and methods at airports. Naturally there is a direct correlation between the security at the airport and the risk and exposure to aircraft, which arrives at and departs from such facilities. One of the most high-profile disasters of the 1980's was the 1988 bombing of Pan Am Flight 103 over Lockerbie in Scotland, which was to show the consequences of failures at an airport to and by an airline.³³

4. CASE STUDIES: *Lessons from 'terrorist attacks'*

(i) *Lockerbie*

Lockerbie was to reveal numerous inadequacies in respect to the means to prevent such terrorist attacks plus the inability of the international community to undertake concerted action to liaise, agree and bring the perpetrators of such events to justice. Lockerbie did lead to various changes being introduced – however, it is arguable whether all lessons were in fact learned. Additionally, it is also questionable whether there has been consistency across the globe in terms of implementation of practices directly as a result of Lockerbie or subsequent terrorist breaches.

In many ways, Lockerbie was very unique in terms of the international reach of this atrocity - i.e. the location of the explosion, the fact that many of the victims were US

³¹ See further breakdown and information:

David L. Glassman (1986) "Keeping "The Wild" out of "The Wild Blue Yonder": Preventing Terrorist Attacks Against International Flights in Civil Aviation," Penn State International Law Review: Vol. 4: No. 2, Article 6.

Available at: <http://elibrary.law.psu.edu/psilr/vol4/iss2/6>

<https://elibrary.law.psu.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1045&context=psilr>

See also: Fox, S. J. (2019) Policing aviation and keeping peace: intelligence-fed security. International Journal on World Peace. Vol. XXXVI, No.1 (March - 2019) pp. 63-92.

³² The ad-hoc Group of Experts was established on 30 January, 1989.

³³ Sarah Jane Fox (2015) 'CONTEST'ing Chicago. Origins and Reflections: *Lest we forget! International Journal of Private Law*, (2015) Vol. 8, No. 1, pp. 73-98.

Sarah Jane Fox (2015) 'To practice justice and right' – international aviation liability: have lessons been learnt? International Journal of Public Law and Policy, (2015) Vol. 5, No. 2, pp. 162–182.

citizens – who died in a US operated aircraft but within the territory of the UK, and, at the hands of bombers from Libya – who were not killed in the event. For, while the degree of devastation caused by 9/11 was higher, it did not challenge the international community in the same way as Lockerbie had done – although, undoubtedly it identified newer challenges, not least the level of destruction that could be caused by the direct use of an aircraft as a weapon of destruction. Lockerbie in fact led to positive changes in terms of preventing luggage being carried without the respective owner/passenger onboard. The ensuing investigations also determined that the cause of the explosion was due to a bomb hidden within a radio-cassette player in a suitcase. The explosive was identified as the plastic explosive SEMTEX, which was used by the military services and for legitimate industries – such as mining. However, it was not detectable by X-ray, possessing a very low vapor mass with no discernable smell. One of the first roles for the ad-hoc Group of Experts was to investigate the means to stop the use of the explosive in the future which led to the Convention on the Marking of Plastic Explosives for the Purpose of Detection, signed at Montreal on 1 March 1991 and entering into force on 21 June 1998.

However, in hindsight should the international community have anticipated the potential for this explosive to be used? And, hence, should it have looked to mitigate its use before this tragedy occurred? Particularly, since the community had been proactive three decades before.

In the period since 1963, the international community has developed approximately 20 international legal instruments aimed at preventing terrorist acts.³⁴ These instruments have been developed under the auspices of the United Nations and the International Atomic Energy Agency (IAEA), and while they are open to participation by all Member States there has been a variable degree of consistency re signatories and respective Parties commitment. So, whilst there is wide condemnation of terrorism and terrorist attacks, the conviction of the international community has not been consistent. This inevitably links to the findings relating to many of the terrorist attacks against the aviation sector, namely that there have been failings in relation to communicating and sharing intelligence of impending attacks and that there is an inherent failure in cooperating and collaborating not only across country borders but within countries.

The Lockerbie investigation generated accusations that the US intelligence services had indeed identified to Pan Am that it was at risk, however the airline had repeatedly ignored warnings that its security measures for interlining baggage were not sufficient.³⁵ The investigating Presidential Commission placed much of the blame for the bombing of Pan Am Flight 103 on the ‘*seriously flawed*’ aviation security system, beginning with inept

³⁴ See UN website bases:

<https://www.un.org/counterterrorism/international-legal-instruments>

³⁵ During the Court proceeding it was concluded that the responsible suitcase(s) came from the Pan Am feeder flight (Pan Am 103A) from Frankfurt.

and confused Pan Am security at Frankfurt and London and furthermore compounded by the Federal Aviation Administration's (FAA) failure to enforce its rules. One of the subsequent recommendations of the Commission was that a new assistant secretary of transportation for security and intelligence should be created to oversee aviation safety, and that the FAA's security division should be elevated so as to report directly to the FAA Administrator (at that time James B. Busey). The Commission Chair stated, “[t]he sad truth,” was “that the aviation security system administered by the FAA has not provided the level of protection the traveling public demands and deserves. The system is seriously flawed and must be changed.”³⁶

Two years later, in 1991, Pan American World Airways filed for Chapter 11 bankruptcy and flew for the last time on 4 December 1991. Although it has been stated that the reasons for its demise were attributable to the airline being a victim of spiraling fuel prices and the deteriorating economy at that time affecting all airlines, there is no doubt that the primary reason was due to the terrorist bombing of its Flight 103 over Scotland two years before and the financial cost in terms of reputation and liability. There is no doubt that terrorist attack comes at a high price and that there are a multitude of victims, in terms of not only the physical casualties (and the affects to relatives/friends of those who lose their lives or are injured and maimed) but to airlines, airport and other stakeholders – including respective governments and the insurance community, etc. Inevitably, this leads back to a key fundamental question as to who should bear and shoulder the cost of terrorist attacks against the aviation industry both from a financial and morale perspective when such destructive events and crimes are committed? Particularly, when in hindsight there was the potential to intervene and/or for governments to sign and endorse international approaches.

(ii) 9/11

The 2001 events of 9/11 once again exposed vulnerabilities in air travel that had inevitably not been plugged by the events of Lockerbie (or subsequent to 1988) and had not been foreseen or anticipated by ‘experts’ and other related stakeholders. The terrorist attacks struck at the very heart of the US and were aimed at high-profile physical targets, which were represented by the Twin Towers in New York and the Pentagon – the

³⁶ The Aviation Security Improvement Act of 1990, Joint Hearing and Markup Before the Committee on Foreign Affairs and the Subcommittee on Aviation of the Committee on Public Works and Transportation, House of Representatives, One Hundred First Congress, Second Session, on H.R. 5200 and H.R. 5732, July 26 and September 27, 1990 – United States. Congress. House. Committee on Foreign Affairs. Recommendation VIII to DOT and FAA – Title I. H.R. 5200.

Downloadable at:

https://books.google.co.uk/books?id=byWdwyrwJx0C&pg=PR8&lpq=PR8&dq=FAA+has+not+provided+the+level+of+protection+the+traveling+public+demand+and+deserves.+The+system+is+seriously+flawed+and+must+be+changed.%22.&source=bl&ots=l499BY6MBY&sig=ACfU3U3mrhDCnTq11jpKm_p_OFINrtIzQ&hl=en&sa=X&ved=2ahUKEwjJrKzSrtPwAhXFB2MBHbAkBTQAQ6AEwBXoECAUQAaw#v=onepage&q=FAA%20has%20not%20provided%20the%20level%20of%20protection%20the%20traveling%20public%20demands%20and%20deserves.%20The%20system%20is%20seriously%20flawed%20and%20must%20be%20changed.%22.&f=false

Department of Defense Headquarters.³⁷ Not only were extensive lives lost but the effects were significant, extending beyond the US to the greater-world economic markets. The attacks were directed at a democratic government system, plus the wider society, whereby they were invariably designed to undermine and challenge international confidence. The method of delivery may have been perpetrated through the use of aeroplanes, themselves being used as weapons of mass destruction, but this ‘*opportunity*’ arose due to fallibilities in various systems, not least aviation security. There was resounding shock of not only the events, but the vulnerability and exposure of society to terrorism – including to and even by aviation.

Ironically, in 1993, there has been an earlier terrorist attack against the World Trade Center, when a truck with a bomb was detonated below the North Tower. The intention was to cause it to crash down on the South Tower.³⁸ One of the main men involved was Ramzi Yousef who had spent time at an al-Qaeda training camp in Afghanistan, before arriving in the US illegally on a falsified Iraqi passport and claimed political asylum.³⁹

However, perhaps 1994 really revealed the potential for a civilian airliner to be used against a national monument in a terrorist attack. This related to a hijacking which started on December, 24, 1994, involving Air France flight 8969 (an Airbus 300B2-1C F-GBEC) which was due to depart from Houari Boumedienne Airport in Algier to Paris, France. In **fact**, it did not depart until December 26, after it was known that there were terrorists on board and the French sanctioned it entering France. Landing in Marseille, it was subsequently stormed by French elite forces.⁴⁰ The mission of the plane had been to crash into the Eiffel Tower.⁴¹

Debatably, 9/11 showed that lessons had not been sufficiently learnt from Lockerbie and perhaps other events also. There was an obvious indicator of a repetitive trend and propensity not to sufficiently, or adequately, check luggage – in this instance, in respect to carry-on items. In hindsight sufficient lessons has not been learnt from Lockerbie.

Once again there was widespread condemnation of the attack and although there was some “post-9/11 posturing”⁴² of intention to be proactive from an international and unified perspective, in many instances this diminished over a relatively short period of

³⁷ Located in Arlington County, Virginia, US.

³⁸ James Glanz; Eric Lipton. (January 21, 2014). *City in the Sky: The Rise and Fall of the World Trade Center*. Times Books. ISBN 9781466863071.

³⁹ Ibid. Also see Lawrence Wright (ed). *Looming Tower: Al-Qaeda and the Road to 9/11* Knopf, (2006).

Also see <https://fas.org/irp/world/iraq/956-tni.htm>

⁴⁰ Transport Security International: <https://www.tsi-mag.com/swatting-hijackers-away-the-hijacking-of-air-france-8969-and-the-gign-intervention/>

⁴¹ See the Los Angeles Times: ‘Omens of Terror.’ David Wise, Oct. 7, 2001.

<https://www.latimes.com/archives/la-xpm-2001-oct-07-op-54366-story.html>

⁴² Michael Milde, (2012) *Essential Air & Space Law*, 2nd ed., p.271, Eleven International Publishing, The Hague, Netherlands. ^[1]_[SEP]

time.⁴³ This can be illustrated by the fact that one of the most pressing issues in the aftermath of the attack related to insurance pay-outs and compensation/protection systems. The ICAO world - Global Scheme on Aviation War Risk Insurance⁴⁴ was advocated as a coordinated solution to providing assistance in the field of aviation war risk insurance, whereby contracting worked together so as to develop a unified approach in providing assistance in the field of aviation insurance in the event of such disasters.⁴⁵ However, as so often been the case with international discussions, attaining final agreement proved impossible, for while recognizing the need to achieve stability and reassurance during such crisis events, nations could simply not agree. In essence, there was not the political will or the mechanism at an international level to explore the plan further and drive this on, for the reality remains that international law is comprised of international treaties under the principle of international customs, which Member States governments 'decide' whether to enter in, or not – as the case may be. As was the situation at Chicago in 1944 – what proves a difficult topic to agree on is either not discussed, or, if it is, it simply falls by the wayside when discussion prove uncomfortable or solutions difficult to achieve. In many instances this leaves Member States to plug any gaps they see at a national level, thus causing a disparity of approaches and variable solutions across the globe. In some instances, bilateral agreements between countries ensure some consistencies or recognition as to accepted practices and procedures operated by the respective nations. From this perspective, the European Union has extended this principle, and has shown that agreement and basic frameworks between a number of States can ensure more regularity, which, in theory, should also translate to improvements and consistency in security measures. This means that equally, from a passenger perspective, there should be a better understanding of what is required of the discerning traveler during the respective travel stages – which inevitably starts with the obtaining of the travel document (in most cases the passport).

5. Agreement and diversity: EU and US – ‘comparison & perspective’

While 9/11 caused nations to re-evaluate aviation security measures – it failed to achieve uniformity across the globe perhaps on a scale that should have occurred, despite the fact that virtually all nations realized that there was a need to increase aviation security measures. Invariably States clung onto control and implementation of their system – their way. For example, whereas ICAO advocated a global-unified approach, such as, in relation to insurance⁴⁶ through ‘Globaltime’ – States, for most parts, took a stand-alone

⁴³ Sarah Jane Fox (2015) ‘To practice justice and right’ – international aviation liability: have lessons been learnt? *International Journal of Public Law and Policy*, (2015) Vol. 5, No. 2, pp. 162–182.

⁴⁴ ‘Globaltime’ was proposed as a means to facilitate an international third party insurance ‘mutual fund’ by way of an alternative mechanism to commercial insurance for airlines.

⁴⁵ Sarah Jane Fox (2015) ‘CONTEST’ing Chicago. Origins and Reflections: *Lest we forget! International Journal of Private Law*, (2015) Vol. 8, No. 1, pp. 73-98.

⁴⁶ As earlier - this extended to the area of aviation risk insurance, whereby passengers would pay a small but increased premium for flying, and damages caused to third parties on the surface in terrorism related incidents would be compensated by the utilization of a reinsuring mechanism of the participating governments.

stance – the US designing their own version of *Globaltime*, called ‘*Equitime*,’ whilst the EU proposed a system called ‘*Eurotime*.’ This divided approach emphasized once more, that for an international scheme to work there needs to be a more developed and stable governance approach. This requires the support of a regulatory system or systems, which extends beyond the area of aviation; hence, there needs to be a sustainable solution that is commensurate to the modern-day risks associated with terrorism (or other such security challenges). Invariably insurance deals with compensation ‘after’ an event (in hindsight) and naturally comes at a price to all parties, including the user. Prevention is always the better option.

Since 9/11, there has been noticeable progressive improvements to the insurance markets – leading to a higher degree of optimism that the market would be better placed to manage the risk and exposure in the event of another such attack. But that said, there still remains controversy and debate as to the respective role, responsibilities and hence liability of all stakeholders where terrorist attacks have occurred and hence have not been prevented.

Once again, this raises the question as to who should bear such a cost and at what level? And, ultimately, where and with whom does, or should, the primary responsibility lay in terms of managing various related risks that compromise aviation security – particularly when there have been failings in the system that have led to the need to compensate as a consequence of such deficiencies.

In reality, any measures to prevent such an incident remains more pressing than the mechanism to deal with the aftermath of such an atrocity. And it remains an undeniable fact that it is an issue wherein all nations battle to stay a step ahead of ‘*would be*’ terrorists, and others, that challenge aviation security.

5.1. Lessons from the EU: harmonization?

One of the most coordinated and unified approaches to aviation security amongst countries globally is recognized to occur within the EU;⁴⁷ however, this only developed as a direct result of 9/11, prior to then the EU had no legislative competence in this area and it was left to each Member State to determine its own security measures and apply its own rules and standards to aviation.⁴⁸ Notwithstanding this achievement, it should also be noted that the standard, for most parts, is based upon ‘commonality.’ The EU common rules in the field of civil aviation security are aimed at protecting persons and goods from unlawful interference. The development over the years has included Regulation (EC)

⁴⁷ As well as the current 28 Member States of the EU this extends to Norway, Liechtenstein, Iceland and Switzerland.

⁴⁸ Sarah Jane Fox (2014) ‘Security: *The influence of 9/11 to the EU Framework*.’ Research in Transportation Economics – Special Edition DOI: 10.1016/j.retrec.2014.07.004 Vol. 45 (2014), pp. 24–33. Note: that 1992 saw the EU’s Internal Market for Aviation being born.

300/2008⁴⁹ replacing the initial framework Regulation 2320/2002⁵⁰ and has seen various initiatives been imposed or advocated. The principle is for the EU Commission to work together with the Member States and other stakeholders in determining an efficient EU aviation security policy.

The common basic standards relate to:

- The screening of passengers, cabin baggage and hold baggage;
- Airport security – access control and surveillance;
- Aircraft security checks and searches;
- The screening of cargo and mail;
- The screening of airport supplies;
- Staff recruitment and training.

However, there are key considerations for implementing technology solutions, in the name of security, relating to travel convenience against operational factors – such as time and financial considerations and implications.

Across the globe, there remains the constant need to reevaluate technology measures and procedures in line with threats, intelligence reports and risk assessments at regular intervals or when new challenges become known. In reality though, many of the experiences across the world have resulted in each country taking its own response to a shared problem. However, sharing of good practices and information remains key. That said, the EU's approach though has been based largely upon harmonization of practices and procedures.

Yet, as Gladwell observed any responsive measures applied has generally led to the situation whereby, “[a]irport-security measures have simply chased out the amateurs and left the clever and the audacious.”⁵¹ In most cases these responses stay one step ahead of the last attack or attempted attack.

In Europe, for example – the 2006 attempted terrorist attack out of London-Heathrow airport,⁵² wherein the intention was to blow-up several aircrafts in flight utilizing

⁴⁹ Regulation (EC) 300/2008 of the European Parliament and of the Council of 11 March 2002 on common rules in the field of civil aviation security and repealing Regulation (EC) 2320/2002.

Also note: that in 2016 the whole set of previous implementing legislation was updated: Commission implementing Regulation (EC) N° 2015/1998 lays down detailed measures for the implementation of the common basic standards on aviation security.

Whilst - Commission Regulation (EU) N°72/2010 lays down procedures for conducting Commission inspections in the field of aviation security.

⁵⁰ Regulation (EC) 2320/2002 of the European Parliament and of the Council of 16 December 2002 establishing common rules in the field of civil aviation security. OJ L355, 30 December, 2002.

⁵¹ Malcolm Gladwell, (2001). Safety in the skies. Available at <http://gladwell.com/safety-in-the-skies/>

⁵² See background information at <http://edition.cnn.com/2006/WORLD/europe/08/10/uk.terror/>
<http://www.telegraph.co.uk/news/uknews/terrorism-in-the-uk/6153243/Airline-terror-trial-The-bomb-plot-to-kill-10000-people.html>

homemade explosives, led to the EU Commission adopting additional rules for passengers in relation to carrying on board liquids, aerosols and gels (LAGs). Given the lessons learnt from SEMTEX should this have been anticipated and even mitigated against earlier? The ban imposed on LAGs was envisaged as a temporary restriction, which would be revisited when new technology became available. However, in January 2014, far from becoming removed, it was arguably extended, when it became mandatory for all airports to screen with special liquid explosive detection equipment the LAGs (which extended, at that time, to those purchased at the airport). Today, these provisions still remain in place.

As a result of the attempted terrorist attack on December, 25, 2009 involving explosives concealed on a passenger,⁵³ a subsequent EU legal framework on security scanners was adopted.⁵⁴ However it was stated that the use of security scanners at EU airports remained optional for the Member State/airport(s) and hence was subject to regulation at a national level.

At any EU airport, passengers therefore ‘may’ be screened by body scanners, either as the primary method of screening or as an additional method to resolve any concerns. While it is left to an EU country to decide whether to use the scanners, if a country has chosen this option it must comply with the EU rules.

The Regulation therefore relates to the minimum operational standards and conditions for the scanners whereby a harmonized approach is adopted (when used). So, while common rules and common basic standards exist, Member States are able to deviate and apply more stringent measures than those laid down, however, this would seem to run contrary to the principal goal of the EU for a ‘one-stop security’ approach being applied to all flights with the Union. In essence, such deviation and diversity stands to create not only uncertainty for passengers but inconsistency of standards leading to potential vulnerabilities.

Currently, the emphasis applies to the need to work across the following key areas:

- The general use of the security scanners at EU airports
- Working on replacing the ban on liquids, aerosols and gels by a more improved and secure screening procedure.
- Improving the security of the EU bound cargo and mail, which departs from airports located outside the EU.
- Improving the transparency and ensuring cost-related and non-discrimination when levying charges at the airports.

In terms of the aspect as to who should pay for security, the EU again explains that whilst

⁵³ This relates to the failed bombing of Northwest Flight 253 bound for Detroit (from Amsterdam) by Umar Farouk Abdulmutallab, who had explosives sewn into his underpants.

⁵⁴ In November 2011 the European Commission adopted the framework on security scanners, which has since been integrated into Commission Implementing Regulation (EU) 2015/1998.

this is subject to the relevant rules of Community law it translates through to the fact that the protection of civil aviation lies with each ‘*State, the airport, entities, air carriers and other responsible agencies, or users.*’⁵⁵ Thus applying a shared approach to security, but one that remains subject to coordination and indeed cooperation, not only within a State but across States, and not just in respect to aviation but the sharing of other information and security data.

5.2. The USA

After 9/11, in 2001, The Aviation and Transportation Security Act⁵⁶ established the Transportation Security Administration (TSA) within the Department of Transportation (DoT). This Act applied many responses appertaining to lessons learnt from the 9/11 attacks (as well as later threats that year⁵⁷) and included measures such as fortification of aircraft cockpit doors.⁵⁸ Up until this time the FAA had been working alongside ICAO to strengthen international security standards by adopting a harmonized approach across the world but this responsive measure surpassed this somewhat slower mechanism. It once again clearly reinforced the inability to apply standardized methods (and in essence, ‘quick responses’) via the International Community process.⁵⁹

However, in 2015, the Germanwings disaster⁶⁰ led to the reinforcement standard and the locking procedure for cockpit doors being questioned during the investigation into the incident. This once again showed a disparity of systems and practices across the globe in terms of security and safety measures and protocols, not only from one country to another but by airlines. The Germanwings protocol was in-line with the rules established by the German aviation safety authority, the Luftfahrt Bundesamt – which states that when there are two crew members, one can leave the cockpit – but only for the absolute minimum period.⁶¹ However, in contrast, the US procedure states that a flight attendant

⁵⁵ Article 5 - Regulation (EC) 300/2008.

⁵⁶ Aviation and Transportation Security Act of 2001, Pub L No. 107-71, 115 Stat. 597 (2001)
(Herein the Security Act)

⁵⁷ In December 2001 there was a further attempt in the US by Richard Reid (also known as Ariq Eja – and as the shoe-bomber) to cause damage/destruction to American Airlines flight 63 by igniting explosives in his shoes.

See <http://www.telegraph.co.uk/news/worldnews/northamerica/usa/11388442/Failed-shoe-bomber-Richard-Reid-describes-tactical-regrets-that-mass-murder-mission-failed.html>

⁵⁸ Ibid. § 104, 115 Stat. 6060.

⁵⁹ The Chicago Convention later updated Annex 6 to read,

“ From 1 November 2003, all passenger-carrying aeroplanes of a maximum certificated take-off mass in excess of 45,500 kg or with a passenger seating capacity greater than 60 shall be equipped with an approved flight crew compartment door that is designed to resist penetration by small arms fire and grenade shrapnel, and to resist forcible intrusions by unauthorized persons. This door shall be capable of being locked and unlocked from either pilot’s station.”

⁶⁰ Germanwings Flight 9525 - 24 March 2015.

https://www.bea.aero/uploads/tx_elydrapports/BEA2015-0125.en-LR.pdf

⁶¹ EASA later re-issued advise for minimum cockpit occupancy in Europe – EASA SIB_2016-9 21 July 2016. <https://ad.easa.europa.eu/ad/2016-09>

is required to go into the cockpit when a pilot leaves it.

Other procedures authorized by the US Security Act included the increased use of video cameras within aircraft (and at airports) and the authorization for arming flight deck crew with, what is stated as, “less-than-lethal” weapons. While surveillance cameras have now become an increasingly used method utilized to monitor travelers (and indeed staff) in order to detect security breaches and threats across aviation establishments – permission for the arming of crew is not a process that has been adopted widely across the globe. Given the latter Germanwings disaster, which was allegedly purposely perpetrated by a sanctioned pilot, there are obvious concerns as to the associated risks involved with permitting certain authorized personnel to have weapons onboard. The Germanwings incident only too clearly showed that security threats also manifest themselves from staff and employees. ‘Insider threats’ – by aviation staff, has become a major security concern for the industry in recent times (ranging from minor offences, through to organized crimes, and hence includes the opportunity to undertake or assist in a terrorist attack, including seizing/hijacking an aircraft) whether at an airport or in the air. From a US perspective, armed personnel have been viewed as a key aid to deter or prevent offences on aircraft for a number of years – acting as a further security layer. Indeed, air marshals have been on US planes for over 50-years with a sky marshal program being established by President Kennedy in the 1961 as a result of the then security breaches and threatened/potential risk of such. The FAA began its official ‘Sky Marshal’ program in 1968, and today the Federal Air Marshal Service (FAMS) comes under the supervision of the TSA, which is part of the US Homeland Security (DHS).⁶²

In 1999, it was argued that a hijacker had an 81% chance of seizing control of an aircraft as compared to the success of bombing an aircraft, which was stated at being lower, at 76%.⁶³ Given today’s security measures these statistics may well have changed, however, the effectiveness of air marshals⁶⁴ has hitherto been more recently questioned, with allegations being levied that they are now ineffective and not equipped to cope with today’s security challenges.⁶⁵

⁶² See 49 U.S. Code § 44917 - Deployment of Federal air marshals
49 CFR 1544.223 - Transportation of Federal Air Marshals.

⁶³ A. Merari, (1999). Attacks on civil aviation: Trends and lessons. In P. Wilkinson & B. Jenkins (Eds.), *Aviation terrorism and security* (pp. 2-6). London: Frank Cass Publishers.

⁶⁴ In Europe, Regulation 300/2008 specifies that it is for each Member State to determine whether to deploy in-flight security officers on aircraft registered in that Member State or on flights of air carriers licensed by them in accordance with paragraph 4.7.6 of Annex 17 to the Chicago Convention.

⁶⁵ See ‘ANALYSIS - Federal Air Marshal Service’s Failure To Adapt To New Aviation Threats Is Alarming’ by Clay Biles, 8 March 2015 and 23 February 2017: Available at <http://www.hstoday.us/single-article/analysis-federal-air-marshal-services-failure-to-adapt-to-new-aviation-threats-is-alarming/3cbd3070399904dbb5d5af426e778efd.html>

<http://www.hstoday.us/briefings/daily-news-analysis/single-article/special-analysis-federal-air-marshals-fail-to-assess-capabilities/78940370dd6aa9cddb801ef4cd1d6085.html>

Also see Schneier on Security at:

https://www.schneier.com/blog/archives/2010/04/the_effectivene.html

6. *The Future*: Prevention is better than the cure

Applying a medical analogy – ‘*prevention is better than the cure.*’ And in many ways, this is an ethos applied to situations where it is anticipated that there is risk and that there is a higher cost to bear in not taking preventive measures – for example, ensuring oil is maintained within an engine system.

Yet, although this is a well-known medical phrase, the origins – ‘medicine,’ has shown a lack of ability to actually apply this in practice – with medicine just like aviation security, being overwhelmingly reactive rather than proactive.⁶⁶ Medicine too has had to apply morale principles or ethics to its practices – particularly those of a research and trial nature. In many ways, aviation has had to suffer the same level of scrutiny, and (even medical considerations) in terms of the practices adopted as a means to prevent security breaches (such as various person-screening techniques). Inevitably, when security goes wrong it stands to equally compromise lives – particularly when the failure results in a terrorist atrocity. Claims of medical negligence whilst not being common are certainly not unknown or encountered – in general, this area of litigation relates to ‘errors and mistakes’ in the diagnosis or treatment of an individual, and whereby there is a need to seek answers, redress – such as compensation, and admittance or responsibility for the resulting consequence.⁶⁷

6.1. Bearing responsibility

Following high profile (terrorist) incidents in aviation (such as Lockerbie and 9/11) scrutiny has often been undertaken in order to establish where mistakes have been made – in *hindsight*.

In many instances, these enquiries have only assisted to indicate a purposeful intention rather than cement a final act, or commitment to act at the very least. These investigations have often shown an adaption on the ‘*Swiss-Cheese*’⁶⁸ principle or, accumulative action effect applying – leading invariably to actions being executed with disastrous consequences.

Such investigations have, in many instances, highlighted the inability to coordinate and share information – such as intelligence and data of the impending threat; and, where a

⁶⁶ Art Johnson, ‘Prevention Is Better Than Cure,’ IEEE Pulse, Sept/Oct. 2016
<http://pulse.embs.org/september-2016/prevention-is-better-than-cure/>

⁶⁷ Further defined ‘medical negligence’ is understood to be the inadequate treatment of a patient by a medical professional, which has led to injury, pain, trauma, or the worsening of an existing medical condition. This can occur through malpractice, incorrect treatment, unskilled care professional and other practitioners.

⁶⁸ This refers to the model largely devised by James Reason for system failure. Whereby there are variable steps that can lead to failure and although variable layers can be applied as a defense when a hole exists it maybe passed onto the next layer. The danger is transmitted through to a disaster or error when the wholes align.

coordinated response would have aided in mitigating or even preventing the higher-level of exposure to the risk or the event itself. That said, where terrorist attacks have occurred the ultimate culprit is the terrorist(s)/offender(s) and any related network behind it. In more recent attacks the possibility of seeking redress from the perpetrator(s) and associated group has not always been possible (i.e. suicide bombers, etc.) and only in rare cases has compensation from a source (other than an insurer) been possible. Invariably, the layers of cheese will have lined up (meaning the offence was not only possible but indeed committed) arguably, due to other added ‘errors’ or ‘mistakes.’ In some instances, this may be interpreted as even negligent action by a party or parties who should have foreseen the event or had in place the practices and procedures to detect or prevent the atrocity. Responsibilities for offences committed on aircraft inevitably will remain a shared responsibility – not least of the system, or breakdown/lack of systems, in place. This will also see airport also playing a role and being a party to any allegation levied for non-compliance or failure – for example this may also see the airport operator or screening agent bearing a percentage of responsibility too. And then of course there is the role of the State, or State’s agents – such as security and policing bodies to also factor in – in terms of both culpability and responsibility.

7. Security as a right?

The Universal Declaration of Human Rights (UDHR) identifies that “[e]veryone has the right to life, liberty and **security** of person,”⁶⁹ and, the preamble reaffirms the intention of Member States to ensure this through their ‘pledge’ to work in ‘*cooperation*’ with the UN to achieve this. However, security measures have arguably, infrequently, been challenged as being contrary to, and an interference on, a person’s privacy, and, whilst, Article 12 does identify this aspect, it also adds that, “[e]veryone has the right to the protection of the law against such interference or attacks.”

In the wake of 9/11 government security and law enforcement bodies across the globe were tasked with collecting data in a bid to prevent another terrorist attack but amidst this there were claims levied (particularly in the US following the creation of Homeland Security) that a mountain of digital data was being collected on individuals who were never a threat to security.⁷⁰ Privacy activists claimed that the depth and degree of data mining was not justified and invaded personal privacy rights, which undermined civil

⁶⁹ Article 3 - United Declaration of Human Rights. Paris 10 December 1948 General Assembly resolution 217A).

⁷⁰ The following issues were identified by the EU and UK Parliaments:

The collection of more information than is needed for this purpose, standards of accuracy slip, and the sharing of information with those not responsible for counter-terrorism and/or used for other purposes. ^[1]_{SEP}
See EP Resolution on EU judicial cooperation with the United States in combating terrorism accessible <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P5-TA-2001-0701+0+DOC+XML+V0//EN&language=EN> . According to this text the EP considered "... that the US Patriot Act, which discriminates against non-US citizens, and President Bush's executive order on military tribunals are contrary to the principles established. ..."

liberties and was contrary to constitutional rights and other established civil protections. In this digital and cyber age these issues are increasing becoming more blurred and inevitably more controversial, as technology presents both a challenge to security (from an unauthorized access perspective⁷¹) and equally an opportunity – as a means to utilize to address threats. On the one hand, the Internet is embraced as a way to connect millions of people - each day, information is willingly shared via this method, yet on the other hand, objections are raised when travel records are transferred across borders and biometric data is shared.

However, it is recognized that cooperation and building intelligence remains the most effective way to combat and fight terrorism, which therefore ensures freedom of the individual and ultimately preserves their right of life.⁷² The Final Report of the 9/11 Commission, published in 2004, identified the reluctance by different security authorities to share information with one another as one of the main causes of the failure to prevent the terrorist attacks. “The post 9/11 review suggested the need for strong institutions that overcome *national* and *organisational silos* that prevent inefficient coordination.”⁷³ That said, governments have long been using passenger lists to screen travelers and persons already on watch lists (or where other interests have been generated and raised) before they depart on a journey. However, 9/11 was to lead to further coordinated, and, at times, controversial methods, to share passenger information.

7.1. Passenger Name Records (PNR)

Profiling - The privacy of data vs. security debate

In trying to address the criticism levied within the 9/11 Commission report – there has been a concerted effort for more coordination globally. However, this has not been without challenge – as it is difficult to break a legacy of sharing information, or rather not, when knowledge is sometimes viewed as power. Invariably, this is also linked to what is perceived as sovereign control (or, arguably dominance), whereby security agencies remain an extension of governments. Even internally, within countries, i.e. with their own airlines and other agencies, there has been a reticence to coordinate and share information, as 9/11 and Lockerbie identified.

This said, 9/11 has, for the most part, led to major changes in the way security matters are

⁷¹ For example – it is identified that personal records run the risk of being hacked or compromised, which again presents a security threat.

⁷² It is argued that national security is therefore compatible with Article 3 of the UDHR: which recognizes that: “*Everyone has the right to life, liberty and security of person.*” See further discussions on this conflict Sarah Jane Fox “*Mobility and movement are ‘our’ fundamental rights*”..... Safety & Security – risk, choice & conflict!..... *Issues in Aviation Law and Policy*. Volume 17 No. 1. Autumn, 2017, pp 7-43

⁷³ Ibid. S. J. Fox (2017) – this finding was instrumental in leading to the creation of the Department for Homeland Security.

handled throughout the Western world, and not least of course in the US.⁷⁴ Since the 2001 aviation related terrorist atrocity, the focus has shifted to preventing terrorist attacks and monitoring those so far unidentified by using more of the detailed information collected by airlines and travel agencies when an individual books a flight.

Today, Passenger Name Records (PNR) contains information, such as travel itineraries and payment details that can be analyzed to identify high-risk travelers before they board their planes.⁷⁵ However, the transmission of such sensitive information outside of the originating country has remained a contentious issue, which has required numerous barriers having to be negotiated (see Table 1: PNR Timelines – key developments, EU with the US).

The US requirement for airlines to supply PNR data to the Bureau of Customs and Border Protection (CBP) within the DHS ran contrary to Article 25 of the 1995 EC (European) Data Protection Directive,⁷⁶ which provides that personal information originating from within EU Member States may be transferred to a third country only if that country “ensures an adequate level of protection.” Initially, the EU Commission decided that the United States did not ensure an adequate level of protection in order to satisfy this and allow for the PNR data to be transferred from Member States. This meant that airlines were left in a position of breaching EU law (and of the (then) respective national laws implementing such) if data was transmitted, but a failure to transfer the data would conversely result in sanctions in the United States, which might extend to heavy fines and ultimately to a loss of landing rights for the airlines. Negotiations to seek a remedy to this dilemma continued for an extended period of time (as Table 1).

Initially, a compromise via an interim Agreement was reached between the US and the EU (whereby concessions on the amount of data to be sent and how the data would be handled was agreed by the two parties⁷⁷) with both the Commission Adequacy Decision

⁷⁴ The Aviation and Transportation Security Act of 2001 in the US (adopted on 19 November 2001) gave the Bureau of Customs and Border Protection (CBP), within what is now the DHS, and the Transportation Security Administration (TSA) authority to require access to Passenger Name Record data. [SEP]

⁷⁵ Note this is different to the transfer of advance passenger information or the Advance Passenger Information System (APIS). APIS simply allows the country of destination to access at the time of departure of a flight information about the identities of passengers which it would otherwise receive on the arrival of the passengers. This basic information is held on the airlines’ own departure control systems and is mostly derived from the machine-readable sections of passports.

⁷⁶ Directive 95/46 of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data, OJ L281, 23 November 1995, p 31. [SEP]

⁷⁷ The Data Protection Working Party established under Article 29 of the Data Protection Directive 95/46/EC. [SEP] Also see: Opinion 2/2004 on the Adequate Protection of Personal Data contained in the PNR of Air Passengers to be transferred to the United States, Bureau of Customs and Border Protection (US CBP).

2004/535/EC: Commission Decision of 14 May 2004 on the adequate protection of personal data contained in the Passenger Name Record of air passengers transferred to the United States’ Bureau of Customs and Border Protection (notified under document number C(2004)1914).

2004/496/EC: Council Decision of 17 May 2004 on the conclusion of an Agreement between the European

and the Council Decision, authorizing signature of the 2004 Agreement. However, this was later to be annulled in 2006.⁷⁸ In Advocate-General Léger's Opinion,⁷⁹ he advised that the Adequacy Decision was unlawful, since the Directive on which it was based was an EC (first pillar) instrument, and therefore inappropriate for dealing with third pillar matters. The Court agreed with the Advocate-General on the issue of legality, holding that activities under Title VI of the (then) Treaty on European Union, such as activities in the fields of public security, State security and the activities of the State in areas of criminal law, fell outside the scope of the Directive.

As has been discussed, while the EU was slow to act on aviation security, it was as a direct consequence of 9/11 that the EU gained a central role, adopting competence in transport, across this field. However, the premise of sharing data to aid security sits within the area of law enforcement which is, for the majority part, under the control and sovereignty of Member States – as was this was in the third pillar.⁸⁰

That said, a further 'provisional' Agreement was signed⁸¹ with the US, but this was to also lead to further amendments and re-negotiations leading a later one in 2007.⁸² However, only in 2012 was a firmer Agreement reached with the US.⁸³ Also in 2006, the EU entered into an agreement with Canada⁸⁴ which has equally been contentious (Court of Justice of the European Union (CJEU) judgments – see section 8) which now stands to impact on the 2012 US-EU Agreement).

Although it is appreciated that data and intelligence needs to be shared in order to prevent

Community and the United States of America on the processing and transfer of PNR data by Air Carriers to the United States Department of Homeland Security, Bureau of Customs and Border Protection.

⁷⁸ Joined Cases C-317/04 and C-318/04

Judgment of the Court (Grand Chamber), 30 May 2006. I - 4795

Agreements, in order to share passenger data, were also agreed between the EU and Canada (OJ L 91, 29.3.2006, p. 53, OJ L 91, 29.3.2006, p. 49 and OJ L 82, 21.3.2006, p. 15) and the EU and Australia (OJ L 213, 8.8.2008 p. 49.).

⁷⁹ Joined Cases C-317/04 and C-318/04. Opinion of Advocate General Léger delivered on 22 November 2005 - I-4724.

⁸⁰ The Treaty establishing the European Community (TEC) dealt primarily with the internal market: what are now known as first pillar matters. Title VI of the Treaty on European Union (TEU) gave the European Union (as opposed to the European Community) the power to deal with Police and Judicial Cooperation in Criminal Matters. These are so-called third pillar matters, which are therefore outside the scope of the TEC.

⁸¹ It was signed on behalf of the EU on 16 October, 2006, and on behalf of the United States by the Secretary of DHS on 19 October, from which date it applied "provisionally."
OJ L298/29 of 27 October 2006.

⁸² Agreement between the European Union and the United States of America on the processing and transfer of Passenger Name Record (PNR) data by air carriers to the United States Department of Homeland Security (DHS) (2007 PNR Agreement)
OJ L 204, 4.8.2007, p. 18–25.

⁸³ Agreement between the United States of America and the European Union on the use and transfer of Passenger name records to the United States Department of Homeland Security, OJ L 215, 11.8.2012, p. 5.

⁸⁴ Agreements, in order to share passenger data, were also agreed between the EU and Canada (OJ L 91, 29.3.2006, p. 53, OJ L 91, 29.3.2006, p. 49 and OJ L 82, 21.3.2006, p. 15) See also at this time, the EU and Australia Agreement (OJ L 213, 8.8.2008 p. 49).

terrorist attacks, there is no denying the concern in sharing information of passengers and the storage of the information (in respect to security and the permitted time for retaining records). Most of the controversy, however, surrounds the use to which PNR data is used, for example automated profiling based on passenger data⁸⁵ and the use of data mining programs to obtain computer-generated risks assessment scores which aim to identify passengers who may pose a risk but who are not on any Government watch list.⁸⁶

Certainly sending information, outside of the European Union has remained a highly sensitive issue for the Member States collectively.⁸⁷ And, as early as 2003, the EU Commission looked to establish a ‘*Global EU Approach*,’ which aimed to set out elements for an international coordinated stance to PNR.⁸⁸ In doing so it also advocated that there was a key role to be played by ICAO, who later developed a series of guidelines for PNR transfers to governments.⁸⁹ This in itself presents an interesting dilemma and debate – as, the EU is not a signatory to ICAO, whereas, the Member States are.

The European Union, as it is now known today, did not exist until 10 years after the founding of ICAO. The Treaty establishing the European Economic Community was not signed until 25 March 1957, entering into force on 1 January 1958. All EU Member States are members of the UN, whilst the European Community has only had observer status at the UN since 1974. Hence, the status of the EU at ICAO remains contentious, not least by the EU, which has sought to obtain Community membership of ICAO as a single entity. However, Article 92 of the Chicago Convention states that it is only open to States, and membership on a regional basis would necessitate an amendment to the Convention.

That said, the EU, on behalf of the community, has continually reinforced the challenges of sharing information and hence concerns regarding international PNR transfers.⁹⁰ While

⁸⁵ Data profiling is the determination of characteristics or combinations of characteristics which might identify someone or something as being potentially worthy of investigation. Data mining is the use of advanced algorithms to trawl through huge databases to discover someone or something matching that profile. This has often been raised as a concern:

For example – as identified in a letter to from Ms Joan Ryan MP, Parliamentary Under-Secretary of State, Home Office, ^[1]^[2]UK (30 March, 2007).

Also see The Consultative Committee of the Centre for the protection of individuals with regard to automatic processing of personal data. ‘Passenger Names Records, data mining and data protection: the need for strong safeguards. Council of Europe. Strasbourg, 15 June, 2015.

⁸⁶ Letter of 9 January 2007 from Privacy International to the EU Vice-President, Frattini. ^[1]^[2]

⁸⁷ This said some members (such as the UK) have operated a stand-alone system for PNR.

⁸⁸ COM(2003)826. This was followed by a Communication of 21 September 2010, ‘On the global approach to transfers of passenger name record (PNR) data to third countries.’ COM/2010/0494 final. Brussels, 21 September, 2010.

⁸⁹ Doc 9944 - ICAO’s guidelines on PNR.

⁹⁰ After 9/11 many countries continued to establish their own systems and call upon States to supply data on passengers.

It should also be identified that airlines have collected and processed their passengers’ (equivalence of PNR data) for their own commercial purposes.

the EU has had a Directive relating to the obligation of carriers to communicate passenger data it purely concerned basic information relating to the transmission of information prior to the movement of the passenger.⁹¹ The extension⁹² from the Advanced Passenger Information (API) Directive – which is an identification mechanism,⁹³ to a PNR Directive approach, whereby data is obtained to fight terrorism and other serious crime, has been an arduous journey, resulting in, what has been described as ‘*one of Europe’s most controversial directives*’ to date.⁹⁴ At the same time, it was widely anticipated that the measures within the PNR directive would ‘*save lives, protect rights, catch criminal and make Europe a safer place for citizens,*’ but that said, it took an extended period of time to achieve, only being approved by plenary on 14 April 2016 (virtually 4-years after the Agreement with the US).⁹⁵ This also coincided with the EU’s modernization of legislation on the protection of personal data through the adoption of Regulation (EU) 2016/679 (the General Data Protection Regulation or GDPR⁹⁶) and Directive (EU) 2016/680 (the Directive on data protection in the law enforcement sector, also known as the Law Enforcement Directive⁹⁷).

Internationally, in December 2017, the UN adopted Security Council Resolution 2396 requiring all UN States to develop the capability to collect, process and analyse PNR data and to ensure PNR data are used by and shared with all their competent national authorities.⁹⁸ In March 2019, ICAO, in support of States developing such capabilities, launched the process to draft new PNR standards. These standards are now binding on all

⁹¹ The API Directive – Council Directive 2004/82/EC of 29 April 2004 on the obligation of carriers to communicate passenger data. OJ L 261, 6.8.2004, p. 24–27.

API Guidelines were initially developed in 1993 by the WCO in cooperation with the International Air Transport Association (IATA).

⁹² The PNR is not seen as a replacement merely an additional tool aimed at aiding security. It is without prejudice to Directive 2004/82/EC (as identified in Directive (EU) 2016/681).

⁹³ Aimed at immigration control in the main.

⁹⁴ European Parliament 13 April 2016 – “On the arrivals board: airline passenger data sharing.”

<https://www.europarl.europa.eu/en/programme/security/on-the-arrivals-board-airline-passenger-data-sharing>.

Directive (EU) 2016/681 of the European Parliament and of the Council of 27 April 2016 on the use of passenger name record (PNR) data for the prevention, detection, investigation and prosecution of terrorist offences and serious crime. OJ L 119, 4 May, 2016, p. 132–149.

⁹⁵ Directive (EU) 2016/681 requires Member States to bring into force the laws, regulations and administrative provisions necessary to comply by 25 May 2018 - Article 18.

⁹⁶ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) (Text with EEA relevance), OJ L 119, 4.5.2016, p. 1.

⁹⁷ Directive (EU) 2016/680 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data by competent authorities for the purposes of the prevention, investigation, detection or prosecution of criminal offences or the execution of criminal penalties, and on the free movement of such data, and repealing Council Framework Decision 2008/977/JHA, OJ L 119, 4.5.2016, p. 89.

⁹⁸ Resolution 2396 (2017) - Adopted by the Security Council at its 8148th meeting, on 21 December 2017.

ICAO member countries (unless they file to deviate – stipulating their reason) and were adopted by the ICAO Council on 23 June 2020.

As part of this process the EU Commission actively engaged, as an observer, representing the EU in order to ensure the compatibility of these standards with the EU legal requirements, so that Member States could contribute to facilitate the transfer of PNR data.

However, in July, 2020 the CJEU issued a judgment, in the case of Schrems II, declaring as “invalid” the European Commission’s Decision (EU) 2016/1250 of 12 July 2016 on the adequacy of the protection provided by the EU-U.S. Privacy Shield.⁹⁹ This means, as a result of that decision, that the EU-U.S. Privacy Shield Framework is no longer a valid mechanism to comply with EU data protection requirements when transferring personal data from the EU to the US.¹⁰⁰

As of July, 2021 the matter had still not been resolved.

Date	Event
Oct. 2001	US enacts Aviation and Transportation Security Act ¹⁰¹ (ATSA), which mandates the collection of PNR data on all international flight to and from the US.
May 2004	First US-EU PNR Agreement is concluded
May 2006	CJEU annuls the US-EU Agreement – ruling that the Commission lacked the competence to negotiate it.
July 2007	A new US-EU enters into force
May 2010	The European Parliament withhold consent to the US-EU PNR Agreement
Nov. 2011	The European Commission completes a new US-EU PNR Agreement pending approval from the European Council and Parliament
April 2012	The European Parliament consents to the US-EU Agreement, leading to it entering force
June 2014	The Canadian-EU PNR Agreement is concluded
April 2016	The EU mandates that all EU States adopt PNR systems for certain flights originating from outside the bloc (also some intra-flights – also seen API requirements)
July 2017	CJEU rules that the Canada-PNR Agreement required revisions to conform with the EU data protection legislation
Jan. 2021	The European Commission reports that the US-EU PNR Agreement is now not in line with the CJEU Canada-PNR ruling

⁹⁹ Case C-311/18 Facebook Ireland Ltd, Maximillian Schrems, ECLI:EU:C:2020:559.

¹⁰⁰ See the Privacy Shield Q&A site at: <https://www.privacyshield.gov/article?id=EU-U-S-Privacy-Shield-Program-Update>.

¹⁰¹ USA Patriot Act, Public Law 107-56, 115 Stat. 272, October 26, 2001.

May 2021	The EU Parliament adopts resolution calling for the Commission to report on how it will bring the US-EU Agreement back into line and in conformity with the CJEU judgment
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Table 1: PNR Timelines – key developments, EU with the US
(Source: Authors – based on EU data and information)

There is no doubt that collecting widespread data on passengers, commencing earlier than the initial flight, builds up an extensive profile on a person – and this has led to concerns of global surveillance programs being operated. It is therefore argued that the events of 9/11 merely provided the justification for extending the US, existing mechanisms – such as the earlier Computer Assisted Passenger Pre-Screening (CAPPS – I).

While those that travel and fly want to be safe from a terrorist attack, the ongoing arguments remain whether the method and means are:

- (i) Too intrusive?
 - (ii) Justified?
- And/or,
- (iii) Whether there are ultimately better ways to prevent attacks than potentially building a profile of every traveler?

8. Conclusion - Today: 2020-2021 - *Hindsight*

Did anyone predict Covid-19? In hindsight, the answer is probably ‘yes.’ It was at least to be expected - (*wasn't it?*) that there would be some type of virus (*from nature or even man-made*) that would wreak havoc across the globe.

In 2015 Bill Gates commented at a TED talk, the world was “not ready for the next epidemic.”¹⁰² In many ways ‘we’ tend to think, that if some-thing has happened, the likelihood of it happening again is remote – (lightening rarely strikes twice in the same spot) or, that it will happen to someone else or in someone else’s life-time.

Historical events have shown that history does repeat – Spanish flu, in terms of a major pandemic, is only one such example, but a search through the history books will show many more examples.

History has a funny way of repeating itself.

Without doubt, the period 2020-2021 has been challenging to aviation,¹⁰³ and more

¹⁰² Other predictions at: <https://www.businessinsider.com/people-who-seemingly-predicted-the-coronavirus-pandemic-2020-3>

Also see: <https://www.gatesnotes.com/Health/We-Are-Not-Ready-for-the-Next-Epidemic>

¹⁰³ Fox, S. J. An ‘*obligation*’ to provide air travel: *In the Covid-19 era* (A European perspective. *Issues in*

generally to the wider society. Covid-19 has resulted in countless deaths, caused untold hardships and restricted movement – it has changed our life's.

It may also have provided an opportunity for terrorists and would be terrorists to plan further attacks against governments and society. And such attacks could once again involve civilian aircraft. As international flights begin to take-off and resume connecting society across the globe – it is surely a time not to drop our guard but to be prepared and be proactive in preventing future atrocities.

In 2021 – 20 years after 9/11 we can reflect with *hindsight* – it is easy to be wise after the event. However, the real skill is ensuring that we minimize history from repeating itself where we can - ideally, we ensure it just didn't happen again.

However, one of the challenges to security has always been 'acceptance' and 'willingness.' The Chicago Convention, *is what it is* – should it have envisaged aviation being such a target? The Convention was ultimately written in the midst of a world war, when nations were reluctant to offer their skies or to concede any control of 'their' airlines. As a result, airlines have been seen as an extension of the State, even when, with deregulation and liberalization, this is no longer, so commonly, the case. Over-time, there has been intervention from the international community, specifically through ICAO, to ensure that aviation security risks are understood and mitigated against. But this takes willingness to adopt international Conventions and other actions, and not just short-lived posturing after an event has occurred. Ultimately, this takes Member State's governments to agree and, for nations to coordinate action and share knowledge and best practice.

Sharing of information is key to preventing security breaches (including terrorist attacks) and other tragedies, from happening; but, ensuring the proper balance between security measures vs. privacy rights and protection of personal data remains a challenge. This has clearly been the case with PNR, for example. In many ways ensuring equilibrium is now a nemesis for aviation security – the US-EU Agreement is a clear example of perpetual challenges and history repeating.

As transatlantic air travel is looking to resume, having been plighted by the Covid-19 pandemic, the linchpin aviation security agreement between the US and the EU on passenger name record data is still far from settled. Ironically, the sharp drop in international air travel due to the panic has perhaps served to conceal the PNR issue. It has also allowed the 2012 Agreement to still be used, perhaps, somewhat in the background. Nonetheless, there is every indication that this matter will surface again very shortly and maybe even as a result of remembering and revisiting 9/11 some 20-years later – as a result of which, the US-EU PNR Agreement first came about.

Dialogue has to be continued to resolve this matter, and, more generally, the sharing of information between countries police and security agencies, must continue. To do otherwise would see a return to national and organization silos, or quasi-protectionism by which information is too heavily guarded. This would ultimately put airline and passengers at risk. Invariably, it was such factors that led to the industry being unduly vulnerably and perpetually being in a position of having to play catch-up for events already encountered by the aviation sector.

It is in everyone's interest to work together to make sure another 9/11 (or worse) never occurs again. This means that collective action is needed and there needs to be willingness from every party, the airlines, the airports, security agencies and respective governments.

In 2021, the EU has recognized Covid-19 has caused challenges to its common basic framework, implemented as a consequence of 9/11. The pandemic continues to impact international and European civil aviation to the extent that the performance of on-site visits for the designation and re-designations of air carriers and cargo operator has been affected, and arguably compromised. This has also impacted the ability of airports in the EU to complete the process of installation of standard 3 explosive detection systems (EDS) equipment, the newest technology for the screening of hold baggage. As a consequence, a new road map has been devised to allow additional flexibility to adapt to the current situation, in accordance with a prioritization mechanism based on categories of airports.¹⁰⁴

In all reality however, achieving zero risk will invariably never be possible – safety and security will always stand to be comprised, whether by purposeful or unintentional actions or events. This said, the aim must always remain to achieve zero safety or security incidents, or in failing to achieve this, attain the closest possible result to zero through mitigation methods that address, not only today's known, but tomorrow's perceived challenges and threats. Invariably, it will take collective action to prevent another 9/11. An important aid to doing so is to revisit and question past events and to consider the '*what if's*' and '*in hindsight*' - what could have been done better? Inevitably there remains a need to be proactively looking with foresight.

¹⁰⁴ Commission Implementing Regulation (EU) 2021/255 of 18 February 2021 amending Implementing Regulation (EU) 2015/1998 laying down detailed measures for the implementation of the common basic standards on aviation security (Text with EEA relevance)
C/2021/992. OJ L 58, 19.2.2021, p. 23–35.
