

*A Level Playing Field for "Open Skies": the
Need for Consistent and Harmonized
Regulation of Aviation*

By

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ABSTRACT

Various initiatives by regulators in different jurisdictions over the past two decades have completely reshaped the airline industry in ways that were unimaginable in 1992. From an industry dominated by Pan Am and Trans World Airlines (TWA), and newly privatized airlines such as British Airways, today's industry is dominated by government-owned intercontinental airlines based in the Middle East and carrying passengers the majority of whom are ultimately destined for States other than the States where the airlines are based. Insufficient thought has been given to whether this evolution is desirable, whether it involves profound competitive distortions or whether it is in the public interest that the majority of Australians visiting Europe are carried by an airline based in neither jurisdiction or that a similar claim might be made with respect to traffic between South Asia and the Americas.

This thesis examines the events that have reshaped the international aviation industry over the two decades between 1992 and 2012. It will critically analyze the major developments and the regulatory responses and highlight some of the incompatible and disjointed regulations that are in effect at either end of international routes.

It ultimately proposes that Australia, Canada, the European Union (EU), New Zealand and the United States (US) form a small international organization, to be known as the **Open Skies International Aviation Block (OSIAB)**. OSIAB would be based on expanding the membership of the US-EU Joint Committee foreseen in the 2007 US-EU Open Skies Agreement and expanding its scope to cover every aspect of the regulation of international commercial aviation. This thesis argues such a forum is necessary to ensure that regulations in different countries are aligned so that competitive distortions potentially caused by regulatory disharmony are minimized, thus allowing the international airline industry to compete on the level international playing field that so many international agreements have promised to create.

RÉSUMÉ

Au cours des deux dernières décennies, diverses initiatives prises par les autorités de régulation de différents pays ont entièrement remodelé le secteur du transport aérien d'une manière qui était inimaginable en 1992. D'une industrie dominée par des compagnies aériennes privées telles que Pan Am et TWA ou nouvellement privatisées, telles que British Airways, l'industrie aérienne actuelle est dominée par des compagnies aériennes intercontinentales basées au Moyen-Orient, détenues par les États, et transportant des passagers dont la majorité ne désire pas visiter le pays dans lequel la compagnie est établie. Peu de réflexions ont été menées sur la question de savoir si cette évolution est souhaitable, si elle entraîne de profondes distorsions de la concurrence ou s'il est conforme à l'intérêt public que la majorité des Australiens visitant l'Europe soient transportés par une compagnie aérienne établie dans un pays autre que ces deux territoires, ou qu'une affirmation similaire puisse être exprimée en ce qui concerne le trafic entre l'Asie du Sud et les Amériques. En outre, dans la mesure où cette évolution soulève des problèmes d'ordre réglementaire, ces questions seraient mieux gérées au sein d'un organisme multilatéral.

La présente thèse couvre les deux décennies de 1992 à 2012, et étudie les événements qui ont transformé l'industrie aérienne internationale au cours de cette période. Elle analyse de façon critique les principaux développements et les mesures réglementaires connexes, et met en évidence l'incompatibilité et l'incohérence de certaines réglementations actuellement en vigueur à chaque extrémité des liaisons internationales.

Elle propose que l'Australie, le Canada, l'Union européenne, la Nouvelle-Zélande et les États-Unis forment une organisation internationale, dénommée « Bloc des cieux ouverts d'aviation internationale » (« BCOAI ») aux fins de cette discussion. BCOAI se fonderait d'une part sur l'augmentation du nombre d'adhésions au Comité mixte UE-US prévu dans le cadre de l'Accord Ciel Ouvert entre les États-Unis et l'UE de 2007, et d'autre part sur l'élargissement de sa compétence à tous les aspects de la réglementation de l'aviation internationale. Il y est soutenu qu'une telle organisation s'avère nécessaire pour s'assurer que les réglementations des différents pays soient uniformisées et que les distorsions de concurrence soient minimisées, permettant ainsi une concurrence internationale saine entre les acteurs du transport aérien international, pourtant déjà promise par tant d'accords internationaux.

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When I started this process, I was told that the pursuit of a Doctorate was a solitary activity, but the tremendous support and encouragement that I have received from different quarters has convinced me that my Doctorate is one of the most collective achievements of my lifetime.

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INTRODUCTION

Competition authorities in both the European Union (EU)¹ and the United States (US)² have launched formal investigations into whether, how and to what extent, Government-Backed Mega Carriers (GBMCs) based in the Persian Gulf area benefit from direct or indirect government assistance as alleged in a recent 'white paper' published by American, Delta and United Airlines.³ This allegation is extremely contentious.⁴ Even if it is confirmed, given that international aviation is "largely exempted from WTO trade disciplines",⁵ the normal trade remedies, such as countervailing duties, would not be available. Indeed, the white paper confirms that the only remedy would be for a State to either renegotiate or repudiate its bilateral air service agreements (BASAs) with the States in which the principal GBMCs are based, notably Qatar and the United Arab Emirates (UAE).⁶ Given that such actions might result in the cancellation of announced aircraft purchases⁷ by the Gulf-based GBMCs from Airbus⁸ in the EU and Boeing in the US,⁹

¹ See "Commission to review competition from Gulf-based airlines", *EurActiv* (17 March 2015), online: EurActiv <www.euractiv.com/sections/transport/eu-look-unfair-competition-gulf-based-airlines-312941> (visited April 13, 2015). See also Jens Flottau and Madhu Unnikrishnan, "France, Germany Protest Gulf Carrier Encroachment" *Aviation Week & Space Technology* (20 March 2015), online: Aviation Week & Space Technology <aviationweek.com/commercial-aviation/france-germany-protest-gulf-carrier-encroachment> (visited April 13, 2015).

² See US, "US Departments of State, Commerce, and Transportation Seek Stakeholder Input on Gulf Carrier Subsidy Claim", United States Department of State (10 April 2015), online: United States Department of State <www.state.gov/r/pa/prs/ps/2015/04/240582.htm> (visited April 13, 2015).

³ See "Restoring Open Skies: The Need to Address Subsidized Competition From State-Owned Airlines in the Qatar and the UAE", Americans for Fair Skies (15 January 2015), online: Americans for Fair Skies <fairskies.org/the-white-paper/> (visited April 13, 2015) [*White Paper*].

⁴ See Frontier Economics, "Emirates Economic Impact in Europe", Emirates (February 2015), online: Emirates <content.emirates.com/downloads/ek/pdfs/int_gov_affairs/Emirates_Economic_Impact_in_Europe_Final_Report.pdf> (visited April 13, 2015). See also Etihad Press Release, "Investing in Success is Not a Crime; Blocking Competition Would Be, sayd Etihad Airways Chief" (26 March 2015), online: <etihad.com>.

⁵ Brian H. Havel and Gabriel S. Sanchez, *The Principles and Practice of International Aviation Law* (Cambridge: Cambridge University Press, 2014) at 122.

⁶ See *White Paper*, supra note 3 at 54.

⁷ The *Economist* almost immediately predicted this connection. See "Airlines: Super-connecting the world", *The Economist* (April 25, 2015) online: The Economist <www.economist.com/node/21649509> (visited April 26, 2015).

⁸ See Emirates, "Germany, Emirates and Airbus", online Emirates <www.emirates.com/english/about/int-and-gov-affairs/government-affairs/emirates-and-germany/germany-emirates-and-airbus.aspx> (visited April 13, 2015). Emirates claims that its Airbus purchases support over 14,000 jobs in Germany.

⁹ See Emirates, "Emirates - a Friend of Boeing US Aerospace", online: Emirates <www.emirates.com/english/about/int-and-gov-affairs/government-affairs/emirates-and-usa/emirates-a-friend-of-boeing-us-aerospace.aspx> (visited April 13, 2015). Emirates claims that its orders of Boeing 777s have created roughly 400,000 jobs in the US.

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the EU and the US would best avoid this negative economic consequence if they acted collectively in repudiating or modifying their BASAs with the UAE and Qatar.¹⁰

This issue is simply the highest profile example of the need for a forum in which countries may act collectively to deal with the market and regulatory challenges that have emerged since the Open Skies concept made its debut in 1992. In addition to the emergence of the GBMCs that are the subject of the white paper submitted to the EU and the US, with their ability to link any two global points via a single stop, recent decades have also seen the growth of metal neutral joint ventures¹¹ (MNJVs),¹² which are de facto international airline mergers.

The emergence of both GBMCs and MNJVs confirms the profound degree to which the airline industry has evolved in the past two decades: the first questions a long standing interpretation of BASAs as governing the air transport between its two signatories and the second is based on a reversal of long-standing opposition to pooling. Indeed, chapter 2 identifies nine major changes¹³ that have completely re-shaped the industry since 1992. It will be shown that these changes have inspired diverse regulatory responses at the national level, and that, in view of these differences, a regulatory response in order to be effective must be multilateral.

Chapter 1 outlines the depth and breadth of airline industry regulation. Chapter 2 shows how the industry has evolved from one dominated by established former state-owned carriers, to a new world, whose major players and even hubs were unknown in 1992. In the process of adapting to that new world, and to the evolving needs of society with respect to environmental, accessibility and security concerns, national regulators have been adopting new regulations on a wide variety of aviation topics. In many cases, the regulations seek a similar or even identical overall outcome. Nonetheless, if the regulations adopted by the two jurisdictions at either end of an international route are not harmonious, this can produce legal uncertainty for the airlines and passengers flying the route.

¹⁰ The fleets of the GBMCs are comprised of Airbus and Boeing aircraft; any boycott of these manufacturers would force the GBMCs to consider Russian and Brazilian aircraft, which are not suitable for the long-haul routes they operate. The repudiation or modification of the BASAs has been requested of U.S. and EU authorities by the large airlines based in those countries. See *White Paper*, supra note 3 at 5-6.

¹¹ See Chapter 3 III E) Reacting to the Government-Backed Mega Carriers.

¹² See Chapter 3 IV) Metal Neutrality

¹³ See Chapter 2) V) THE EVOLUTION OF GLOBAL AVIATION: 1992-2012.

With the exception of the Montreal Convention (and the long-standing predecessor Warsaw System) dealing with compensation for personal injury and death developed at ICAO,¹⁴ no multilateral forum has attempted or succeeded in harmonizing regulations with respect to a growing list of issues, such as the carriage of emotional support animals or batteries for scooters, greenhouse gas (GHG) emissions, on board security, passenger rights including the rights of the disabled, and air fare advertising. With respect to passenger rights, airline websites ask the customer to indicate his or her country of residence, and that information will determine not only which points of departure are offered, but the terms and conditions of carriage and the fare.¹⁵ As a result of this largely state-based regulatory regime, three passengers seated beside each other on a transatlantic flight may, for example, be entitled to three different types and amounts of compensation for delay.¹⁶ With respect to other issues such as security, the use of on board Air Marshals may be prohibited in Wellington but commended in Washington,¹⁷ and a pocket knife bought at an airport duty-free shop in Zurich may be confiscated in London.¹⁸ In response to the need for a multilateral forum in which States may address regulatory issues of common concern, Chapter 6 of this thesis proposes the establishment of a new organization, the Open Skies Intercontinental Aviation Block (OSIAB). The creation of the OSIAB would allow its members to develop a harmonious regulatory response among themselves. More importantly, it may thereby contribute to the emergence of *de facto* world standards in those areas of aviation regulation where global harmonization is desirable and where the International Civil Aviation Organization (ICAO) either lacks the jurisdiction to act or has failed to act to date. Indeed, the very creation of the OSIAB may provide the impetus for ICAO to engage more actively and aggressively in the development of international regulatory initiatives.

¹⁴ ICAO was created by the *Convention on International Civil Aviation*, 7 December 1944, 61 Stat 1180, TIAS No 1591, 15 UNTS 295, Can TS 1944 No 36, ICAO Doc 7300/9 [*Chicago Convention*].

¹⁵ Internet fares posted on an airline's website are driven by the air fare regulations of the jurisdiction where the customer lives. This is one of the reasons why almost every airline website relies on "cookies" and asks the customer to indicate his/her country of residence before allowing further transactions.

¹⁶ See Chapter 6 IV) C) 4) Passenger Rights.

¹⁷ See P Paul Fitzgerald "Air Marshals: The Need for Legal Certainty" (2010) 75 J Air L & Com 357.

¹⁸ See generally Simon Murphy, "Airport security farce: Deadlier knives than used on 9/11 sold in duty free and taken on London flight," *Daily Mail* (17 August 2013), online: Daily Mail <www.dailymail.co.uk/news/article-2396327/Airport-security-farce-Deadlier-knives-used-9-11-sold-duty-free-taken-London-flight.html>.

I) OVERVIEW

The Chicago Convention recognizes the sovereignty of States and thus that the regulation of aviation is the primary responsibility of the State where the airline is headquartered or where the aircraft is registered.¹⁹ It follows that competing airlines based in different countries often operate under different regulations with respect to such matters as aviation security, passenger rights, customer service languages, flight attendant/passenger ratios, and crew rest provisions. These regulatory differences may give one carrier an advantage over another, thereby possibly distorting competition.

The potentially anticompetitive impact of these regulatory incompatibilities is compounded when airlines jointly create an MNJV. An MNJV is based on the premise that the participating airlines are so homogeneous that they are truly indifferent as to whose 'metal' is used to fly a specific international route. The regulatory approval of MNJVs constitutes a reversal of long-standing prohibitions on pooling arrangements.²⁰ Moreover the emergence of MNJVs has created the canvas to display the disharmonious regulations that the jurisdictions in which the participating airlines are based have adopted to govern their airline industries. If differences among the regulations to which the different airlines are subject create conditions where it is preferable to use the 'metal' of one of the members, the 'neutrality' at the heart of the MNJV is called into question.

The regulatory blessing of the first MNJVs may have been an attempt to deal with the growth of GBMCs based in countries such as Qatar and the United Arab Emirates. Whether and to what extent a given GBMC benefits from its relationship with its State owner or backer varies among them. However, just as a State's regulators may impose regulatory burdens that may put airlines based in that State at a competitive disadvantage, so may the actions of a State that owns or backs its airlines possibly give that airline a competitive advantage. Where an international airline is owned or backed by the State, the potential for competitive distortions is significant and can cover the spectrum from subsidies to loan guarantees to preferential treatment at state-owned

¹⁹ P Paul Fitzgerald, "In Defense of the Nationality of Aircraft" (2011) 36 Ann Air & Sp L 81 at 94.

²⁰ See below The creation of MNJVs is contrary to long-standing American opposition to pooling arrangements.

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airports. This risk is reflected in the fact that most industrialized jurisdictions prohibit any form of State financial support for airlines.²¹

However, if regulators were concerned about the rise of GBMCs and blessed MNJVs in order to try to level the playing field for European and North American airlines, it is not evident that the strategy has succeeded. The growth of the GBMCs has continued unabated. Moreover, it will be seen that the effect of approving MNJVs may have been to further distort competition by reducing competition on shared transatlantic routes and revealing the impact of disharmonious regulations on competition among participants.

Just as the EU enforces prohibitions on State aid in order to ensure fair competition on all air routes flown by airlines based in its member States, regulators in North America and the EU instead should have considered taking actions against airlines owned or backed by other States where State aid or other State-conferred advantages may create competitive distortions. It was noted at the outset of this chapter that competition authorities in both the EU and the US have in fact very recently launched formal investigations into whether, how and to what extent the Gulf-based GBMCs benefit from direct or indirect government assistance as alleged in the recent white paper published by American, Delta and United Airlines. As also noted earlier, depending on the findings, potential actions could range from imposing restrictions on 6th Freedom traffic to cancelling the applicable BASA.

But prior to this limited recent initiative, the outcome of which remains unknown, regulators chose an incremental and piecemeal approach. Rather than specifically addressing the risk of competitive distortions and trying to understand the massive changes to the global airline industry over the last two decades, regulators facilitated concentration through the approval of MNJVs. Then, in an apparent effort to try to restore consumer balance to growing airline power, regulators adopted passenger rights laws. As these laws were adopted by regulators on a jurisdiction by jurisdiction basis, the result often has been incompatible passenger rights regimes at either end of an international route, with the attendant potential to distort competition and undermine the purported metal neutrality at the heart of the MNJV concept.

²¹ For example, in 2013, the European Court of Justice had to determine whether an Italian government loan to state-owned Alitalia was prohibited by EU law. See *Ryanair v Commission*, C-287/12 P, [2013] ECR I-0000.

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While it is clearly within the purview of a State to regulate those carriers within its jurisdiction, to the extent that differences in a particular State's regulations distort competition over international routes, it may fall upon another State or group of States to take action to minimize the distortion. In situations where an MNJV, which has been granted antitrust immunity (ATI) by the regulators in all the jurisdictions where the participants are based, competes against a GBMC, potential competitive distortions may also arise and effective solutions are beyond the reach of a single State. Inevitably, the MNJV's partners are based in two or more jurisdictions and the GBMC is likely based in yet another jurisdiction.

Consider a scenario where Canada is concerned about competitive dynamics on routes between South Asia and North America, and the relatively small share of traffic carried by Canadian airlines over the route. As will be shown, at least three jurisdictions serve as bases for the MNJVs and GBMCs who carry the lion's share of traffic between South Asia and North America. Thus, any unilateral action by Canada would be unlikely to successfully address its concerns. This scenario underscores a fundamental point: increasingly competition issues in international commercial aviation can only be effectively addressed in a multinational forum.

At present, there exists no multilateral forum where issues related to the regulation of the international airline industry at a global level are being addressed. Current multilateral fora are not necessarily mandated to deal with such issues or may be plagued with bureaucracy to the point that rapid decision-making is impeded. It is for this reason that Chapter 6, as noted earlier, proposes the establishment of the OSIAB.

II) DEFINITION OF TERMS USED IN THESIS

A) Freedoms of the Air

This thesis makes frequent reference to the "Freedoms of the Air", which are a set of commercial aviation rights granting an airline based in one country the privilege to enter and land in another country's airspace. In order to make this thesis more accessible to persons without a familiarity with aviation law, the Freedoms²² are summarized here with concrete examples:

²² For the formal list of Freedoms, see ICAO, Manual on the Regulation of International Air Transport, ICAO Doc 9626, Part 4, online: ICAO <www.icao.int/Pages/freedomsAir.aspx>.

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- 1st Freedom The freedom to overfly a foreign territory while operating an international service. For example, Air France over flies Russia on its Paris – Tokyo service.
- 2nd Freedom The freedom to make a technical stop, usually for fuel, while operating an international service. For example, Taiwanese carriers offering Taipei – Europe services must refuel (tech stop) in Bangkok as China has denied them overflight over its territory.
- 3rd Freedom The freedom to carry outbound traffic from your home country to a foreign country. For example, Air Canada flies passengers from Montreal to Boston.
- 4th Freedom The freedom to carry inbound traffic to your home country from a foreign country. For example: Air Canada flies passengers to Montreal from Boston.
- 5th Freedom The freedom to carry passengers between a 2nd and 3rd country as part of an international service originating in the airline's home country. For example, Royal Jordanian flies Amman–Montreal–Detroit and may carry local traffic between Montreal and Detroit.
- 6th Freedom The carriage by an airline through its hub in its home country of passengers travelling between two other countries. For example, Air New Zealand carries Australians via Auckland to the United States; for many years the Melbourne–Auckland–San Francisco route was operated by the same plane and listed as Air New Zealand Flight 2.
- 7th Freedom The carriage by an airline based in one country of passengers between two other countries without stopping in the airline's home country. For example, Air France operated a short-lived London–Los Angeles service.
- 8th Freedom The carriage of passengers between two points in the same foreign country as part of an international service: Pan Am's New York–Hamburg–Berlin flights and Northwest's Los Angeles–Tokyo–Okinawa flights were rare examples of this freedom.
- 9th Freedom The carriage of passengers between two points in the same foreign country by an airline based in another country. Prior to the EU allowing this freedom to all EU carriers, the leading example of this practice was Pan Am's Internal German Service which provided flights between Berlin and various German cities from roughly 1950 until 1990.

B) Other Terms and Acronyms Used in this Thesis

- ATM Air Traffic Management – This is the network of Air Traffic Controllers, slot managers and even airport terminal managers that facilitate the efficient movement of an aircraft from one airport to another.

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BASA	Bilateral Air Service Agreement – This is a treaty signed between two sovereign States that governs international air services between them.
CBD	The Christmas Day Bomber (Umar Farouk Abdulmutallab) tried to destroy DL flight 253 as it approached Detroit on December 25, 2009
GBMC	Government-Backed Mega Carrier – This is a major inter-continental airline, which is owned or backed by the government or State where it is based, and where the relations between airport authority, regulator and airline management may be or are alleged to be not of an arms-length nature.
MNJV	The Metal Neutral Joint Venture is a legal structure that allows its partner airlines to pool resources, profits and losses and jointly operate aircraft on inter-continental routes
OSIAB	Open Skies Intercontinental Aviation Block – This is the name of the international organization that this thesis proposes should be co-founded by Australia, Canada, the European Union, New Zealand and the United States to harmonize the regulation of international air routes among them.

III) OUTLINE OF THESIS CHAPTERS

The thesis is divided into 6 Chapters.

1) **The Composition and Regulation of International Commercial Aviation**

Chapter 1 explores the complex relationship that exists between airlines and regulators and the reasons why most governments have initially, or at some point, created a State-owned airline. It examines the concept of airlines both as a public good and as a component of national transportation infrastructure especially in large States as well as a vital element of international transportation infrastructure in island and land-locked States. It reviews the aspects of the industry that are regulated, how the regulator seeks to influence outcomes and the motivations behind regulatory initiatives. It also discusses and provides examples of the five principal types of regulation: Economic, Security, Safety, Social and Environmental.

2) **Metamorphosis of the Airline Industry from 1992 to 2012**

Chapter 2 highlights the international nature of the airline industry and the fact that its activities are therefore usually beyond the regulatory jurisdiction of a single State. It provides an overview of the evolving role of the State in the airline industry and the

competitive situation between airlines in each of Australia, Canada, Europe, New Zealand and the United States from the late 1940s until 1992 (as these are the jurisdictions which chapter 6 of the thesis proposes should be the founding members of the OSIAB). It details how restrictive BASAs were often an extension of domestic regulation and how the traffic rights created through these agreements were allocated amongst the airlines of the States involved. It then explains how intercontinental air traffic flowed in 1992 and how the same traffic flowed in 2012, and identifies nine major developments that explain the changes. It shows that seven of these have played an important role in shaping the industry's evolution over the two decades and analyzes the impact of those developments on the industry. It argues that the impact of these developments, especially when combined, has resulted in new alliances, new competitive strategies and an uneven competitive landscape compared to 1992. It further argues that unless regulators understand the nature of these changes and the impact of the identified developments, a proper regulatory response to potential competitive distortions will remain elusive.

3) **Competition and the Evolving Value of the Freedoms of the Air**

Chapter 3 examines how the commercial value of the nine Freedoms of the Air have evolved over time and how 6th Freedom rights have gone from being a source of incremental revenue on a flight carrying 3rd and 4th Freedom traffic to a situation where it is the commercial basis for offering a flight to passengers with no link to the country where the airline is based. It explores the possible competitive distortion provoked by a heavy reliance on 6th Freedom rights by GBMCs. It further examines how the alliance of airlines to form an MNJV to better compete against 6th Freedom-focused GBMCs may result in a further competitive distortion with few positive results. It argues that Emirates' alliance with Qantas is a wake-up call for regulators to examine BASAs to ensure that their bilateral nature is not completely undermined by GBMCs.

4) **Rethinking Aviation Security**

Chapter 4 examines the ongoing struggle for leadership in aviation security and how aviation security standards adopted in the aftermath of the events of September 11, 2001 have evolved. It will be seen that different jurisdictions often have different views of aviation security with the result that passengers on intercontinental journeys may be

screened a number of times and that this is more dependent on their itineraries than on their individual risk profiles. It illustrates how different security regulations may be influencing the travel decisions of passengers away from airlines based in the United States and Western Europe. Finally, it shows that the adoption of common standards among the members of the proposed OSIAB (Australia, Canada, the European Union, New Zealand, and the United States) would mean that persons travelling exclusively among these jurisdictions would only be screened at the point of departure, regardless of whether they changed planes *en route* to their final destination.

5) **Achieving Global Environmental Harmony**

Chapter 5 argues that cooperation between Australia, Canada, the European Union, New Zealand, and the United States would reduce greenhouse gas emissions from aviation rather than simply cut the number of emissions per flight. It argues that a genuine reduction in greenhouse gas emissions is unlikely unless revolutionary new technology is adopted. It observes that on many routes in each of the States of Australia, Canada, the European Union, New Zealand, and the United States, if an airline offered two flights operated by 90-seat aircraft 20 years ago, in 2012, that same airline probably served the same route with three 50-seat aircraft. While this practice reduces the number of seats offered in a market, it increases the number of take-offs and landings, the use of airport gates and infrastructure and the demand on the ATM system. Chapter 5 proposes that regulators in the five above-mentioned jurisdictions work together to urge airlines to reverse this practice. Chapter 5 also proposes ways in which competitors can share the capacity of a large aircraft without running afoul of anti-competition law. It further provides examples of creative arrangements between domestic competitors in the furtherance of greater competition on international routes and suggests that if market access is the justification for ATI approval of an MNJV, similar support should be given to arrangements based on reducing greenhouse gas emissions from aviation.

6) **Creating the Open Skies Intercontinental Aviation Block**

Chapter 6 proposes that Australia, Canada, the European Union, New Zealand and the United States collectively form a new small international organization tentatively called the Open Skies Intercontinental Aviation Block (OSIAB). Chapter 6 argues that these jurisdictions working together have the potential to reshape, *inter alia*, international

aviation competition, safety, security, and environmental policies, and that given their combined influence, the reshaping may become a new *de facto* world standard in international civil aviation (or trigger parallel global initiatives by existing multilateral fora such as ICAO) .

IV) METHODOLOGY

This thesis draws on the author's four decades²³ of research²⁴ and examination²⁵ of the commercial aviation industry from legal,²⁶ business²⁷ and policy perspectives²⁸ and from both sides of the check-in counter.²⁹

My interest in this topic was sparked by Emirates' October 2007 launch of its Dubai–Sao Paulo route and the realization that I was not completely sure who the target market was. In trying to better understand Dubai's aviation history, I came across a Pan Am 1985 route map showing Dubai as an *en route* stop on Pan Am's Frankfurt–Bombay service. This prompted reflection on Pan Am's 1991 demise and curiosity into how Emirates had evolved, from its birth in 1985 until the launch of its Dubai – Sao Paulo non-stop route in 2007, from a small regional airline to a mega-carrier. In the summer of 2008, I obtained a copy of OAG's Executive Travel SkyGuide,³⁰ which listed all of the scheduled intercontinental flights to be operated in the month of June 2008. This provided insight into worldwide air traffic flows, new flights offered pursuant to the 2007 US–EU Open Skies Agreement, and the relative itineraries that the world's carriers would offer to prospective intercontinental passengers. I then compared this information with airline

²³ This author's collection of timetables, books about the industry, its executives and aircraft dates from 1973.

²⁴ The author has been working on air transport-related files for nearly 25 years in different professional capacities.

²⁵ The author has made visits to airline headquarters, hangars, operations centers, airports, control towers, air navigation service providers, aircraft manufacturers, aviation security authorities, and civil aviation authorities in Canada, El Salvador, Germany, the United Arab Emirates, the United Kingdom and the United States.

²⁶ My first legal publication was written with Donald I Brenner QC, in 1988-89 and published as Donald I Brenner and Paul Fitzgerald, "An Update of Recent Developments in Products Liability and Aviation Law in Canada" in *The Fifth International Aviation Law Seminar: Conference Papers* (London: Lloyd's of London Press, 1990) 23.

²⁷ This author wrote "Co-operative Arrangements in the Global Airline Industry," [unpublished] while pursuing an MBA at the University of Western Ontario in 1991. He also produced a video examining the cooperation between Blyth and Company and British Airways in offering weekly Toronto-London Concorde services in 1990.

²⁸ This author wrote "Air Canada's Proposed Take-over of Canadian Airlines: Unadvisable" for the Consumers Association of Canada in 1999.

²⁹ The author was an intern for a major international airline. As a passenger, he has flown on over 900 commercial flights operated by 70 airlines over 280 different routes, serving 115 cities in 27 countries.

³⁰ *Official Airline Guides: Executive Travel SkyGuide* (June 2008) [SkyGuide].

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timetables that I had archived in the early 1990s³¹ and found that the global airline industry had evolved significantly between the early 1990s and the present day. This in turn provoked several questions: How had the industry evolved? To what extent had legal decisions or regulations influenced these changes? Had the evolution produced competitive distortions or resulted in disharmonious regulations? How would regulators address the above questions?

In order to address these issues, I thought it was important to understand some of the principal ways in which the airline industry had evolved. I began with an analytical comparison of air travel patterns in 1992 and 2012. The year 1992 was chosen as it was the year following Pan Am's demise and it was the year in which the first open skies agreements were reached. August was chosen as it is the height of the summer tourist season and it was early enough in 1992 that the impact of that year's open skies agreements would not yet have been evident. Air travel data for August 1992 was obtained from the *OAG Desktop Flight Guide*,³² a compendium used by travel agents to reserve airline tickets. This tome contains flight details for more than 500,000 flights operated by 1,000 airlines and serving over 4,000 airports around the world. The details include full scheduling information, aircraft seat capacity and frequency as well as *en route* stops and fares. That data was then compared with data for August 2012³³ which was compiled from airline timetables from the Star Alliance, oneworld, and various members of SkyTeam.³⁴

Once I had an idea of how and to what extent the airline industry had evolved, I undertook exhaustive research and analysis in order to identify those elements that may have contributed to this evolution. Certain elements were immediately evident, such as the impact of open skies agreements,³⁵ the launch of new routes³⁶ or the increasing use of regional airlines to operate

³¹ This author's collection of timetables and schedules from the early 1990s included those of hundreds of carriers from all corners of the world; from Ansett to Cameroon Airlines to Garuda to Ladeco to Pan Am to Worldways Canada.

³² *Official Airline Guides: OAG Desktop Flight Guide [Worldwide Edition]* 17:6 (August 1992) [OAG Desktop].

³³ See below Chapter 2 – Parts IV) WORLD TRAVEL PATTERNS CIRCA 1992 and V) THE EVOLUTION OF GLOBAL AVIATION

³⁴ SkyTeam does not publish static schedules and this makes archival research difficult. Given the number of inter-alliance code-share flights, the Adobe Acrobat timetables of Air France, Delta, KLM and Virgin Atlantic were used. Combined, these timetables list virtually all of the transatlantic flights of the SkyTeam alliance.

³⁵ See Raymon J Kaduck & Paul Fitzgerald, "Towards a North American Free Aviation Area: Improving on the 1995 Canada-US Transborder Air Service Agreement" (Paper delivered at the 9th Air Transport Research Society World Conference, Rio de Janeiro, Brazil, 6 July 2005) [unpublished].

³⁶ This author witnessed the launch of Flyglobespan's first flight from London, UK, to Hamilton, Ontario, Icelandair's first Toronto-Reykjavík flight, Royal Jordanian's first Amman-Montreal non-stop flights and Air Canada's first Ottawa-Frankfurt non-stop. He also witnessed the launch of Porter Airlines in October 2006.

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flights on behalf of mainline carriers.³⁷ Other elements were unearthed through reading the airline filings made before regulators, such as the United States Department of Transport, and published in the papers of record, such as the *Federal Register* or the *Official Journal of the European Union* or posted on official websites.³⁸ These resources provided significant insight into the discussions and decision-making process with respect to the formation of airline alliances and MNJVs or the use of incentives by regional airports to attract airline service.

I also read dozens of BASAs and looked into whether and how often these had been updated since being concluded. This research identified a fluctuation in the commercial value of the Freedoms of the Air, in particular a decline in the use of 5th Freedom routes and an increase in 6th Freedom traffic. This research also helped me understand to what extent one can expect to see a relationship between the traffic rights contained in a BASA and the international routes operated pursuant to it. My research also revealed that 6th Freedom rights, although not specifically mentioned in many BASAs, were becoming the commercial basis for the establishment of new routes by a new class of airlines: major intercontinental airlines, owned or controlled by the government of a small-population country, often with no meaningful domestic traffic. Frequently, the practices of these airlines were denounced by the airlines based at either end of the new international route.³⁹

While researching how to best address potential competitive distortions, it became apparent that a unilateral approach was unlikely to succeed and I thus began exploring various multilateral approaches. I researched various multilateral organizations, such as the North Atlantic Treaty Organization (NATO), the Commonwealth, la Francophonie, the Organization of American States and the Arab League, with a view to understanding their decision making processes, membership criteria and financial situation. The goal was to be able to propose the creation of a small, focused but effective multilateral organization, the OSIAB, if research showed that existing international organizations were not well suited to addressing possible competitive distortions.

³⁷ This author was first exposed to this practice in 1988 when he flew an Eastern Express Beechcraft C99 from Philadelphia to Washington DC. He had been expecting to fly on an Eastern Airlines 727.

³⁸ Two of the more important websites in this respect are: <<http://www.regulations.gov>>, and <<http://eur-lex.europa.eu/homepage.html>>.

³⁹ For example both European and North American carriers have objected to the activities of GBMCs. See *supra* note 1 and *White Paper*, *supra* note 3.

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The next area of research involved identifying those additional areas of jurisdiction where the OSIAB might be effective and four areas were explored: aviation security, the environment, passenger rights and aviation safety. In all four potential areas of cooperation, extensive subject-specific focused research, including comparing laws and regulations in Australia, Canada, the European Union, New Zealand and the United States, was conducted in order to ensure that a proper analysis of the matter was achieved and that the potential of the OSIAB to influence each area was identified. Thus this thesis includes chapters dealing with the OSIAB's potential contributions to aviation security and reducing greenhouse gases. The research revealed that the OSIAB's potential contribution to aviation safety would be relatively small, as this is one of the few issues that ICAO handles relatively well and current cooperation between the potential OSIAB Members on aviation safety files is extraordinary—as evidenced by the fact that both European and American regulators certified the Airbus A380 as airworthy on the same date.⁴⁰ In the interests of reducing the length of this thesis, my aviation safety research was published in McGill's *Annals of Air & Space Law* in 2012⁴¹ and is incorporated here by reference where necessary. Similarly, while my work has identified passenger rights as an area of potential cooperation, it is only briefly discussed in Chapter 1⁴² due to space considerations.

Research materials for this thesis included the main international treaties dealing with civil aviation, many of the BASAs that govern airline operations between sovereign States, and statutes and regulations from Australia, Canada, the European Union, New Zealand and the United States. Books on regulation, aviation law, the airline industry, airline economics and airline strategy inspired further research and supported conclusions. Peer reviewed articles from law journals, as well as from journals of business, economics and political science, provided the background research for many of the ideas in this thesis and fact checking was done through the online editions of newspapers of record such as the *Canada Gazette*, *America's Federal Register*

⁴⁰ Both the Federal Aviation Administration and the European Aviation Safety Agency gave type approval for the Airbus A380 on December 12, 2006. See Federal Aviation Administration, *FAA Type Certificate Data Sheet No. A58NM*, online: Federal Aviation Administration <[www.airweb.faa.gov/Regulatory_and_Guidance_library/rgMakeModel.nsf/0/95f937b4a558e2a886257242006079c4/\\$FILE/A58NM.pdf](http://www.airweb.faa.gov/Regulatory_and_Guidance_library/rgMakeModel.nsf/0/95f937b4a558e2a886257242006079c4/$FILE/A58NM.pdf)> (visited May 11, 2014). See also European Aviation Safety Agency, *EASA TYPE-CERTIFICATE DATA SHEET No. A.110 for Airbus A380*, online: European Aviation Safety Agency <easa.europa.eu/system/files/dfu/EASA-TCDS-A.110_Airbus_A380-08-24092013.pdf> (visited May 2014).

⁴¹ See P Paul Fitzgerald, "Questioning the Regulation of Aviation Safety" (2012) 37 *Ann Air & Sp L* 1.

⁴² See *below* Chapter 1 – Part VI(A)(3)(d) Social Regulation: Consumer Rights. See also P Paul Fitzgerald, "Air Passenger Rights: The First Canadian Efforts ... an Inauspicious Beginning" (2009) 9:1 *Issues in Aviation Law & Policy* 33 (HeinOnline).

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or the *Official Journal of the European Union*. Additional fact-checking was done through newspaper and magazine articles. Route distances discussed herein are based on data from an online mileage calculator.⁴³

Given the dynamic nature of the internet, where a web-page is referenced in a footnote I have downloaded and archived the contents of that web-page to ensure that the original information will be accessible in the event that the web-page address is changed, or the information has been updated since it was checked in May 2014.⁴⁴ In many cases, screen-captures have also been archived.

In order to further reduce the length of this thesis, some of my research, in addition to the research on safety mentioned above, was redirected into six law journal publications.⁴⁵ That research is incorporated by reference where relevant.

⁴³ See Webflyer, online: <http://www.webflyer.com/travel/mileage_calculator/>.

⁴⁴ All websites were visited in May 2014 so the note (visited May X, 2014) may not appear after every web-site.

⁴⁵ See Fitzgerald, "In Defense, *supra* note 19; Fitzgerald, "Air Passenger" *supra* note 42; P Paul Fitzgerald, "Europe's Emissions Trading System: Questioning its Raison d'Etre" (2011) 10:2 Issues in Aviation Law & Policy 189 (HeinOnline); Fitzgerald "Questioning the Regulation", *supra* note 41; P Paul Fitzgerald "Inner Space: ICAO's New Frontier" (2014) 79 J Air L & Com 101; P Paul Fitzgerald and Md Tanveer Ahmad, "Efficient Air Traffic Management: a Precondition for Reducing Hazardous Emissions from Aviation: Is sovereignty getting in the way of progress?" (2014) 3 ZLW 386.

CHAPTER 1 THE COMPOSITION AND REGULATION OF INTERNATIONAL COMMERCIAL AVIATION

I) WHO REGULATES THE AIRLINE INDUSTRY?

In line with general international law principles of territorial sovereignty, the airline industry is regulated primarily by the law of the State in which the carrier is based⁴⁶ and by the law of any State the territorial space of which the carrier wishes to enter. Thus a State can force a foreign carrier which serves its markets to comply with its laws. For example, the flights of both foreign and EU carriers departing from airports in the European Union (EU) must respect the EU's passenger rights regime,⁴⁷ and since 1998 the United States (US) has applied its prohibition on smoking to all American airlines and to all flights serving the United States.⁴⁸ In addition, both the European Union and the United States prohibit service by foreign airlines based in States whose aviation safety regimes do not meet international standards,⁴⁹ and both Canada and the United States ban non-stop and direct flights to Lebanon.⁵⁰ Even in cases where unilateral State regulation is arguably extraterritorial⁵¹ as a matter of international law,⁵² airlines may have no

⁴⁶See *Chicago Convention*, *supra* note 14, Art 13. Determining where a carrier is based is usually, but not always, a straightforward matter. See *In the Matter of the Application of the International Brotherhood of Teamsters alleging a representation dispute pursuant to Section 2, Ninth, of the Railway Labor Act, as amended involving employees of LACSA and TACA*, 28 NMB 72 (9 May 2001), online: The National Mediation Board <www.nmb.gov/archive/determinations/28n072-t/>.

⁴⁷ Europe's Passenger rights regulations apply to foreign airlines departing from EU airports. See EC, *Regulation (EC) No 261/2004 of the European Parliament and of the Council of 11 February 2004 establishing common rules on compensation and assistance to passengers in the event of denied boarding and of cancellation or long delay of flights, and repealing Regulation (EEC) No 295/91*, [2004] OJ, L 46/1 at 4, art 6 [Regulation 261/2004].

⁴⁸ America's Smoking ban applies to American carriers and foreign carriers serving the US. See 49 USC § 41706.

⁴⁹ See Fitzgerald "Questioning the Regulation" *supra* note 41 at 44. As of 2012, only airlines based in Swaziland and in the Democratic Republic of Congo, were prohibited from serving both the EU and the US.

⁵⁰ See *below*, Chapter 4, V) D) 1 Dangerous Airports.

⁵¹ 49 USC § 41311 (2013) prohibits in-flight gambling on all flights operated by an "air carrier or foreign air carrier" but this is likely unenforceable against foreign carriers or airlines flying foreign-registered aircraft particularly on international routes not serving or over-flying the United States. See Christopher M Carron, "Getting Lucky While a Mile High: Challenging the US Extraterritorial Ban on In-Flight Gambling" (2008) 12 Gaming Law Review & Economics 220 at 220–228.

⁵² There is often no practical or legal remedy to this situation; see *below* notes 1683 to 1687 for the details on the dispute over the extraterritorial application of the EU's emissions trading regime. The EU's ban of foreign airlines from its skies on safety grounds based on the carrier's worldwide record is arguably extraterritorial. See Cedric Ryngaert, *Jurisdiction in International Law* (Oxford: Oxford University Press, 2015) at 94. Carriers that are banned cannot operate with their own aircraft to the EU.

practical choice but to comply.⁵³ In addition, all airlines serving international routes are also regulated as a matter of contract and treaty law by applicable bilateral air service agreements (BASAs) and international conventions.⁵⁴

II) WHAT IS REGULATED

The vast majority of aviation regulations focus on safety.⁵⁵ So comprehensive is the regime of aviation safety regulation that in 1969 when Boeing wanted to certify the prototype Boeing 747, the paperwork needed to bring the aircraft to US and international certification for airworthiness weighed almost as much as the prototype itself.⁵⁶ In addition, the airline industry is governed by economic regulations⁵⁷ (affecting issues from share ownership⁵⁸ to market entry⁵⁹), social regulations (dealing with such issues as passenger rights,⁶⁰ including the mobility rights of the obese⁶¹ and the infirm,⁶² and the carriage of service and comfort animals⁶³), regulations dealing

⁵³ In 1966, the US Government, after some negotiations with the International Air Transport Association (IATA), urged airlines to enter into a "special contract" increasing damage liability limits to US\$ 75,000 with respect to international flights "originating, terminating or having a connection point in the United States." See *CAB Agreement No 18990* approved by *CAB Order No E-23680* (May 13, 1966) (Montreal Agreement), 14 CFR Part 203 (2014) [1966 Montreal Agreement]. Airlines wanting to serve the US were obliged to sign.

⁵⁴ The *Chicago Convention*, *supra* note 14 governs international air navigation and provides the legal framework for the network of Air Traffic controllers that facilitate international and intercontinental air transport.

⁵⁵ The *Chicago Convention*, *supra* note 14, has 19 Annexes. Of these, 17 deal with aspects of aviation safety.

⁵⁶ P Paul Fitzgerald, "Freedom to Fly: Route Deregulation in the Canadian Airline Industry" (1989) 14 Ann Air & Sp L 47 at 49. By the way the prototype weighed 370,100 lbs or 167,874 kg.

⁵⁷ See generally Anthony Sampson, *Empires of the sky: the politics, contests and cartels of world airlines* (London: Hodder & Stoughton, 1984); Ronald Edward George Davies, *Rebels and Reformers of the Airways* (Shrewsbury, England: Airline, 1987).

⁵⁸ Different states have very different positions on foreign ownership limits. See Government of Canada, Competition Policy Review Panel, *Compete to Win: Final Report - June 2008*, online: Industry Canada <[www.ic.gc.ca/eic/site/cprp-gepmc.nsf/vwapj/Compete_to_Win.pdf/\\$FILE/Compete_to_Win.pdf](http://www.ic.gc.ca/eic/site/cprp-gepmc.nsf/vwapj/Compete_to_Win.pdf/$FILE/Compete_to_Win.pdf)>.

⁵⁹ For Canada's economic regulation of the airline industry, see Fitzgerald, "Freedom," *supra* note 56 See further, Max Ward, *The Max Ward story: a bush pilot in the bureaucratic jungle* (Toronto: McClelland & Stewart, 1992).

⁶⁰ New York State Bill No A08406B of August 1, 2007 was an early US attempt to "Create a consumer bill of Rights" regarding airline passengers. See US, A08406B, *An Act to amend the executive law and the general business law, in relation to creating a consumer bill of rights regarding airline passengers*, 2007-08, Reg Sess, NY, 2007.

⁶¹ See *In the matter of an application filed by the Estate of Eric Norman, Joanne Neubauer and the Council of Canadians with Disabilities pursuant to subsection 172(1) of the Canada Transportation Act, S.C., 1996, c. 10, as amended, against Air Canada, Jazz Air LP, as represented by its general partner, Jazz Air Holding GP Inc. carrying on business as Air Canada Jazz, WestJet, the Gander International Airport Authority and the Air Transport Association of Canada concerning the fares and charges to be paid by persons with disabilities who require additional seating to accommodate their disabilities to travel by air on domestic air services* (10 January 2008), 6-AT-A-2008, online: Canadian Transportation Agency <www.otc-cta.gc.ca/eng/ruling/6-at-a-2008#116> [CTA Decision 6-AT-A-2008], which prohibited Canada's airlines from charging a fare for an extra seat for an obese passenger or for a passenger that required an attendant.

⁶² The Canadian Transportation Agency also ordered Air Canada and Air Canada Jazz to ensure sufficient floor space is provided for certified service animals at the person with a disability's seat. See *In the matter of Decision No. LET-AT-A-30-2008 issued February 11, 2008 - Robin East against Air Canada and Jazz Air LP, as represented by its general partner, Jazz Air Holding GP Inc. carrying on business as Air Canada Jazz (Air Canada Jazz)* (20 June

with aviation security,⁶⁴ and environmental regulations addressing the impact of aviation on climate change.⁶⁵ Regulations can apply to an airline,⁶⁶ to a type of aircraft,⁶⁷ to a specific aircraft,⁶⁸ to all aircraft registered in a specific State pursuant to the Chicago⁶⁹ or Tokyo Conventions,⁷⁰ and to the airline's crew.⁷¹ Most domestic regulations apply to the entire industry,⁷² but some regulations may be restricted to a specific airline,⁷³ or even to all airlines

2008), 327-AT-A-2008, online: Canadian Transportation Agency <www.otc-cta.gc.ca/eng/ruling/327-at-a-2008> [CTA Decision 327-AT-A-2008].

⁶³ See *Guidance Concerning Service Animals in Air Transportation* 68 Fed.Reg 24875 (2003).

⁶⁴ By way of example, Singapore wants to ensure that its airline's Airbus A380s are extremely well protected. See "Singapore wants air marshals on all planes", *United Press International* (22 December 2003), online: UPI <www.upi.com/Top_News/2003/12/20/Singapore-wants-air-marshals-on-all-planes/23041071942061/>. See also "S'pore passes law allowing air marshals on SIA, SilkAir", *Agence France Presse* (14 August 2003), online: Singapore Window <www.singapore-window.org/sw03/030814af.htm> (visited May 11, 2014).

⁶⁵ See EC, *Directive 2008/101/EC of the European Parliament and of the Council of 19 November 2008 amending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community*, [2009] OJ, L 8/3 [Directive 2008/101].

⁶⁶ Foreign ownership levels apply to the corporation. The US allows 25% foreign ownership. See 49 USC §40102(a)(15) (2003). Canada may soon allow up to 49% foreign ownership. See *Budget Implementation Act, 2009*, SC 2009, c 2, ss 466 – 471.

⁶⁷ In 1979, after the second major DC-10 crash in five years, the US Federal Aviation Administration (FAA) temporarily withdrew the aircraft's type certificate. See *Special Federal Aviation Regulation (SFAR) No 40*, (SFAR 40) 44 Fed.Reg 33396 (1979).

⁶⁸ The EU list of banned aircraft identifies aviation authorities, carriers and specific aircraft. See EC, *Commission Regulation (EC) No 474/2006 of 22 March 2006 establishing the Community list of air carriers which are subject to an operating ban within the Community referred to in Chapter II of Regulation (EC) No 2111/2005 of the European Parliament and of the Council*, [2006] OJ, L 84/14 [Regulation 474/2006]. See further, EC, *Commission implementing Regulation (EU) No 1318/2014 of 11 December 2014 amending Regulation (EC) No 474/2006 of 22 March 2006 establishing the Community list of air carriers which are subject to an operating ban within the Community*, [2014] OJ, L 355/8.

⁶⁹ Article 17 of the Chicago Convention recognizes the nationality of aircraft and some States, including Canada, use that status to determine the nationality of babies born aboard aircraft. See *Chicago Convention*, *supra* note 14, art 17; *Citizenship Act*, RSC 1985, c C-29, s 2(2)(a). Article 31 of the same Convention makes States responsible for overseeing airworthiness. See *Chicago Convention*, *ibid*, art 31. For the US, see 14 CFR § 121.53 (2011); 14 CFR § 129.13 (2014). For Canada, see *Canadian Aviation Regulations*, SOR/96-433, s 700.05(1). For the UK, see generally *Air Navigation Order 2009*, SI 2009/3015, s 16(1).

⁷⁰ *Convention on Offences and Certain Other Acts Committed on Board Aircraft*, 14 September 1963, 704 UNTS 219, art 3, ICAO Doc 8364 [Tokyo Convention]. Article 3 of the Tokyo Convention gives States jurisdiction over crimes committed on board aircraft registered in that State. *Ibid*. See also 49 USC § 46506(2)(A) (2011); *Criminal Code Act 1995* (Cth), sch, c 2, part 2.7, division 14; *Civil Aviation Act 1982* (UK), c 16, s 108; *Criminal Code*, RSC 1985, c C-46, ss 7, 27.1(2).

⁷¹ Pilot retirement ages are an example of this type of regulation. The US age is currently 60. See 14 CFR § 121.383 (2014); *Fair Treatment for Experienced Pilots Act*, Pub L No 110-135, 121 Stat 1450 (2007) (codified as amended at 49 USC § 44729 (2011)). In Canada, airlines may set a retirement age. See *Canadian Human Rights Act*, RSC 1985, c H-6, s 15(1)(c); *Vilven v Air Canada*, 2009 CHRT 24, [2009] CHR 24 (available on QL). India has raised the age to 65 as long as the co-pilot is under 60. See Nicholas Ionides, "India forced to raise pilot retirement age again", *Flight International* 168:5014 (6-12 December 2005) 10 (ProQuest).

⁷² Regulations on flight attendant/passenger ratios vary from country to country. American law requires one attendant for every 50 seats. See 14 CFR § 121.391(a)(1) (2014). So does New Zealand. See Civil Aviation Authority of New Zealand, *Civil Aviation Rules*, CAA Consolidation, 1 April 2014, r 121.539. Australia requires one attendant for every 36 passengers. See *Civil Aviation Order 2004* (Cth), s 20.16.3(6)(6.1). Canada's law require one attendant for every 40 passengers. See *Canadian Aviation Regulations*, *supra* note 69, s 705.104.

using a specific airport.⁷⁴ Airlines are also bound by national laws of general application, such as those dealing with incorporation,⁷⁵ pension plans,⁷⁶ financial restructuring,⁷⁷ workplace standards,⁷⁸ labour relations⁷⁹ and human rights.⁸⁰

Where the carrier is a state-owned monopoly, the regulatory climate may be less formal, but where it operates on commercial terms, at arm's-length from government, regulation comes in the form of statutes,⁸¹ regulations,⁸² guidelines,⁸³ executive orders⁸⁴ and decisions of courts⁸⁵ and semi-judicial bodies.⁸⁶ It can even result from failed legislation,⁸⁷ as when the airline

⁷³ Air Canada's official languages requirements are an example of carrier-specific regulation. See *Air Canada Public Participation Act*, RSC 1985, c 35 (4th Supp), s 10. [ACPA]

⁷⁴ Dallas Love airport, Toronto City Centre Airport and Ronald Reagan National Airport all have regulations affecting carriers. See *Wright Amendment Reform Act of 2006*, Pub L No 109-352, 120 Stat 2111 (restrictions lifted on October 13, 2014). See also *Jazz Air LP v Toronto Port Authority*, 2006 FC 705, [2006] FCJ 1053, 294 FTR 278 (available on QL); 49 CFR § 1562.23(e)(7) (2014). It requires that an "aircraft operating into or out of [Ronald Reagan Washington National Airport] have onboard at least one armed security officer" or "Federal Air Marshal."

⁷⁵ Many US carriers, such as American, Continental, Delta, Spirit and United are incorporated in Delaware. Prior to its merger with Delta, Northwest was incorporated in Minnesota. On January 31, 2006 Frontier Airlines made a 4K filing before the United States Security Exchange Commission, and provided the reasons why it was incorporating in Delaware. See online Frontier Airlines Holdings Form S-4 (31 January 2006), online: SEC <www.sec.gov/Archives/edgar/data/1351548/000104746906001149/a2166982zs-4.htm#de1065_reasons_for_the_reorgan_de102429> (visited May 11, 2014).

⁷⁶ See *Air Canada Pension Plan Funding Regulations*, SOR/2013-244.

⁷⁷ Various US airlines have restructured under Chapter 11, literally Title 11 of the US Code. See 11 USC.

⁷⁸ One workplace standard potentially guarantees employee-only washrooms on aircraft. See *Aviation Occupational Health and Safety Regulations*, SOR/2011-87. Sections 4.2 (1) and (4) of the new regulation read, "If practicable, the employer shall provide a room that contains a toilet and a washbasin, for the sole use of the employees".

⁷⁹ For an interesting read of some of the legal issues surrounding the 1985 pilots strike at United, see *Rakestraw v United Airlines*, 765 F Supp 474 (ND Ill 1991) (available on QL).

⁸⁰ *Canadian Human Rights Commission v Canadian Airlines International Ltd*, 2001 FCT 840, [2002] 1 FC 158, 202 DLR (4th) 737 (available on WL Can), considered claims by predominantly female flight attendants alleging wage discrimination compared with male comparator groups.

⁸¹ *Aviation Act*, *supra* note 70; *Aviation and Transportation Security Act*, Pub L No 107-71, 115 Stat 597 (2001) (codified as amended in scattered sections of 49 USC); *Civil Aviation Act 1990* (NZ), 1990/98.

⁸² The requirement for an airline to fly aircraft registered in the state is usually contained in regulation. For the US, see 14 CFR § 121.153(a)(1) (2014). For Antigua and Barbuda, see *Civil Aviation Regulations*, 2004, s 54(2)(c).

⁸³ Canada's *Commercial Air Service Standards* at standard 725. These are devised by Transport Canada officials under the authority *Canadian Aviation Regulations*, *supra* note 69.

⁸⁴ See US, Department of Homeland Security, Transportation Security Administration, *Aviation Emergency Amendment: Law Enforcement Officers on Flights To, From, or Overflying the United States* (EA 1546-03-10) (28 December 2003), online: Governmentattic.org <www.governmentattic.org/2docs/27TSA-EmergAmends_2003-2008.pdf> (visited May 11, 2014) [*Law Enforcement Officers on Flights*].

⁸⁵ *VIA Rail Canada v Canadian Transportation Agency*, 2007 SCC 15, 279 DLR (4th) 1, (*sub nom Council of Canadians with Disabilities v VIA Rail Canada*) [2007] 1 SCR 650 (available on QL). See also *Air Transport Association of America v Cuomo*, 520 F (3d) 218 at 220 (2d Cir 2008) (available on WL Can). The Court struck down New York's Passenger Bill of Rights holding that only the Federal government had the authority to pass such legislation. Common carriage obligation of the transport sector has been codified since long before the first plane flew. See John Bouvier, *Institutes of American law* (Philadelphia: JB Lippincott & Co, 1851) vol 1 at 411–412.

⁸⁶ See US, Department of Transportation, Order 2009-7-10 (2009) which allowed Air Canada, Continental, Lufthansa, and United to enter into a joint venture agreement called Atlantic Plus-Plus ("A++") on routes between North America and Europe. See also CTA decisions permitting and confirming authority for Cubana de Aviación

industry decides to comply without waiting for future similar legislative initiatives to take effect.⁸⁸ Given the number and variety of regulatory actors, it is conceivable that regulations may conflict, that they might require incompatible compliance actions,⁸⁹ or that the costs of meeting a regulatory objective might be different for two airlines.⁹⁰

III) WHY REGULATE? AVIATION AS A POTENTIAL PUBLIC GOOD

In almost every case, the principal justification for regulation is an assumed "market failure"⁹¹ in terms of the provision of the sought-after public good. For example, without regulatory intervention, the aviation industry failed to adequately meet the needs of mobility-challenged persons,⁹² and it may currently be failing to meet the needs of elderly passengers.⁹³ Every time market failure is associated with public goods, regulation results.

A) What is a Public Good?

A public good is both non-rivalrous, in that there is no incremental cost of providing it to an additional person, and non-excludable, in that it is impossible to exclude someone from enjoying its benefits.⁹⁴ Naturally provided public goods are often "pure" in the sense that they are fully non-rivalrous and fully non-excludable. Examples of such pure public goods are rainbows, forests, waterfalls, the Aurora Borealis or a moonlit sky; in each case an unlimited number of people can enjoy the benefit and there is no incremental cost for an additional participant. Some

S.A to wetlease aircraft from TACA or El Salvador for the former's Cuba-Canada routes since 2003. See Canadian Transportation Agency, Decision No 609-A-2008 [*CTA Decision 609-A-2008*] and the decisions it renews.

⁸⁷ Bill C-62, *An Act to amend the Aeronautics Act and to make consequential amendments to other Acts*, 1st Sess, 38th Parl, 2005, would have provided a legal basis for regulating Safety Management Systems.

⁸⁸ Bill C-62 never passed, but Canada's airlines embraced Safety Management Systems anyway. See online: Air Canada, "Safety Policy, Our Commitment to Safety", online: Air Canada <www.aircanada.com/en/about/safety/>.

⁸⁹ For the impact of incompatible perspectives on Air Marshalls on commercial aircraft see P Paul Fitzgerald, "Air Marshalls: the Need for Legal Certainty" (2010) 75 J Air L & Com 357 at 385–386 (HeinOnline).

⁹⁰ Slight differences between Canada and the US with respect to the ratio of flight attendants to passengers, resulted in situations where Canadian air carriers would be required to provide more flight attendants than their US counterparts for the flights carrying the same number of passengers. See Statement of Fred Gaspar (Vice-President, Policy and Strategic Planning, Air Transport Association of Canada) at the House of Commons, Standing Committee on Transport, Infrastructure and Communities, *Evidence*, 39th Parl, 1st Sess, Hansard TRAN No 011 (20 June 2006).

⁹¹ See below B) *Market Failure: the Basis of Regulation of Public Goods*.

⁹² See generally RIR Abeyratne, "Proposals and Guidelines for the Carriage of Elderly and Disabled Persons by Air" (1996) 4:4 *Journal of Travel & Tourism Marketing* 117 (Taylor & Francis Online).

⁹³ See Yu-Chun Chang & Ching-Fu Chen, "Service needs of elderly air passengers" (2012) 18 *Journal of Air Transport Management* 26 (ScienceDirect).

⁹⁴ See Inge Kaul, Isabelle Grunberg & Marc A Stern, "Defining Global Public Goods" in Inge Kaul, Isabelle Grunberg & Marc Stern, eds, *Global Public Goods: International Cooperation in the 21st Century* (New York: Oxford University Press, 1999) 2 at 2, 4.

human-provided public goods are pure in the same sense; examples of these would include a language or culture, an open-air concert in a large park and a fireworks display.

By comparison, a pure private good is both rivalrous, in that there is an incremental cost of providing it to an additional person, and excludable, in that persons are required to pay to enjoy its benefits. Consider a winter coat, which can only be worn by one person and thus an additional person must buy an additional coat or have less protection from the storms of winter.

While a distinction is evident between pure public goods and pure private goods, the distinction between pure public goods and most human-provided public goods is more subtle. In the case of most human-provided public goods it is possible to calculate the incremental cost of providing the benefit to additional persons and to imagine ways of excluding some from their benefits.⁹⁵ In other words, the degree of non-rivalness and non-excludability of a naturally provided pure public good will exceed that of a human provided public good. However, if a human-provided public good can be said to be less non-excludable than a naturally-provided one, it still retains a high degree of non-excludability. This fact makes it virtually impossible to capture revenue from potential users. Public goods are rarely provided on a cost-recovery or profit basis and thus the private sector is almost never associated with their provision. For example at a restaurant operating on a "pay-as-you-can" philosophy, some will decline to pay the amount they can afford, confirming that the free-rider⁹⁶ factor is invariably associated with any human-created public good.⁹⁷ This is because although everyone derives similar benefits from the public good, they have a different willingness to pay (WTP).⁹⁸ Moreover, if a pure public good is truly non-rivalrous, such as air, it is limitless and therefore cannot be fully consumed.⁹⁹ If it is limitless,

⁹⁵ Public campaigns promoting vaccination or literacy are designed not to be excludable but there is a slight additional cost for serving an additional person. There are also situations where a person might be excluded, such as where the person was allergic to the vaccine, or was mentally incapable of participating in the literacy campaign.

⁹⁶ Free riding describes situation where it is possible to enjoy the benefits of a public good without paying. An art gallery operating on an 'honour' system might suffer lost revenue from persons who would enter but not pay. See Lester G Telser, "Why Should Manufacturers Want Fair Trade?" (1960) 3 JL & Econ 86 (HeinOnline).

⁹⁷ The One World Everybody Eats Foundation is associated with the operation of "pay-as-you can" restaurants in various US cities. All operate on the basis of money paid by customers, volunteer labour and money raised. Online: One World Everybody Eats Foundation <www.oneworldeverybodyeatsfoundation.org/>.

⁹⁸ See Raymond G Batina & Toshihiro Ihori, *Public Goods: Theories and Evidence* (Berlin: Springer, 2005) at 9. For a review of the role of the state in funding public education and the refusal of many to pay even \$0.10/year of university tuition, see Robert A Rhoads & Carlos Alberto Torres, *The university, state, and market: the political economy of globalization in the Americas* (Stanford, Cal: Stanford University Press, 2006) at 187–191.

⁹⁹ See Daphna Lewinsohn-Zamir, "Consumer Preferences, Citizen Preferences, and the Provision of Public Goods" (1998) 108 Yale LJ 377 (HeinOnline).

and supply exceeds demand, the market value of the pure public good¹⁰⁰ will decline to the point that people will simply take it for granted.¹⁰¹

Thus, in almost every case of a human-created pure public good, government is involved either directly or indirectly in the provision, subsidization or financing of the public good,¹⁰² and the funds are almost always taken from general tax revenue.¹⁰³ This often provokes debate as to the role of government in society. For example, the ability to receive mail is arguably a public good because there is no charge for receiving mail and one cannot be prevented from receiving mail. At the same time, the fact that there is a charge for sending mail raises the prospect of profits. This fact has supported the privatization of postal services in places like Germany,¹⁰⁴ as well as attempts to revoke Canada Post's monopoly with respect to first-class mail.¹⁰⁵ This is because postal service is not a pure public good, but rather an impure public good, in that, while it is not excludable in the sense that everyone can benefit from mail delivery, it is rivalrous, because there is a slight incremental cost to extend mail delivery to an additional person.¹⁰⁶ If one further considers that the postal service is excludable to the extent that the price of a stamp excludes those who cannot afford one, it is clear that postal service does not have the fully non-rivalrous and fully non-excludable qualities of a pure public good.

¹⁰⁰ The fact that clean air is free and abundant hampers efforts to reduce GHGs, and may result in a "Tragedy of the Commons" or a communal fouling of the nest, but where water is scarce, there is strong support for water conservation effort. See Garrett Hardin, "The Tragedy of the Commons" (1968) 162 Science 1243 (JSTOR), James B Martin-Schramm, *Climate Justice: Ethics, Energy, and Public Policy* (Minneapolis: Fortress Press, 2010) at 35. Thus in Las Vegas, 16,000 home owners using new yard-maintenance techniques managed to reduce water usage by 80%, (saving over 8 billion gallons of water) without any formal training. See Gary Chamberlain, *Troubled Waters: Religion, Ethics, and the Global Water Crisis* (Lanham, Md: Rowman & Littlefield, 2008) at 187.

¹⁰¹ This is one of the reasons why WTP is often an inaccurate measure of the true value of a public good. See Daniel Kahneman & Jack L Knetsch, "Valuing Public Goods: The Purchase of Moral Satisfaction" (1992) 22 Journal of Environmental Economics & Management 57 at 64 (ScienceDirect).

¹⁰² In some cases, especially in developing countries, pure public goods may be provided by charities. Further, in the example of the fireworks display, there may be some private sector involvement, but there is almost always government financial support.

¹⁰³ See Batina & Ithori, *supra* note 98 at 27. Because of the free-rider or WTP problem, many public goods are financed from general tax revenue rather than from a marginal tax on the public good. In many countries schools, hospitals and universities are either funded through tax revenues or are heavily subsidized. See *supra* note 98.

¹⁰⁴ See David Parker, ed, *Privatisation in the European Union: Theory and Policy Perspectives* (New York: Routledge, 1998) at 28. See also Constantine J Zepos, "Liberalizing the "Sacred Cows": Telecommunications and Postal Services in the EC" (1992) 3:1 Duke J Comp & Int'l L 203 at 227 (HeinOnline).

¹⁰⁵ See *Canada Post Corp v Key Mail Canada Inc*, [2005] OJ No 3653, 259 DLR (4th) 309 (available on QL) (Ont CA), leave to appeal to SCC refused, [2005] SCCA No 422; *Canada Post Corp v G3 Worldwide (Canada) Inc* (2007), 85 OR (3d) 241 (available on QL) (Ont CA).

¹⁰⁶ See David Leo Weimer & Aidan R Vining, *Policy Analysis: Concepts and Practice*, 4th ed (Upper Saddle River, NJ: Prentice Hall, 2005) at 72.

Postal service has been seen as a public good for over two millennia,¹⁰⁷ but the impact of changing technology is reducing public support for it.¹⁰⁸ Both this declining level of public support¹⁰⁹ and the fact that it is not a pure public good underscore the difficulty in determining whether something is a public good. Moreover, in many cases, these impure public goods do not exist in a contestable market. In other words, to the extent that something is non-rivalrous and non-excludable, it is of little interest to the market place, but if it is mostly non-rivalrous and mostly non-excludable, it has a small profit potential. The nature of most non-pure public goods such as sewage, highways and natural parks is such that it is difficult to conceive of competition in these situations; they are natural monopolies. It is this nature of impure public goods that motivates private sector interest in being the "service provider" of public transportation,¹¹⁰ or of the delivery of drinking water in the developing world.¹¹¹ It also motivates private companies to participate in Public-Private Partnerships,¹¹² because these endeavors do not face competition. Even though they face enhanced government scrutiny and regulation, they achieve above-average returns.

B) Market Failure: the Basis of Regulation of Public Goods

Where there is true competition, in whatever form, the regulatory impetus will be reduced. No one regulates the price of cherries at a competitive farmers' market and few, if any, would call for such action. While regulations are relaxed or reduced in the face of true competition,

¹⁰⁷ The Assyrians' road network was developed in part to facilitate the carriage of mail. They had mail service between Ephesus and India in the 5th century BCE, See Adam . Silverstein, *Postal systems in the pre-modern Islamic world* (Cambridge, UK: Cambridge University Press, 2007) at 13.

¹⁰⁸ A Canadian Parliamentary committee studied the issue. See Statement of Mr. Deepak Chopra (President and Chief Executive Officer, Canada Post) at House of Commons Standing Committee on Transport, Infrastructure and Communities, *Evidence*, 41st Parl 1st Sess, Hansard (18 December 2013), online: Evidence, Publications – December 18, 2013, Parliament of Canada

<www.parl.gc.ca/HousePublications/Publication.aspx?DocId=6388819&Language=E&Mode=1&Parl=41&Ses=2>.

¹⁰⁹ Deepak Chopra, Canada Post's CEO, told a Parliamentary committee that Canada's government was ceasing the use of cheques in favour of direct deposit and that in virtually every aspect of Canada Post's operations its customers are "basically doing their best to abandon the mail." See *ibid*.

¹¹⁰ Veolia Transport currently operates 1,298 trains in seven countries, including Germany, the Netherlands, Sweden, and the United States. Most of its services are operated on behalf of public sector transportation agencies. See online: Transport Modes, Transdev <www.veoliatrtransportation.com/Rail.aspx>. First Group also operates public transit and school buses in the UK, the US and Canada. See "Our Company", online: FirstGroup <www.firstgroup.com/corporate/our_company/>.

¹¹¹ The privatization of drinking water delivery has resulted in great controversy in developing countries. See Philippe Marin, *Public-Private Partnerships for Urban Water Utilities: A Review of Experiences in Developing Countries* (Washington, DC: World Bank: Public-Private Infrastructure Advisory Facility, 2009).

¹¹² See Jeffrey Delmon, *Private sector investment in infrastructure: project finance, PPP projects and risk*, 2d ed (Frederick, Md: Kluwer Law International, 2009).

regulation makes sense in cases of "market failure."¹¹³ For example, even in the case of cherry sellers at a farmers' market, there could be calls for price regulation if the cherry sellers were related to each other or so few in number such that a truly competitive market did not exist.¹¹⁴

The concept of market failure is central to an understanding of pure public goods as these experience market failure 'by existence' in that "the set of prices which would induce profit-seeking competitors to produce the optimal bill of goods, would be necessarily inefficient in allocating that bill of goods."¹¹⁵ Thus regulation is provoked by market failure,¹¹⁶ and pure public goods are an example of market failure, as rarely are pure human-provided public goods capable of being provided in sufficient quantity by the market alone. The regulator is equally concerned with the avoidance of public bads,¹¹⁷ the negative externalities that are produced by many human-centred transactions.

Applying the above theory to aviation, the regulator encourages commercial aviation to increase positive externalities, such as national and international connectivity¹¹⁸ and aviation safety, and to decrease negative externalities, such as the barriers faced by mobility-challenged passengers and the industry's carbon footprint. For the purpose of this discussion the term 'public good' will be used to denote both the increase of positive externalities and the decrease of negative externalities.

¹¹³ Francis M Bator, "The Anatomy of Market Failure" (1958) 72 Quarterly Journal of Economics 351 (EBSCO HOST).

¹¹⁴ *Ibid* at 354.

¹¹⁵ *Ibid* at 371.

¹¹⁶ Canada's first transcontinental train arrived in Vancouver on July 4, 1886. The "Royal Commission on Railways" (January 14, 1888) quickly identified abuses of market power and a report to Parliament, described a choice between public good and railway profits and called for the establishment of an "efficiently organized Railway Commission." See SJ McLean, "Reports upon Railway Commissions, Railway Rate Grievances and Regulative Legislation", *Sessional Paper 20a* (Ottawa, Parliament of Canada, 10 February 1902) at 5. Five years earlier, America's first independent regulatory agency, the Interstate Commerce Commission, had been established to correct a market failure, the monopoly abuse of the railroads. See Paul Stephen Dempsey & Laurence E Gesell, *Air commerce and the law* (Chandler, Ariz: Coast Aire Publications, 2004) at 28 [Dempsey & Gesell, *Air Commerce*].

¹¹⁷ See Charles Wyplosz, "International Financial Instability", in Kaul, Grunberg & Stern, *Global*, *supra* note 94, 152 at 156 – 159.

¹¹⁸ Section 11(4) of the *Customs Act* now allows the potential mixing of outbound and inbound international passengers in certain zones at Canadian airports. *Customs Act*, RSC 1985, c 1 (2nd Supp), s 11(4).

C) Are Airlines a public good?

Public transportation is described as a public good that would be offered by a "people-centred society"¹¹⁹ and transportation infrastructure forms part of the social overhead capital which is a pre-requisite for economic development.¹²⁰ In some respects, airlines are a service and thus could be considered a purely private good. For example, the service provided by the supersonic Concorde was rivalrous, in that its 100-passenger capacity produced situations where the carriage of one passenger might result in the denial of another. It was excludable, because its fares, at a 30% premium over first class fares,¹²¹ were more expensive than most travellers could afford. There were no negative externalities associated either with the fact that it was rivalrous or excludable. Most travellers in the markets served by the Concorde never really considered it as a travel option.¹²² However, with respect to non-premium services, and especially with respect to affordable flights aimed at the general public, there is no unanimity on whether airline service is a public or private good. "[C]ountries differ in the extent to which they consider that ... airline services provide public as well as private benefits and thus warrant public financial support, direct or indirect."¹²³

From the beginning,¹²⁴ regulators saw the practical uses of airlines. In 1923, for example, the Belgian government, faced with the need to control the Congo, created an airline: SABENA - Société Anonyme Belge d'Exploitation de la Navigation Aérienne.¹²⁵ At the same time as governments became aware of the tremendous and virtually unlimited possibilities of

¹¹⁹ James Gustave Speth, "Foreword" in Kaul, Grunberg & Stern, *Global*, *supra* note 94, xii.

¹²⁰ Anthony Patrick Ellison, *Entrepreneurs and the Transformation of the Global Economy* (Cheltenham: Edward Elgar Publishing, 2002) at 136.

¹²¹ In 1992, European authorities deregulated commercial aviation in the EU with a trio of regulations dubbed the Third Package. See EC, *Council Regulation (EEC) 2407/92 of 23 July 1992 on licensing of air carriers*, [1992] OJ, L 240/1 [Regulation 2407/92]; EC, *Council Regulation (EEC) 2408/92 of 23 July 1992 on access for Community air carriers to intra-Community air routes*, [1992] OJ, L 240/8 [Regulation 2408/92]; EC, *Council Regulation (EEC) 2409/92 of 23 July 1992 on fares and rates for air services*, [1992] OJ, L 240/15 [Regulation 2409/92]. When the regulations were announced the Concorde NY-London round-trip fare was US\$ 8,334, 30% higher than a first-class ticket at US\$ 6,410, and 300% more costly than a full-fare economy ticket at US\$ 2,084. See OAG Desktop, *supra* note 32.

¹²² By 1992, there were 3 scheduled routes, New York-London (twice daily, British Airways), New York-Paris (daily Air France) and Washington-London (thrice weekly, British Airways). On the routes respectively there were seven, six and two other carriers providing non-stop service. See *ibid*.

¹²³ Richard R Nelson, *Technology, Institutions, and Economic Growth* (Cambridge, Mass: Harvard University Press, 2005) at 216. See also Nawal K Taneja, *Simpli-Flying: Optimizing the Airline Business Model* (Aldershot, England: Ashgate Publishing, 2004) at 59.

¹²⁴ 1919 is the date from which KLM Royal Dutch Airlines traces its foundation. See Kenneth Hudson & Julian Pettifer, *Diamonds in the sky: a social history of air travel* (London: Bodley Head: British Broadcasting Corp, 1979) at 38.

¹²⁵ Sampson, *supra* note 57 at 31.

commercial aviation, they realized how that potential could be harnessed to deliver or facilitate the delivery of a number of additional "public goods," whether these be supporting the local aircraft industry,¹²⁶ providing necessary links to other countries,¹²⁷ boosting tourism,¹²⁸ transporting dignitaries,¹²⁹ fostering diplomatic ties,¹³⁰ providing cargo lift to the military in times of national emergency,¹³¹ facilitating espionage activities,¹³² performing missions¹³³ of national importance¹³⁴ or even participating in the fight against terrorism.¹³⁵

¹²⁶ Pan Am helped launch the Boeing 707 and the Boeing 747, American and United launched the DC-10, and TWA and Eastern launched the L1011.

¹²⁷ For many years Cuba's national airline, Cubana de Aviación, provided service to Moscow facilitating Russian tourism to Cuban beaches thereby assisting the Cuban economy. Their efforts were facilitated by the fact that Russians did not need a visa to visit Cuba. See Mervyn J Bain, *Russian-Cuba Relations Since 1992: Continuing Camraderie in a Post-Soviet World* (Lanham: Lexington Books, 2008) at 73. Lebanon's state-owned carrier, Middle East Airlines, has long provided consistent service to Beirut in the face of the region's various tensions. See Sampson, *supra* note 57 at 230.

¹²⁸ "Come to Ireland by Aer Lingus, the Friendly Irish Airline ...". See Tim Pat Coogan, *Wherever Green Is Worn: The Story of the Irish Diaspora* (New York: Palgrave Macmillan, 2002) at 265.

¹²⁹ When Air Canada was still a state-owned airline, and before Canada's military obtained long-range passenger aircraft, Air Canada was responsible for transporting the Queen to/from and within Canada. On October 13, 1964 she flew from Ottawa to London in the very first aircraft to wear the "Air Canada" name.

¹³⁰ Pan Am's "joint-venture" agreement with Aeroflot facilitated New York-Moscow flights in 1988. See "Company News: Pan Am, Aeroflot Plan Joint Venture", *The New York Times* (3 October 1987), online: The New York Times <www.nytimes.com/1987/10/03/business/company-news-pan-am-aeroflot-plan-joint-venture.html>. In 2007, Venezuela's President Hugo Chavez ordered Conviasa to serve Tehran. See Simon Romero, "Venezuela and Iran strengthen ties with Caracas-to-Tehran flight", *The New York Times* (March 3, 2007), online: The New York Times <www.nytimes.com/2007/03/03/world/americas/03caracas.html?_r=0>. Similarly in 1966, Canada's government ordered Air Canada to begin service to Moscow from Montreal. See Philip Smith, *It seems like only yesterday: Air Canada, the first 50 years* (Toronto: McClelland & Stewart, 1986) at 12. See also David H Collins, *Wings Across Time: The Story of Air Canada* (Toronto: Griffin House, 1978) at 62–63, 83–84.

¹³¹ Under America's Civil Reserve Air Fleet, US airlines offer their aircraft in times of national emergency through agreements with the Department of Defence and are given preference in carrying commercial peacetime cargo and passenger traffic for the Department. See online: US Department of Transportation <www.dot.gov/mission/administrations/intelligence-security-emergency-response/civil-reserve-airfleet-allocations>.

¹³² For the activities of Pan Am, Braniff and Continental see Sampson, *supra* note 57 at 84 – 85.

¹³³ El Al, the national airline of Israel, was created to bring Israel's first President Chaim Weizman back to Israel from Geneva on September 28, 1948 because Israeli military aircraft were unwelcome in Europe at the time. See Arnold Sherman, *To the Skies: the El Al story* (London: Mitchell Vallentine, 1973) at 1–11.

¹³⁴ An El Al plane also transported convicted Nazi war criminal, Adolf Eichmann, from Argentina to his trial in Israel on May 20, 1960. See Hans W Baade, "The Eichmann Trial: Some Legal Aspects" (1961) 1961 Duke LJ 400 (HeinOnline). On May 24, 1991, an El Al Boeing 747 carried a record-breaking 1,087 passengers as part of an evacuation of Ethiopian Jews to Israel. See Stephen Spector, *Operation Solomon: The Daring Rescue of the Ethiopian Jews* (Oxford: Oxford University Press, 2005) at 164 – 166.

¹³⁵ N313P was the registration borne by a Boeing 737 allegedly owned by a CIA front company for "flights of rendition" from Kabul, Afghanistan to Szcztyno-Szymany International Airport in Poland and later on to Rabat, Morocco, and Guantanamo Bay, in September 2007. See Tom Hundley, "Remote Polish airstrip holds clues to secret CIA flights", *Chicago Tribune* (6 February 2007), online: Chicago Tribune <articles.chicagotribune.com/2007-02-06/news/0702060187_1_cia-flights-poland-and-romania-detention-centers>.

Thus, there are very few countries that have not experimented with state-ownership of an airline at some point.¹³⁶ Whether to link a small State's capital to far-flung colonial outposts, or to provide service between distant points in a vast State, monarchies, republics, islands, large dominions and governments of every political stripe have, at one time or another, owned an airline.¹³⁷ As recently as 2014, a government-affiliated low cost airline was launched to more cheaply connect El Salvador with its Central American neighbours.¹³⁸

1) Airlines as Infrastructure¹³⁹

Airports and runways are typically considered part of national infrastructure and are almost always owned by or operated by government.¹⁴⁰ In addition, in the history of many vast countries such as Russia,¹⁴¹ China¹⁴² and Canada,¹⁴³ airline service has formed an essential part of national transportation infrastructure.¹⁴⁴ Predictably, especially prior to regulation, some scholars considered airlines to be "public utilities."¹⁴⁵ Even today, there are situations in which

¹³⁶ Notable exceptions include the United States and Hong Kong.

¹³⁷ Ten countries that owned airlines for many years include: Algeria; Argentina; Australia; Canada; China; India; Indonesia, Mexico; Russia; and Saudi Arabia. They have very different philosophies and systems of government, yet each is vast and state-owned airlines have facilitated domestic transportation of goods and people.

¹³⁸ VECA, a new San Salvadoran low cost airline got US\$ 14 million in start-up funds from ALBA Petroleos de El Salvador, a cooperative entity between Venezuela's oil company and El Salvador's government. See Karen Molina Juan José Morales Correo, "VECA se desmarca de Alba pese a financiamiento," *El Salvador.com* (28 October 2013), online: elsalvador.com

<www.elsalvador.com/mwedh/nota/nota_completa.asp?idCat=47861&idArt=8284073>. The airline was inaugurated on 28 March 2014.

¹³⁹ The text in this section is adapted from Fitzgerald, "Europe's Emissions", *supra* note 45 at 199.

¹⁴⁰ While there are many examples of airports being managed by local operating authorities or by private sector entities, the land is usually retained by government and strict conditions are imposed on the operator. Hamburg Finkenwerder Airport is one of the few totally-private airports. Airbus owns it and uses it for test and delivery flights as well as for receiving cargo for the adjacent Airbus factory on the site.

¹⁴¹ Aeroflot played a pivotal role in connecting Moscow with the rest of the country. Its domestic network included 3,000 points. See Hugh MacDonald, *Aeroflot: Soviet air transport since 1923* (New York: Putnam, 1975).

¹⁴² China believed that a state-owned airline was essential to domestic air transport capability. See Mark Dougan, *A political economy analysis of China's civil aviation industry* (New York: Routledge, 2002) at 59.

¹⁴³ Canada's government created Air Canada to be a "national instrument for providing air service" largely so that the Canadian flying public could cross Canada without having to fly through the United States. See Garth Stevenson, *The Politics of Canada's Airlines from Diefenbaker to Mulroney* (Toronto: Toronto University Press, 1987) at 11.

¹⁴⁴ Thus Aeroflot's first use of a passenger jet, and the world's first scheduled jet service, was not on an exotic international route, but to connect Moscow with Irkutsk in Central Siberia. The cities are separated by 4,180 km, and the TU 104 reduced travel time from 20 to 7 hours. See Sampson, *supra* note 57 at 103.

¹⁴⁵ Frederick Thayer, "Airline Regulation; The Case for a "Public Utility" Approach," (1982) 18:3 *The Logistics and Transportation Review* 221 at 231.

an airline will receive State support for providing infrastructure services to remote areas,¹⁴⁶ such as through America's Essential Air Service program.¹⁴⁷

2) *Connectivity*¹⁴⁸

There is value to a community in having a link to the outside world.¹⁴⁹ In telecommunications, "connectivity" is a public good as it facilitates the ability to contact all other members of the collective. That "connectivity" is a public good is underscored by long-standing government support for telecommunications¹⁵⁰ and recent support for rural broadband Internet.¹⁵¹

In transportation, "connectivity" or "being on the map" is also seen as a public good. It is widely believed that cities with better air service can compete more effectively for tourists and business conventions.¹⁵² In 1993, a US Department of Transport report identified the dramatic impact on both airfares and passenger traffic of the entry of low-cost carriers into new markets.¹⁵³ Perhaps as a consequence of that report, communities large and small¹⁵⁴ appear to be willing to use tax dollars to entice low-cost carriers,¹⁵⁵ because community leaders¹⁵⁶ believe that such services offer their communities a competitive advantage.¹⁵⁷

¹⁴⁶ Canada had a "foodmail" program that sent food supplies to persons in Canada's North. See Indian and Northern Affairs Canada, *Indian and Northern Affairs Canada devolution and Territorial relations branch: food mail review - Interim Report* (Ottawa: Government of Canada, 2009), online: Christian Aboriginal Infrastructure Developments <caid.ca/FoodMailIntRev031509.pdf>.

¹⁴⁷ 49 USC §§ 41731 – 41748 (2011). See *supra* note 131.

¹⁴⁸ The text in this section is adapted from Fitzgerald, "Europe's Emissions", *supra* note 45 at 201-202.

¹⁴⁹ See John Preston, "Public Transport Subsidisation" in Stephen Ison & Tom Rye, eds, *The Implementation and Effectiveness of Transport Demand Management Measures: An International Perspective* (Burlington, Vt: Ashgate Publishing, 2008) 189 at 192.

¹⁵⁰ In many countries, including Australia (Postmaster General's Department), France (Postes, télégraphes et téléphones), Germany (Deutsche Bundespost), New Zealand (New Zealand Post Office) and the UK (Post Office Telecommunications), the post office was associated with the provision of telex and telephone service. In Canada, the provincial governments of Alberta, Saskatchewan and Manitoba operated telephone service as a public utility. Elsewhere in Canada and the United States, telephone service was provided by private companies and regulated.

¹⁵¹ See Federal Communications Commission, "The National Broadband Plan", online: FCC <www.fcc.gov/national-broadband-plan />. See also Industry Canada's Broadband Canada program, "Broadband Canada: Connecting Rural Canadians", online: Industry Canada <www.ic.gc.ca/eic/site/719.nsf/eng/00017.html>.

¹⁵² Detroit has much better air service than Las Vegas, but the latter draws more tourism and convention traffic.

¹⁵³ Randall D Bennett & James M Craun, *The Airline Deregulation Evolution Continues: the Southwest Effect* (Washington, DC: US Department of Transportation, 1993). The report concluded that Southwest had reduced fares by an average of 65% and increased traffic by at least 30% in every new market it had entered.

¹⁵⁴ In 2005, Prince Edward Island's government signed revenue guarantees with Westjet and Northwest to ensure flight to Toronto and Detroit respectively. The Detroit service connected with flights serving Japan. Air Canada denounced the move as a subsidy. See Brent Jang, "AC cancels Toronto - Charlottetown flights", *The Globe and Mail* (18 July 2005), online: Airline Crew <www.airlinecrew.net/vbulletin/showthread.php?180573-AC-cancels-Toronto-Charlottetown-flights&s=fb36c29f2f42119e537d10626938d255>.

¹⁵⁵ For a review of these activities in Europe, see Fitzgerald, "Europe's Emissions", *supra* note 45 at 202 – 208.

3) Attracting State Financial Support

If an entity is to attract State financial support, it must be able to demonstrate that it is, or provides, or has a role in providing, a "public good." Thus banks, which are primarily providers of private goods, do not receive State funds,¹⁵⁸ but arts programs, social services, pedagogical institutions and infrastructure projects do,¹⁵⁹ and this support is largely based on their perceived status as a "public good."¹⁶⁰

Since the beginning of the airline industry, individual airlines have been or are government owned,¹⁶¹ have received or continue to receive government-provided¹⁶² or government-approved subsidies¹⁶³ and benefit from "equivalent-to-financial support" through the granting by a State of lucrative international route operating rights.¹⁶⁴ In each case, government support is predicated on the basis of the provision of a public good, and therefore, to the extent that a public good exists, government must play a role in dictating under what terms and conditions the public good is provided.¹⁶⁵ This provides the regulatory nexus.

D) Airlines are de facto Public Goods

When one considers the role that airlines play in assuring connectivity or serving as national or international infrastructure, which are clearly acknowledged public goods, and the fact that airlines play a fundamental role in the delivery of various other public goods, it is clear that even

¹⁵⁶ Sometimes these are business leaders. See Barbara De Lollis, "Companies wave cash to lure airlines to their towns", *USA Today* (8 July 2002), online: USA Today <www.usatoday.com/travel/news/2002/2002-07-09-travel-banks.htm> (visited May 18, 2014).

¹⁵⁷ Thus the website for the airport in Chattanooga, Tennessee has a section dealing with the fact that it is not included in the list of airports served by Southwest Airlines. See online: "Frequently Asked Questions", Chattanooga Airport <www.chattairport.com/www/docs/167/frequently-asked-questions/>.

¹⁵⁸ Economic stability is a public good and this has justified the bail-out of large private sector financial institutions under the doctrine of "Too Big to Fail." See Eric Dash "If It's Too Big to Fail, Is It Too Big to Exist?", *New York Times* (20 June 2009), online: New York Times <www.nytimes.com/2009/06/21/weekinreview/21dash.html?partner=rss&emc=rss&_r=0>.

¹⁵⁹ See Batina & Ihori, *supra* note 98.

¹⁶⁰ See *ibid*.

¹⁶¹ Aeroflot is still owned by the Russian State. See Aeroflot, *supra* note 141.

¹⁶² In 1934, the British Parliament agreed to provide Imperial Airways (a predecessor of British Airways) a £750,000 a year subsidy to carry mail across the Empire. See Sampson, *supra* note 57 at 30.

¹⁶³ Early air services were based on contracts to carry mail. See Smith, *Airways*, *supra* note 168 at 46 – 53.

¹⁶⁴ For an overview of how Trans World Airlines (TWA) got its international routes, see Sampson, *supra* note 57 at 77–82.

¹⁶⁵ For example, when Canada's government privatized Air Canada, it put limits on the number of voting shares that any individual could hold, and the collective percentage of voting shares that foreigners could hold. It also required the carrier to maintain its head office in Montreal and continue to serve customers in English and French. See *Air Canada Participation Act*, *supra* note 209. No other private sector Canadian carrier has similar obligations.

if airlines are not explicitly public goods in and of themselves, they are sufficiently associated with the delivery of explicit public goods to make them *de facto* public goods. Such a conclusion is consistent with state-ownership and state-support of airlines, and the distinct regulation of the airline industry. Throughout the world, a similar philosophy is present: whether the airline industry is a public good or not is irrelevant, as is its degree of public ownership; what matters is the role the industry plays and the powers and tools the regulator may use in order to ensure that these other public goods continue to be provided.¹⁶⁶ The regulations are often based on a market failure argument, which underscores the extent to which airlines are seen as *de facto* public goods. Thus, for the purposes of this thesis, airlines will be considered public goods.

VI) THE HOW OF REGULATION

Given that airlines are public goods, the tools of regulation - from state-ownership to subsidies - were present from the earliest stages of the industry's development.¹⁶⁷ The potential of aviation was without precedent, and in the absence of an efficiently operating market, the government intervened. In 1924, as a result of the British government's influence, Britain's small airlines were merged into a larger company, Imperial Airways, and given a subsidy for flying a million miles a year.¹⁶⁸ Regulators quickly recognized the obvious: aircraft are singular in being able to carry a person directly between any two points, literally "as the crow flies." Unlike ships, an aircraft can serve inland points and remote communities¹⁶⁹ not linked to mainline rail or to the highway network.¹⁷⁰ Unlike any technology that has preceded or succeeded it, the aircraft permits physical in-person connectivity while relying on comparatively little infrastructure.¹⁷¹ Two days after Louis Blériot made the first-ever air crossing from Calais to Dover, *The Observer* carried a special supplement with the heading "England No Longer an Island."¹⁷²

¹⁶⁶ For example, over two decades after Air Canada was privatized, Canada's government took action to block work stoppages and to ensure the viability of the airline's pension fund. See *Protecting Air Service Act* SC 2012, c 2. See *Air Canada Pension Plan Funding Regulations*, *supra* note 76.

¹⁶⁷ One of America's oldest carriers, Varney Air Lines (predecessor of both United and Continental) began to grow when an airmail contract was awarded to it in 1925. See Davies, *Rebels*, *supra* note 57 at 4.

¹⁶⁸ Henry Ladd Smith, *Airways abroad: the story of American world air routes* (Madison: University of Wisconsin Press, 1950) at 97.

¹⁶⁹ This author worked in Labrador City, Labrador. Without aircraft that community would probably not exist.

¹⁷⁰ Aircraft serving remote communities can land on grass strips, lakes or snow. No airport is required.

¹⁷¹ Until satellite internet services were available, telecommunications infrastructure was required for phone, TV and Internet. Thus, until very recently, aircraft were serving destinations that did not have reliable phone service.

¹⁷² Sampson, *supra* note 57 at 23. The flight occurred on July 25, 1909.

A) Forms of Intervention

In the regulation of public goods, it is not always clear that one form of intervention is to be preferred over another. The various means of ensuring the provision of service are:

- Direct provision by government, e.g., National Archives;¹⁷³
- Creating a state-owned corporation, e.g., Amtrak,¹⁷⁴ to provide the service;
- Granting a direct subsidy, e.g., America's Essential Air Service program;¹⁷⁵
- Using an indirect funding mechanism, e.g. the Corporation for Public Broadcasting¹⁷⁶ to finance the provider of the service;
- Creating a state-sanctioned monopoly, e.g., a cable TV company;¹⁷⁷
- Creating regulations that force the private sector to provide a given service;¹⁷⁸ or
- Providing consumers with the tools to influence a private sector company.¹⁷⁹

While each of these has advantages and disadvantages in terms of accountability and efficiency, more analysis is needed to determine how each can best be applied to different cases.¹⁸⁰

B) Factors in Choosing Regulatory tools

1) Directness

Directness as that term is used here refers to the extent to which the regulator carries out the activity. Does the regulator provide the service or influence private sector entities?¹⁸¹

Often the public visibility of the task may influence the choice of provider. If an efficient state-owned enterprise can deliver a high-quality outcome, the regulator often gets the credit as when state-owned Air Canada carried Queen Elizabeth II.¹⁸² In other cases, successful outcomes are seen as normal and generate no public interest and thus the only publicity comes from negative outcomes, such as aviation accidents, airport terminal cost over-runs or people taking knives

¹⁷³ Canada's National Archives are government operated. See *Library and Archives of Canada Act*, SC 2004, c 11.

¹⁷⁴ See *Rail Passenger Service Act of 1970*, Pub L No 91-518, 84 Stat 1327.

¹⁷⁵ See Essential Air Service Program *supra*, note 147.

¹⁷⁶ See 47 USC 396 (2011).

¹⁷⁷ Cable TV companies often have their own exclusive territory. See David Taras, Frits Pannekoek & Maria Bakardjieva, eds, *How Canadians Communicate* (Calgary: University of Calgary Press, 2003) at 154.

¹⁷⁸ See SC 2000 C-15 clause 3. When Air Canada bought Canadian Airlines in 2000, the government required it to give 1-year notice before abandoning service to any city.

¹⁷⁹ See *Intermodal Surface Transportation Efficiency Act of 1991*, Pub L No 102-240, § 6006, 105 Stat 1914 at 2172. The US government publishes the punctuality records of American air carriers.

¹⁸⁰ See B Guy Peters & John A Hoornbeek, "The Problem of Policy Problems" in F Pearl Eliadis, Margaret M Hill & Michael Howlett, eds, *Designing government: from instruments to governance* (Montreal: McGill-Queen's University Press, 2005) 77 at 95.

¹⁸¹ Lester M Salamon, "Economic Regulation" in Lester M Salamon & Odus V Elliott, eds, *The tools of government: a guide to the new governance* (New York: Oxford University Press, 2002) 117 at 120.

¹⁸² See *supra*, note 129.

through airport security. Thus, in certain jurisdictions, regulators have chosen a non-direct option, such as having a non-governmental agency provide air traffic management (ATM) services,¹⁸³ or operate airports¹⁸⁴ or having the private sector conduct airport screening.¹⁸⁵

If a high quality outcome is likely, the regulator's reputation increases when a government agency achieves a successful outcome. However where successful outcomes are expected as normal and publicity is only generated from failures, having a regulated but arms-length entity provide the service allows the regulator to distance itself from any failure to adhere to the expected standard. Thus when two aircraft collided in Swiss-controlled airspace over Germany in 2002, the victims' families were not compensated by the Swiss government but by the Swiss private company, SkyGuide, that had provided the ATM services.¹⁸⁶ In this case, had a Swiss government agency been the service provider, the government's reputation might have suffered, but the fact that the error had been made by a private sector company allowed the government to investigate but did not oblige them to assume blame. Thus, depending on the experiences and capacities of different States, the directness of the service delivery will vary. While this distinction is generally of little consequence, it potentially poses challenges when various countries seek to align standards. If a group of countries are planning to harmonize their ATM services into a single entity, the negotiations are complicated if most of the States have government agencies providing ATM services, and others have private entities like the Swiss SkyGuide or NAV CANADA.

¹⁸³ Canada's ATM services are now provided by an independent agency. See *Civil Air Navigation Services Commercialization Act*, SC, 1996, c 20) and *NAV CANADA Divestiture Regulations*, SOR/96-479. A Swiss government-owned company provide ATM services over its territory. See Confédération Suisse, 748.132.1 *Ordonnance du 18 décembre 1995 sur le service de la navigation aérienne* (OSNA), online: The Federal Council, Government of Switzerland <www.admin.ch/opc/fr/classified-compilation/19950593/index.html>.

¹⁸⁴ Canada's major airport authorities are independent of Canada's government but regulated by it. A 2003 proposal would have required them to display the Canadian flag, and erect welcome signs, in prominent places for arriving international passengers; and display the Canadian flag at other prominent places on the airport. See Bill C-27 *Canada Airport Act*, Parliament of Canada, House Government Bill, 37th Parl, 2nd Sess, online: LegisInfo, Parliament of Canada <www.parl.gc.ca/HousePublications/Publication.aspx?Language=E&Mode=1&DocId=2331380>.

¹⁸⁵ Most German airports use private screening firms that operated in accordance with strict regulatory standards. See Jens Hainmüller & Jan Martin Lemnitzer, "Why do Europeans Fly Safer? The Politics of Airport Security in Europe and the US" (2003) 15:4 *Terrorism and Political Violence* 1 (Taylor & Francis Online) at 12.

¹⁸⁶ See, "Claim against Skyguide filed in Switzerland", (21 May 2005) online: Swissinfo.ch, <www.swissinfo.ch/eng/claim-against-skyguide-filed-in-switzerland/4519176> (visited May 17, 2014).

2) Automaticity

Once the regulation is adopted, the question remains as to whether compliance can be expected to follow automatically (degree of "automaticity") or whether additional measures are required to ensure compliance and whether post-regulatory monitoring must be done. In some situations, a special agency will need to be created. Canada's Commissioner of Official Languages exists, in part, to ensure that the travelling public in Canada receives appropriate services in both English and French as required by law.¹⁸⁷ The Commissioner investigates complaints and reports to Parliament.¹⁸⁸ In other cases, market forces can be harnessed, such as auctions for a slot at a busy airport,¹⁸⁹ price determination on competitive routes,¹⁹⁰ or the provision of service in the local language of the market served.¹⁹¹ To the extent that either the market or a complaint-driven system will facilitate enforcement, compliance assurance costs are reduced. In other situations, such as in aviation security, direct enforcement and monitoring is required as the lack of adherence to standards has potentially serious consequences. In addition, given the technical nature of aviation security regulation, market-based and complaint-driven enforcement would not be likely to achieve the desired regulatory outcomes. Thus the degree of automaticity of a regulation will depend on the type of regulation and the nature of the outcome desired.

3) Publicity

Certain regulations receive more publicity than others for a variety of reasons. There are times when a politician wants significant public credit for a regulatory change, such as when the change repeals or modifies an unpopular or problematic regulation,¹⁹² or when a change

¹⁸⁷ *Official Languages Act*, RSC 1985, c 31 (4th Supp), ss 23, 49 – 71.

¹⁸⁸ Office of the Commissioner of Official Languages, *Audit of Service Delivery in English and French to Air Canada Passengers: Final Report* (Ottawa: Government of Canada, 2011).

¹⁸⁹ In December 2008, an FAA initiative to auction slots at the three largest airports serving New York was stayed by the Courts. See *Port Authority v FAA*, No 08–1329 (DC Cir December 8, 2008).

¹⁹⁰ Open skies agreements are based on the idea that prices will be determined by the market and thus they usually include a double-disapproval clause so that a tariff will be deemed approved unless disapproved by both signatories.

¹⁹¹ In its efforts to attract more passengers, Emirates' website now provides service in the local language of every market the carrier serves. See online: Emirates <www.emirates.com/> and select region. In addition, on an average flight, the airline can provide in-flight service in up to 15 languages. See Air Transport World, "Airline of the Year", online: Air Transport World <atwonline.com/airline-finance-data/article/airline-year-emirates-airline-0201>.

¹⁹² Thus the announcement that Canada was aligning its automobile "immobilizer" regulations with the US was issued in a press release, fully a week before the regulations were tabled in the Canada Gazette. See Transport Canada, News Release, H 245/07, "Importation of US Vehicles by Canadians: Government of Canada Announces Amendment to Clarify and Ease Importation" (19 December 2007), online: Government of Canada <news.gc.ca/web/article-en.do?nid=369589> (visited May 22, 2014). See also Government of Canada, *Regulations Amending the Motor Vehicle Safety Regulations* (Importation of Vehicles – Section 12) (SOR/2007-307). Over 1,000 vehicles imported into Canada from the US were caught by the former regulation.

responds to public demands for action.¹⁹³ In other cases, such as after a terrorist incident¹⁹⁴ the public needs to be quickly informed of any consequential regulatory changes.¹⁹⁵ There are even situations where publicity is sought so that the regulator can be seen to be taking substantial action during a crisis.¹⁹⁶ Indeed, it is precisely the need to be seen to be taking action that motivates many regulatory initiatives.

Thus the EU passenger rights legislation was designed to compensate passengers for cancelled flights,¹⁹⁷ whereas American passenger rights initiatives initially focused on compensating passengers for lengthy tarmac delays.¹⁹⁸ The fact that similar regulatory regimes are rooted in solutions to very distinct public problems in different jurisdictions complicates initiatives to harmonize them.

4) Relativity of State Capacity

The choice of regulatory tool is also influenced by the State's capacity or organizational ability to influence the behaviour of those it seeks to regulate and by the number and type of actors whose actions must be influenced to effect the desired regulatory change.¹⁹⁹ The better the State's reputation in terms of economic prosperity, transparency, government stability, adherence to the rule of law, and dispassionate, objective regulatory expertise,²⁰⁰ the greater will be the range and

¹⁹³ Transport Canada's Flight Rights campaign was an attempt to satisfy the demands of a Parliamentary Motion calling for an "Airline Passenger Bill of Rights". See Fitzgerald, "Air Passenger", *supra* note 42 at 34 – 37. See also Transport Canada, News Release, H 207/08, "Government of Canada Announces Flight Rights Canada for air travellers" (September 5, 2008) online: Government of Canada <news.gc.ca/web/article-en.do?nid=419619> (visited May 14, 2014).

¹⁹⁴ For example, the August 10, 2006 plot to blow up 10 transatlantic flights departing Heathrow. See Paul J Smith, *The Terrorism Ahead: Confronting Transnational Violence in the Twenty-first Century* (Armonk, NY: M. E. Sharpe, 2008) at 76.

¹⁹⁵ For example, Canada used a press release to announce new restrictions against taking liquids and gels aboard airliners. See Transport Canada, "Canada's New Government Announces Increased Security Measures for Airports and Air Travel", News Release, GC 010/06 (August 10, 2006) online: Government of Canada <news.gc.ca/web/article-en.do?crtr.sj1D=&mthd=advSrch&crtr.mnthndVl=&nid=232059&crtr.dpt1D=&crtr.tp1D=&crtr.lc1D=&crtr.yrStrtVl=&crtr.kw=lawrence%2Bcannon&crtr.dyStrtVl=&crtr.aud1D=&crtr.mnthStrtVl=&crtr.yrndVl=&crtr.dyndVl=>.

¹⁹⁶ Thus, six days after the September 11 terrorist attacks, Canada's Minister of Transport announced a rule requiring Canada's airlines to lock the cockpit door "for the full duration of flights." See Transport Canada, "Actions Taken by Transport Canada Following the September 11, 2001 Terrorist Attacks, Backgrounders", online: Transport Canada <www.tc.gc.ca/eng/mediaroom/backgrounders-menu-6417.htm>.

¹⁹⁷ See EC 261/2004, *supra* note 47.

¹⁹⁸ See 14 CFR § 259.5 (2011).

¹⁹⁹ Michael Howlett, "What is a Policy Instrument? Tools, Mixes, and Implementation Styles" in Eliadis et al, *supra* note 180, 31 at 43.

²⁰⁰ See also Daniel Kaufmann, Aart Kraay & Massimo Mastruzzi, *The Worldwide Governance Indicators: Methodology and Analytical Issues*, Policy Research Working Paper 5430 (Macroeconomics and Growth Team, The

geographical reach of regulatory tools available. Thus the United States and European States are invited to participate in foreign accident investigations,²⁰¹ while aircraft regulated by the aviation authorities of the Democratic Republic of Congo and Swaziland are banned from EU and US skies.²⁰² The extent to which the American No-Fly list²⁰³ and the European Union's Emissions Trading System²⁰⁴ can be said to have extraterritorial application underscores the relativity of the range and reach of regulatory tools available to a jurisdiction.

C) Regulatory Tools

1) State Ownership or Direct Provision

State ownership of airlines was a historical reality in much of the Global North.²⁰⁵ This is because

direct government involvement is preferred over indirect regulatory means where: . . . performance cannot be left to chance; where equity concerns are important; where no effective market exists or is likely to exist; and where maintenance of some government capability is essential.²⁰⁶

Furthermore, as Staniland observed:

In the postwar period ... the State had in reality both a proprietary and a regulatory relationship with the airline industry, and its performance in both relationships was often complicated by commitments and pressures unrelated to the specific goal of promoting the air transport industry. Diplomats and colonial governors, for example, wanted airlines to open routes to particular routes

World Bank Development Research Group, 2010), online: World Bank <www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2010/09/24/000158349_20100924120727/Rendered/PDF/WPS5430.pdf>.

²⁰¹ When a TACA Airlines Airbus A320 crashed in Tegucigalpa in May 2008, France, Ireland and the United States were invited to participate in the accident investigation. See El Salvador, Autoridad de Aviación Civil, *Preliminary Report: TACA International Airlines Flight 390: Airbus A320-233: Register No. EI-TAF, Toncontin International Airport (MHTG/TGU), Tegucigalpa, Honduras (MSN 1374)*", Autoridad de Aviación Civil, May 30, 2008, online: Autoridad de Aviación Civil <www.aac.gob.sv/archivos/cai/390.pdf> (visited May 16, 2014).

²⁰² See *Regulation 474/2006*, *supra* note 68. See also Federal Aviation Administration, International Aviation Safety Assessments (IASA) Program, online: FAA <www.faa.gov/about/initiatives/iasa/> (visited May 24, 2014).

²⁰³ *Intelligence Reform and Terrorism Prevention Act of 2004*, Pub L No 108–458, 118 Stat 3638 at 3714 [IRTA].

²⁰⁴ *Directive 2008/101*, *supra* note 65.

²⁰⁵ This term includes North America, the European Union, Japan, Australia and New Zealand. See Paulos Milkias, *Developing the global south: a United Nations prescription for the third millennium* (New York: Algora Publishing, 2010) at 45. It probably also includes South Korea, Singapore, Taiwan and Chile.

²⁰⁶ Christopher K Leman, "Direct Government" in Salamon & Elliott, *supra* note 181, 48 at 61-62.

or colonies; finance ministers wanted them to earn foreign exchange, especially dollars; and labor leaders and industry minister wanted them to buy domestically built airliners.²⁰⁷

In the 1930s, when Canadian regulators considered how to best create a national airline, they recognized that competition was not really possible on a national basis. Given that a monopoly had to exist, they felt that a Crown corporation would better serve the public than would a private company.²⁰⁸ This approach allowed many of the additional benefits described in the above-quoted paragraph to be achieved and avoided the situation where the government would constantly be required to regulate abuses of market power by a monopoly private carrier.

a) Positive Side Effects of Direct Provision

For many regulators, more important than the above-quoted factors is the airlines' ability to stimulate economic growth in targeted regions. Thus, regulators seek to influence the location of an airline's headquarters²⁰⁹ and of its aircraft maintenance facilities.²¹⁰ Another important aspect of a major state-owned airline is its potential to support the local aircraft manufacturing industry. China explicitly acknowledged that a state-owned airline would be important to stimulate aviation manufacturing.²¹¹ Although no Chinese-built commercial jet airliner has yet seen commercial service, regulators in other countries were more fortunate. The Vickers VC-10,²¹² Concorde²¹³ the Dassault Mercure,²¹⁴ and the Ilyushin Il 96-300,²¹⁵ are four examples of aircraft that would never have flown if their state-owned customers had not been forced by regulators to

²⁰⁷ Martin Staniland, *Government birds: air transport and the state in Western Europe* (Lanham, Md: Rowman & Littlefield Publishers, 2003) at 68.

²⁰⁸ See David Corbett, *Politics and the airlines* (Toronto: University of Toronto Press, 1965) at 81.

²⁰⁹ Air Canada must maintain its headquarters in Montreal. See *ACPA*, *supra* note 73, s 6(1)(e).

²¹⁰ Air Canada is legally required to maintain operational and overhaul centres in Winnipeg, Montreal and Toronto. See *ibid*, s 6(1)(d).

²¹¹ Dougan, *supra* note 142 at 59. China's state-owned airlines may be called to purchase the new COMAC ARJ21, which is based on a DC-9 and produced with the help of dozens of foreign companies. See Roger Cliff, Chad JR Ohlandt & David Yang, *Ready for Takeoff: China's Advancing Aerospace Industry* (Arlington, Va: RAND Corporation, 2011) at 27, 43 – 45.

²¹² See Staniland, *supra* note 207 at 151 – 153.

²¹³ Air France and British Airways, the only two airlines who purchased Concorde, had both been 'encouraged' by their governments to do so. See generally Christopher Orlebar, *The Concorde Story: Ten Years in Service* (Twickenham, Middlesex: Temple Press Books, 1986)

²¹⁴ After a French state-owned carrier had bought 10 of the 2-engine aircraft "no other company in the world wanted the plane." See Raymond Vernon & Yair Aharoni, *State-owned enterprise in the Western economies* (New York: St. Martin's Press, 1981) at 101.

²¹⁵ See John Ambler, Denis JB Shaw & Leslie Symons, *Soviet and East European transport problems* (New York: St Martin's Press, 1985) at 155 – 157.

purchase them.²¹⁶ In each case, the regulator, at least in the short term, could take personal credit for shepherding the development of a new aircraft. Thus, "[i]n cases such as the Concorde aircraft's development, bureaucratic experts and pipe-dreaming politicians could launch a vastly extravagant but highly prestigious project at minute personal cost."²¹⁷

b) Political Considerations of State Ownership

Direct government provision has high public visibility, and the physical presence of infrastructure and uniformed personnel is an important factor in political visibility.²¹⁸ Airlines are, by nature, higher profile than most other lines of business²¹⁹ so the trials and tribulations of a state-owned carrier will be visible.²²⁰ While the airline's successes are to the government's credit, its foibles are politically embarrassing and there is inevitable political pressure for the airline to serve marginal or unprofitable routes or both.

c) Re-Thinking State Ownership

In recent years, former state-owned carriers have been privatized²²¹ in the European Union,²²² and in most of the industrialized world.²²³ These actions have been seen as motivated by a "traditional ideological hostility to government intervention in private affairs, and a political apparatus that gives private interests exceptional opportunities to resist governmental intrusions into their turf."²²⁴ Nonetheless, when a state-owned enterprise is privatized, especially where it had a monopoly or dominant position in the market, economic regulation inevitably follows.²²⁵ Thus, 17 years after Air Canada was privatized, a Member of Canada's Parliament observed:

²¹⁶ None of the four aircraft was commercially successful and their combined production was 115 including 54 Vickers VC-10s, 20 Concorde, 12 Dassault Mercuries and 29 Ilyushin IL-96s.

²¹⁷ Peter Self, *Political Theories of Modern Government: Its Role and Reform* (London: Allen & Unwin, 1985) at 66

²¹⁸ See Leman, *supra* note 206 at 52.

²¹⁹ In 1934, Australian Prime Minister J A Lyons noted that the establishment of an efficient international airway could "raise the prestige of Australia in the eyes of the world." See Sampson, *supra* note 57 at 52.

²²⁰ For example, despite having been fully privatized in 1989, Air Canada was mentioned in Canada's House of Commons over 360 times between January 21, 2001 and November 1, 2005. See *House of Commons Debates*, 38th Parl, 1st Sess, No 147 (3 November 2005) at 9457 (James Moore) [Moore, *Debates*]

²²¹ AeroMéxico (2007); Air Canada (1988); Air Jamaica (2010); Air New Zealand (1983) Kenya Airways (1996); Korean Air Lines (1969); LAN Chile (1989); Royal Jordanian (2007); Qantas (1993); Qatar Airways (1997, 50%).

²²² Most of the EU's former state-owned airlines have been privatized. Staniland, *supra* note 207 at 183 – 274.

²²³ Some of the major airlines that are still majority-owned by national governments include: China Airlines (Taiwan), Emirates, Etihad, South African Airways and Singapore Airlines.

²²⁴ See Leman, *supra* note 206 at 62 – 63.

²²⁵ For the post-privatization aftermath in the UK and Mexico after the privatization of British Telecom and Teléfonos de México, respectively, see Salamon, *supra* note 181 at 124.

In fact, such is the [government's] fascination with regulating Air Canada that in the past three years the airline has been mentioned by name in four separate government initiated bills, Bill C-38,²²⁶ Bill C-26,²²⁷ Bill C-44²²⁸ and Bill C-47^{229, 230}.

In the 1980s, UK Prime Minister Margaret Thatcher's government led "the international trend towards the privatization of State enterprises."²³¹ The government quickly indicated its intention to sell British Airways.²³² While the legal framework required to privatize a state enterprise did not yet exist, it was created in the context of another British state-owned enterprise, British Telecom,²³³ and shortly thereafter British Airways shares were put on the market.²³⁴

Privatization is often seen as a "'regulatory event' because of both its impact on many firms at once and its source in government decision-making."²³⁵ However, the privatization of a large state-owned enterprise may be long and complex and it may be "difficult to accurately identify precise regulatory event dates ... [because] changes in regulation occur in many States over time and multiple events convey marginal news about the impending change."²³⁶

Undoubtedly, in each case of privatization, state regulators ultimately concluded that the state-owned carriers had reached a level of financial stability that they could operate independent of government, and that in many cases, the privatization of the airline would bring revenue to government coffers. Moreover, although privatization, as noted above, had long been seen as part of the market-oriented ideological platform of conservative governments in the UK and

²²⁶ Bill C-38, *An Act to amend the Air Canada Public Participation Act*, 1st Sess, 37th Parl, 2001 (Royal Assent on 18 December 2001). This Act eliminated the 15% limit on ownership of voting shares in Air Canada by any one person.

²²⁷ Clause 28 would have re-regulated Air Canada's relations with its feeder carriers (Jazz) and with its frequent flyer plan. See Bill C-26, *An Act to amend the Canada Transportation Act and the Railway Safety Act, to enact the VIA Rail Canada Act and to make consequential amendments to other Acts*, 2nd Sess, 37th Parl, 2003, cl 28.

²²⁸ Clause 28 would have re-regulated Air Canada's relations with its feeder carriers (Jazz) and with its frequent flyer plan. See Bill C-44, *An Act to amend the Canada Transportation Act and the Railway Safety Act, to enact the VIA Rail Canada Act and to make consequential amendments to other Acts*, 1st Sess, 38th Parl, 2005, cl 28.

²²⁹ Bill C-47 would have broadened Air Canada's feeder airlines (Jazz) obligations with respect to the *Official Languages Act* and required Air Canada's parent holding company to maintain its headquarters in Montreal. See Bill C-47, *An Act to amend the Air Canada Public Participation Act*, 1st Sess, 38th Parl, 2005.

²³⁰ See Moore, *Debates*, *supra* note 220.

²³¹ Robert Howse, J Robert S Prichard & Michael J Trebilcock, "Smaller or Smarter Government?" (1990) 40 UTLJ 498 at 498, 500 (JSTOR).

²³² Catherine Eckel, Doug Eckel & Vijay Singal, "Privatization and efficiency: Industry effects of the sale of British Airways" (1997) 43 Journal of Financial Economics 275 at 277–278 (ScienceDirect).

²³³ WB Morley, "The Privatization of British Telecom – Its impact on management" (1986) 19:6 Long Range Planning 124 at 126 (ScienceDirect).

²³⁴ See Eckle, *supra* note 232 at 275 – 278

²³⁵ See *ibid* at 275–298, and especially at 280.

²³⁶ *Ibid*.

North America, it was quickly embraced by governments of all political stripes in developed States and increasingly is being accepted by regimes in the developing world.²³⁷

2) Subsidy/State Aid

Regulators in many countries where airlines were never state-owned, or where state-owned airlines have been privatized, nonetheless have used subsidies as a tool to influence the behavior of commercial airlines in order to ensure, for example, that they serve specific destinations,²³⁸ establish hubs at specific airports,²³⁹ or make their aircraft available to the military under certain conditions.²⁴⁰ In many cases, subsidy and state aid are second-best options that make most sense only when direct measures are not feasible.²⁴¹

Subsidy lacks the political visibility and degree of control of direct government involvement; advertising is often needed to make the public aware of the subsidy,²⁴² and the link between the financial assistance and the public good is not always as clear as it would be with direct government involvement. Depending on whether a subsidy is given as a tax refund or voucher to the passenger to reduce the net cost of travel, or paid directly to the airline, or takes the form of reduced landing fees at an airport, it may be more or less efficient at achieving its stated objectives. Thus, a value-for-money audit should always be part of any subsidy program.²⁴³

While subsidies constitute a less direct market intrusion than establishing a state-owned carrier that competes with a private sector airline,²⁴⁴ they must be designed and handled with care. Although there are obvious situations where air transportation, especially to isolated

²³⁷ See Howse, Prichard & Trebilcock, *supra* note 231 at 498, 501.

²³⁸ See Essential Air Service Program *supra*, note 147.

²³⁹ See Vincent JG Power, "Ryanair v. European Commission: The European Court of First Instance's Judgment on Alleged State Aid at Charleroi Airport" (2008-2009) 8 *Issues in Aviation Law & Policy* 183 (HeinOnline).

²⁴⁰ See 10 USC § 9512 (2011); 49 CFR Part 93 (2011). See also *Department of Defense Authorization Act, 1982*, Pub L No 97-86, § 9513, 95 Stat 1099 at 1128 (codified at 10 USC § 9513).

²⁴¹ See Christopher Findlay, *Strategic Directions for ASEAN Airlines in a Globalizing World: Overview*, Final Report, REPSF Project No 04/008 (August 2005) at 32, online: ASEAN <www.asean.org/archive/aadcp/repsf/docs/04-008-FinalOverview.pdf> (visited April 8, 2014).

²⁴² Thus the logo of the Corporation for Public Broadcasting appears at the end of every PBS program.

²⁴³ The US General Office of Accounting (GAO) examines the value of all taxpayer-supported ventures. It observed that in 1997, fewer than 100 passengers a day had boarded Amtrak trains in 13 states. See US, GAO, "Congressional Oversight: Opportunities to Address Risks, Reduce Costs, and Improve Performance", GAO/T-AIMD-00-96 (2000) at 37.

²⁴⁴ State-owned British Airways (BA) debts at US\$ 350 million were much higher than those the US\$ 270 million Laker Airway owed, so it is not a big surprise that Freddie Laker sued BA for helping to destroy his business after it went bust in 1982. See also the comments of the President of Wardair Canada on competing with state-owned Air Canada. See Ward, *supra* note 59 at 261–263; Davies, *Rebels*, *supra* note 57 at 256-258.

communities, is a public good, there are other circumstance in which subsidies can backfire. This disparity creates perverse disincentives that diminish rather than enhance economic welfare. A subsidy may weaken a firm's incentive to improve efficiency - even contributing to moral hazard - and thereby allow less efficient firms to expand at the cost of more efficient (but non-subsidized) competitors.²⁴⁵ Once given, a subsidy is difficult to remove and brings with it the clamor for more.²⁴⁶

The United States has two principal subsidy programs: the Civil Reserve Air Fleet,²⁴⁷ and the Essential Air Service program.²⁴⁸ The European situation is more nuanced; though the EU does not allow the subsidization of airlines,²⁴⁹ it does allow the subsidization of individual routes and start-up operations under certain circumstances.²⁵⁰ Although Canada does not have a similar type of program,²⁵¹ it does subsidize the delivery of food to certain isolated Northern communities,²⁵² but its former carrier-specific subsidies caused distortion of competition between air carriers serving Northern Canada.²⁵³

a) America's Civil Reserve Air Fleet Program

In the Civil Reserve Air Fleet (CRAF) program, airlines agree to make their aircraft available to the US Department of Defense in return for preferential bidding opportunities to carry peacetime cargo and passenger traffic.²⁵⁴ In 2006, the subsidy accounted for only 1.4% of the revenues of participating US passenger carriers,²⁵⁵ but nonetheless, it was seen as positive.²⁵⁶ More

²⁴⁵ See Findlay, *supra* note 241 at 23–26. Between 1992 and 2000, Philippine Air Lines received unlimited guarantees and debt write-offs by the national government, virtually eliminating any need for fiscal discipline.

²⁴⁶ Thus, on February 23, 2011, the Alaska State Legislature passed a motion, HR5, calling on the US Congress to continue fully funding the Essential Air Services Program. See US, Alaska State Legislature, *House Journal*, 1st Sess, 27th Leg (23 February 2011) Juneau, Alaska, at 0314.

²⁴⁷ See *supra* note 240

²⁴⁸ See *supra* note 147.

²⁴⁹ In 1998, the EU demanded that Greece cease subsidies to Olympic Airlines. See Kenneth Button & Roger Stough, *Air transport networks: theory and policy implications* (Cheltenham, UK: Edward Elgar Publishing, 2000) at 164. Greece was still trying to justify these subsidies in 2005. See *Commission v Greece*, C-415/03, [2005] ECR I-3894.

²⁵⁰ See Power, *supra* note 239.

²⁵¹ Some provinces subsidize inter-city bus service. Greyhound Canada's regional services, where it is the only provider of public transport, has a public good component and has attracted government support. See "Greyhound will continue bus service in Manitoba, along with subsidies", *Waterloo Chronicle* (28 October 2009) (QL).

²⁵² Australia has a similar program. See Indian and Northern, *supra* note 146 at 15.

²⁵³ See Chris Windeyer, "Food mail fight headed to appeals court", Nunatsiaq Online (12 February 2007) online: Nunatsiaq Online < www.nnsi.com/frames/newspapers/2007-02/feb12_07food.html >.

²⁵⁴ CRAF costs about US\$ 2.1 billion annually. See US Congress, Congressional Budget Office, *Issues Regarding the Current and Future Use of the Civil Reserve Air Fleet* October (October 2007) at 1

²⁵⁵ *Ibid* at 7.

importantly, the subsidy has produced the desired result. During "Operation Desert Storm", roughly 93% of passenger capacity was provided by CRAF participants.²⁵⁷ Because any US-owned carrier with suitable aircraft is eligible to participate,²⁵⁸ this subsidy is not carrier-specific and therefore does not distort competition.²⁵⁹

b) America's Essential Air Services Program

The Essential Air Service (EAS) program used to pay a subsidy of up to US\$ 200 for residents of a community that was between 70 and 209 miles away from a medium or large hub.²⁶⁰ Because the subsidy was paid on a per seat basis, whether the aircraft carried any passengers or not, the actual subsidy per person reached US\$ 4,107 for each of the 227 passengers that flew out of Ely, Nevada in 2010.²⁶¹

Unsurprisingly, in light of examples like this, in 2006, the US General Office of Accounting (GAO) criticized the EAS program as not being cost-effective.²⁶² More recently, the GAO found evidence that passengers are willing to forgo EAS-subsidized flights at a local airport in favor of traveling to a larger airport that offers more flight options, more direct flights, and lower fares.²⁶³ The GAO also noted that three communities with EAS flights were within 50 miles of a small-hub airport.²⁶⁴ The US Congress reacted by adopting legislation that denies subsidies for any airport with an average of fewer than 10 daily passengers unless that airport is further than 175 miles from a medium or large hub.²⁶⁵

²⁵⁶ This is especially true for the airlines that provide the most aircraft. See William F Bowlin, "Financial analysis of civil reserve air fleet participants using data envelopment analysis" (2004) 154 *European Journal of Operational Research* 691 at 703 (ScienceDirect).

²⁵⁷ Lawrence Schwartz et al, *Review of DoD's Strategic Mobility Programs: Civil Reserve Air Fleet*, PL023R2, (Bethesda, Md: Logistics Management Institute, May 1991) at 16, online: DTIC Online <www.dtic.mil/dtic/tr/fulltext/u2/a246916.pdf>.

²⁵⁸ It is a "cooperative, voluntary program"; virtually every major US airline is involved in it. See *supra* note 131.

²⁵⁹ See Findlay, *supra* note 241 at 28.

²⁶⁰ 49 USC § 41742 (2011). Airlines bid for the route and winning carrier must offer a minimum number of daily flights over a designated route. Thus, this subsidy does not distort competition.

²⁶¹ See "Taxpayers are paying \$4,000 a head to fly passengers to the middle of nowhere", *Daily Mail* (12 August 2011), online: Daily Mail <www.dailymail.co.uk/news/article-2025364/Taxpayers-paying-4-000-head-fly-passengers-middle-nowhere.html> (visited May 11, 2014)

²⁶² Many of the US-subsidized flights leave with lots of empty seats. See US, Government Accountability Office, "Commercial Aviation: Programs and Options for the Federal Approach to Providing and Improving Air Service to Small Communities", GAO-06-398T (2006) at 17.

²⁶³ US, Government Accountability Office, "National Transportation System: Options and Analytical Tools to Strengthen DOT's Approach to Supporting Communities' Access to the System", GAO-09-753 (2009) at 36.

²⁶⁴ *Ibid.*

²⁶⁵ *FAA Modernization and Reform Act of 2012*, Pub L No 112-95, § 421, 126 Stat 11 at 96.

c) America's Small Community Air Service Development Program

A third US subsidy is the Small Community Air Service Development Program.²⁶⁶ This program currently awards US\$ 6 million a year to help airports attract airlines and market their services. For example, in 2010, the airport in Burlington, Vermont, applied for US\$ 200,000 "to implement a highly focused marketing program aimed at recapturing lost traffic as well as creating awareness in neighboring Quebec of air service available at [the airport.]"²⁶⁷

Both the Civil Reserve Air Fleet and the Essential Air Service Program are available to any US carrier that complies with the conditions,²⁶⁸ and thus, neither serves to distort competition.²⁶⁹ Similarly, the Small Community Air Service Development Program does not significantly distort competition as its focus is to promote the airport and the carriers that serve it.

d) European Subsidies

From the beginning of the European Union,²⁷⁰ state-subsidization of state-owned or state-related enterprises has been prohibited. Article 107 of the Lisbon Treaty²⁷¹ provides:

107 (1) "Save as otherwise provided in this Treaty, any aid granted by a Member State of through State resource in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the common market."²⁷²

Article 107 confirms that state subsidies of private companies - or even continued state support of state enterprises that engage in the market - is a form of market distortion and must be avoided. Nonetheless, when faced with communities clamoring for low-cost flights, European

²⁶⁶ This focuses on airports not receiving sufficient service. See 49 USC § 41743 (2011).

²⁶⁷ See Burlington International Airport, *Proposal Under the Small Community Air Service Development Program*, OST-2010-0124, at 3 online: Daily Airline Filings <airlineinfo.com/ostpdf79/617.pdf> (visited April 9, 2014).

²⁶⁸ See 14 CFR Part 398 (2014). See also *supra* note 260.

²⁶⁹ Nonetheless, the subsidy allows a potential distortion of markets in that small communities are usually linked just to one airport. Thus, residents of many communities in Iowa, Michigan, Minnesota, North Dakota and South Dakota are served only from Minneapolis (MSP). See US Non-Alaskan Subsidized EAS Report for November 2013, online: US Department of Transportation

<www.dot.gov/sites/dot.gov/files/docs/Subsidized%20EAS%20web%20report%20for%20non-Alaska%20communities-Nov%202013.pdf> (visited May 12, 2014). Given the dominance of Northwest Airlines (now Delta) at MSP, passengers connecting onward to other destination may pay more than they would have had they been offered transit via another point. See Dempsey & Gesell, *Air Commerce*, *supra* note 116 at 800–814.

²⁷⁰ *Treaty Establishing the European Economic Community*, 25 March 1957, 294 UNTS 17 [TEEEEC].

²⁷¹ *Consolidated Version of the Treaty on the Functioning of the European Union*, [2010] OJ, C 326/47 at 91 [TFEU].

²⁷² The wording from 1957 is retained. See TEEEC, *supra* note 270, art 92(1).

authorities issued advice on how and when it would be permissible to provide state subsidies to attract low cost airlines to regional airports.²⁷³ In 2005, formal guidelines were issued:

[T]he Commission can accept that public aid be paid temporarily to airlines under certain conditions, if this provides them with the necessary incentive to create new routes or new schedules from regional airports and to attract the passenger numbers which will enable them to break even within a limited period.²⁷⁴

A decision of the European Court of Justice²⁷⁵ imposes the condition that the "recipient undertaking must actually have public service obligations to discharge and the obligations must be clearly defined."²⁷⁶ This implies that low-cost regional air service is considered to be a public good worthy of State assistance. Nonetheless, there have been complaints that these subsidies have created market distortions.²⁷⁷ When Brussels' Charleroi Airport offered Ryanair more than €6 million to set up a base there, the matter ended up in the courts.²⁷⁸

D) Statutory Regulation

Compared to direct government intervention or state aid, statutory regulation (hereinafter "regulation") may impose much less of a financial burden on the state; most regulations do not have a high enforcement cost, at least where the enforcement comes as a result of competitor²⁷⁹ or consumer action.²⁸⁰ Indeed, in Canada, if a regulation does not directly involve the imposition of user fees or have financial consequences (either in terms of costs or loss of revenue for the federal government), one of the more cumbersome steps in the regulatory process, seeking the

²⁷³ European Commission, "Questions on State aid for Airports and start-up aid to airlines" Press Release, Memo/07/285 (10 July 2007), online: European Commission <europa.eu/rapid/press-release_MEMO-07-285_en.htm> (visited May 12, 2014).

²⁷⁴ EC, *Communication from the Commission – Community guidelines on financing of airports and start-up aid to airlines departing from regional airports*, [2005] OJ, C 312/1 at 11, para 74 [*Community guidelines*].

²⁷⁵ *Altmark Trans GmbH v Nahverkehrsgesellschaft Altmark GmbH*, Case C-280/00, [2003] ECR I-7747.

²⁷⁶ *Community guidelines*, *supra* note 274 at 6, para 35(1).

²⁷⁷ See Gerry Byrne, "Ryanair profits boosted by subsidies, say rivals", *The Irish Times* (1 May 2010), online: The Irish Times <www.irishtimes.com/news/ryanair-profits-boosted-by-subsidies-say-rivals-1.659808>.

²⁷⁸ See EC, *Commission Decision 2004/393/EC of 12 February 2004 concerning advantages granted by the Walloon Region and Brussels South Charleroi Airport to the airline Ryanair in connection with its establishment at Charleroi*, [2004] OJ, L 137/1. See also Power, *supra* note 239. Paragraph 357 of the Court decision shows how the subsidy was saved in part due to its ability to create jobs in an economically depressed region.

²⁷⁹ This often happens behind closed doors, but in 2007, when Porter Airlines sought US permission to serve Newark, Air Canada opposed the application, stating, that Toronto City Centre Airport was a *de facto* a private airport at which competitors of Porter are strictly limited in their ability to offer competing services, if not barred outright. See US, Office of the Secretary of Transportation, Department of Transportation, DOT-OST-2007-27402 (20 June 2007) (*Answer of Air Canada to the application of Porter Airlines, Inc.* of 2 March 2007).

²⁸⁰ For example, in cases under the European passenger rights, when a traveller has a complaint against an airline, the passenger deals directly with the airline. See *Emirates Airlines v Schenkel*, C-173/07, [2008] ECR I-05237.

financial approval of an authority such as Canada's Treasury Board, can be avoided.²⁸¹ Perhaps for this reason, despite promises of deregulation, governments' regulatory powers often increase. Thus, despite its ability to deliver desired outcomes, the cost of regulation does not feature prominently in government budgets."²⁸²

As observed earlier in the thesis, the regulation of the airline industry can be divided into four broad categories: economic regulation; security regulation; safety regulation; and social regulation.

1) Economic Regulation

From the government perspective, one advantage of economic regulation is that it is less politically visible:

[I]t imposes its costs in subtle and indirect ways that do not show up on the ledgers of government agencies. Rather the costs are shifted to private businesses, to consumers at large, or to the economy. The costs of this tool thus are conveniently hidden from popular view, which make them far more palatable politically.²⁸³

Moreover, policy participants, be they elected officials or bureaucrats, generally seek to maximize their own interests, such as re-election of the official or greater power for the bureaucracy, and they will therefore tend to select policy instruments that enable them to achieve these ends, irrespective of optimally more efficient choices.²⁸⁴

a) Regulation of Competition

Formerly in the Global North, airline industry regulators controlled²⁸⁵ market entry²⁸⁶ and exit conditions, but these regulations have been eliminated in Australia,²⁸⁷ Canada,²⁸⁸ the European

²⁸¹ Treasury Board of Canada Secretariat, *A Guide to Preparing Treasury Board Submissions 2007*, at 51, online: Treasury Board of Canada <www.tbs-sct.gc.ca/pubs_pol/oepubs/tbm_162/gptbs-gppct-eng.pdf>.

²⁸² Peter Self, *Government by the market?: the politics of public choice* (Boulder, Colo: Westview Press, 1993) at 38

²⁸³ Salamon, *supra* note 181 at 145.

²⁸⁴ Réjean Landry & Frédéric Varone, "Choice of Policy Instruments" in Eliadis et al, *supra* note 180, 106 at 126.

²⁸⁵ See *Federal Aviation Act of 1958*, Pub L No 85-726, 72 Stat 731 (Approved 23 August 1958); *Transport Act*, SC 1938, c 53. Australia had a two-airline policy in 1958 that precluded the emergence of another carrier by restricting the importation of commercial aircraft. See S Nicholas Samuel & Desh B Gupta, *Issues in Applied Economics: An Australian Text* (Melbourne: Macmillan Education Australia, 1993) at 76–77.

²⁸⁶ European regulators shielded their state-owned airlines from meaningful competition by imposing tight controls for market entry on domestic and international routes. See Cranfield University, *Air Transport: Quarterly Report No 18 – 1st Quarter 2008 (January to March)* at 19, online: European Commission <ec.europa.eu/transport/air/observatory_market/doc/atv_q12008_18.pdf> (visited April 9, 2014). For example, in 1965 when UK-based Caledonian Airways sought a license to operate scheduled flights to New York, they were turned down by the British Air Transport Licensing Board. See Davies, *Rebels*, *supra* note 57 at 265.

Union,²⁸⁹ New Zealand,²⁹⁰ and the United States.²⁹¹ While Canada retains regulations over the exit of the last carrier serving a route,²⁹² economic regulation is otherwise typically limited to the control of foreign ownership²⁹³ and the review of mergers.²⁹⁴ US authorities have given full antitrust immunity (ATI) to each of the three major airline alliances, SkyTeam,²⁹⁵ Star Alliance²⁹⁶ and oneworld.²⁹⁷ Until recently EU authorities had only granted ATI to oneworld²⁹⁸ and the A++ MNJV.²⁹⁹ However, the EU granted ATI to the Air France/KLM/Delta MNJV on

²⁸⁷ Australia airline deregulation was achieved through the *Airline Agreement (Termination) Act of 1990*. See Dipendra Sinha, *Deregulation and liberalisation of the airline industry: Asia, Europe, North America and Oceania* (Aldershot, England: Ashgate Publishing, 2001) at 34. See also Dipendra Sinha and Tapen Sinha, "The Effects of Airline Deregulation: The Case of Australia" (June 1994) 17:4 World Competition 81 (Kluwer Law Online).

²⁸⁸ *National Transportation Act*, SC 1987, c 34. See generally Fitzgerald, "Freedom," *supra* note 56 at 101–105.

²⁸⁹ The EU's "Third Package" deregulated commercial aviation in the EU in 1992. See *supra* note 121.

²⁹⁰ In 1983, New Zealand abolished domestic fare and entry controls and it privatized its state-owned carriers, Air New Zealand in 1989. See Dawna L Rhoades, *Evolution of international aviation: phoenix rising* (Aldershot, Hants, England: Ashgate Publishing, 2003) at 97.

²⁹¹ *Airline Deregulation Act of 1978*, Pub L No 95-504, 92 Stat 1705, signed into law on October 24, 1978.

²⁹² Canadian law requires an airline proposing to reduce service to a domestic destination to less than once a week, to notify the federal government. See *Canada Transportation Act*, SC 1996, c 10, s 64. This is especially important where there is no other service. US legislation has similar effect. See 49 USC § 41734 (2011).

²⁹³ US foreign ownership limits are at 25%. See 49 USC § 40102(a)(15) (2011). Canada's Parliament has given regulators the power to raise foreign ownership in Canadian air carriers from 25% to 49%. See *Budget Implementation Act* *supra* note 66, s 55. For other countries, see Competition Policy Review Panel, *Compete to win: final report, June 2008* (Ottawa: Competition Policy Review Panel, 2008) at 40.

²⁹⁴ In Canada, a merger of two airlines would be reviewed by the Commissioner of Competition and by Transport Canada. See *Canada Transportation Act*, *supra* note 292, s 53.1(1); *Competition Act*, RSC 1985, c C-34, s 114(1).

²⁹⁵ The SkyTeam transatlantic ATI covers Air France Alitalia, Czech Airlines, Delta, KLM and Northwest. See US, Department of Transportation, Order 2008-5-32 (2008). The SkyTeam South-Pacific ATI covers Delta and Virgin Australia. See US, Department of Transportation, Order 2011-6-9 (2011).

²⁹⁶ The Star Alliance transatlantic ATI covers Air Canada, Austrian, British Midland, Continental, LOT Polish Airlines, Scandinavian, Swiss, TAP Portugal and United. See US, Department of Transportation, Order 2009-7-10 (2009). The Star Alliance US-Japan ATI covers Continental/United and All Nippon Airways. See US, Department of Transportation, Order 2010-11-10, (2010).

²⁹⁷ The oneworld transatlantic ATI covers American Airlines, British Airways, Finnair, Iberia and Royal Jordanian. See US, Department of Transportation Order 2010-7-8 (2010). The oneworld US-Japan ATI covers American Airlines and Japan Airlines. See US, Department of Transportation Order 2010-11-10, (2010).

²⁹⁸ See James L Devall, "The US and EU Approaches to Global Airline Alliances: Cooperation or Conflict" (2010-2011) 10:2 Issues in Aviation Law & Policy 251 at 262 (HeinOnline).

²⁹⁹ EC, *Commission Decision of 23.5.2013 addressed to: - Air Canada – United Airlines, Inc. – Deutsche Lufthansa AG relating to proceedings under Article 101 of the Treaty on the Functioning of the European Union in Case AT.39595*, C(2013) 2836 final (2013), online: European Commission <ec.europa.eu/competition/antitrust/cases/dec_docs/39595/39595_3012_4.pdf> (visited May 12, 2014) [*Decision Case AT.39595*]. For summary of the decision, see EC, *Summary of Commission Decision of 23 May 2013 relating to a proceeding under Article 101 of the Treaty on the Functioning of the European Union (Case AT.39595 – Continental/United/Lufthansa/Air Canada)*, [2013] OJ, C 201/8. .

May 11, 2015.³⁰⁰ Canadian authorities have raised competition concerns with the granting of the A++ MNJV ATI on routes between Canada and the US.³⁰¹

b) Truth in Advertising

America's Truth in Lending Act³⁰² requires lending institutions to disclose the prices, terms and conditions that apply to consumer credit transactions. The policy underlying disclosure is that if credit decisions are transparent and consumers are fully informed about their options and purchases, this will improve the efficiency of credit markets.³⁰³ It is for this reason that Canada,³⁰⁴ the European Union³⁰⁵ and the United States³⁰⁶ require that an airline's advertised ticket price must include: the air fare or air rate; all taxes; all potential airport charges; and any other charges, surcharges or fees, such as those related to security or fuel. Previously, the subsequent addition of these fees could triple the advertised cost of a ticket. For example, in the summer of 2006, a one-way Toronto-New York advertised fare of US\$ 57 became a US\$ 189.13 ticket.³⁰⁷ Of the US\$ 132.13 difference, US\$ 67.50 was attributed to fuel and navigation charges,

³⁰⁰ See European Commission, Press Release, IP/15/4966, "Antitrust: Commission accepts commitments by SkyTeam members Air France/KLM, Alitalia and Delta on three transatlantic routes", (12 May 2015), online: European Union <http://europa.eu/rapid/press-release_IP-15-4966_en.htm> (visited May 20, 2015).

³⁰¹ In 2010, Canada's Commissioner of Competition called on the Competition Tribunal to investigate 19 overlapping routes. See *The Commissioner of Competition v Air Canada, United Continental Holdings Inc, United Airlines Inc, and Continental Airlines Inc* (24 October 2012), CT-2011-004, online: Competition Tribunal <www.ct-tc.gc.ca/CasesAffaires/CasesDetails-eng.asp?CaseID=348> (filed on 27 June 2011). A Consent Agreement was later reached. See Competition Bureau, "Competition Bureau Reaches Agreement with Air Canada and United Continental" (24 October 2012), online: Competition Bureau <www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/03507.html>. In the US former Congressman James Oberstar, DEM, Minnesota 8th, wanted the Comptroller General to conduct a study of the legal requirements and policies followed by the Department in deciding whether to grant ATI to international alliances. See US, Bill, HR 915, *FAA Reauthorization Act of 2009*, 111th Cong, 2009, s 426 (not enacted).

³⁰² 15 USC § 1601 (2012).

³⁰³ See generally Thomas Durkin & Gregory Elliehausen, "The Issue of Market Transparency: Truth-in-Advertising Lending Disclosure Requirements as Consumer Protections in the United States" in Robert N Mayer & American Council on Consumer Interests, eds, *Enhancing consumer choice: proceedings of the Second International Conference on Research in the Consumer Interest, Snowbird, Utah, USA., August 1990* (Columbia, Mo: American Council on Consumer Interests, 1991) 255 at 255–265.

³⁰⁴ *Canada Transportation Act*, *supra* note 292, s 86.1. See Transport Canada, News Release, H 128/11, "Government of Canada moves forward with changes to airfare advertising" (16 December 2011), online: Government of Canada <news.gc.ca/web/article-en.do?nid=646549&_ga=1.205873877.736559876.1396983636> (visited May 12, 2014).

³⁰⁵ See EC, *Regulation (EC) No 1008/2008 of the European Parliament and of the Council of 24 September 2008 on common rules for the operation of air services in the Community (Recast)*, [2008] OJ, L 293/3 at 14–15

³⁰⁶ See 14 CFR § 399.84 (2014).

³⁰⁷ For a discussion and overview of the statutory charges, taxes and fees that contribute to this dramatic price increase, see Fitzgerald, "Air Passenger", *supra* note 42 at 77–78.

and fully US\$ 57.01 was collected on behalf of various domestic and foreign government departments and agencies.³⁰⁸

In Europe, as a result of complaints that fares were not readily available or that certain costly options were in fact mandatory, the EU took enforcement action and published the result on a website,³⁰⁹ but the final report did not name the offending carriers or recommend disciplinary action.³¹⁰

2) Security Regulation

In the post-September 11 environment, aviation security is a dramatically growing area of aviation regulation. It is discussed below in *Chapter 4 – Rethinking Aviation Security*.

3) Safety Regulation

Aviation safety³¹¹ standards worldwide are based on the Annexes³¹² to the Chicago Convention.³¹³ So important is the need for consistent universal regulation that States that fail to regulate aviation safety face drastic consequences.³¹⁴ Both the European Union³¹⁵ and the United States³¹⁶ have legislation allowing them to ban carriers certified by States whose safety regulations do not comply with ICAO standards.

³⁰⁸ See P Paul Fitzgerald, "Air Fare Transparency" (Presentation delivered at the PEOPI & McGill Conference on Aviation Law & Insurance: Current Issues and Controversies, Amsterdam, 8-9 October 2010), [unpublished].

³⁰⁹ See European Commission, "Outcome of the 2007 Airline Sweep Enforcement Action", online: European Commission <ec.europa.eu/consumers/enforcement/sweep/index_en.htm>.

³¹⁰ See Universiteit Antwerpen et al, *Study on Air Passenger Rights Compliance: Main Report* (produced for the Directorate-General for Health and Consumers of the European Commission), online: European Commission <ec.europa.eu/consumers/enforcement/sweep/final_report_sweep_20090505.pdf>.

³¹¹ The regulation of aviation safety is discussed in Fitzgerald, "Questioning the Regulation of Aviation Safety", *supra* note 41.

³¹² In particular Annexes 1, 7, 8 and 13 deal respectively with Personnel Licensing, Aircraft Nationality and Registration Marks, Airworthiness of Aircraft, and Aircraft Accident and Incident Investigation.

³¹³ *Chicago Convention*, *supra* note 14.

³¹⁴ In 2007, EU authorities banned from entry into European airspace all "air carriers certified by the authorities with responsibility for regulatory oversight of Liberia" even though Liberia's failure to comply was due to "civil conflict". See *Regulation 474/2006*, *supra* note 68 at 19.

³¹⁵ *Ibid.*

³¹⁶ See 14 CFR Part 129 (2014). See also online: International Aviation Safety Assessments (IASA) Program, Federal Aviation Administration <www.faa.gov/about/initiatives/iasa/>.

4) Social Regulation: Consumer Rights

a) Consumer Rights

Consumer rights are an emerging field of aviation regulation. Although they are rooted in the spirit of international instruments like the Montreal Convention (1999),³¹⁷ many go much further. The European Union's Airline Passenger Rights regulation,³¹⁸ Canada's One Person One Fare decision,³¹⁹ and the United States' Enhanced Protection for Airline Passengers³²⁰ all potentially reallocate responsibility to airlines for costs incurred by passengers as a result of situations and circumstances over which the airline has no control. For example, the EU regulations required an airline to pay for hotel accommodation for a passenger stranded because of a volcanic cloud,³²¹ the Canadian authorities have instructed airlines to provide an extra adjacent seat, at no charge, for the obese,³²² and the US would potentially hold a carrier responsible for a lack of customs facilities at an airport to which a flight was diverted as a result of a snowstorm.³²³

Insufficient consideration appears to have been given by regulators as to whether such regulations strike the appropriate balance. As late as 2010, after noting that the eruption of the Eyjafjallajökull volcano in April of that year had cost the airline industry US\$ 1.7 billion dollars in just six days,³²⁴ the European Commission declared that its Airline Passenger Rights regulation remained "fully applicable during these testing times for passengers and the industry alike. The benefits of EU rules for passengers can be precisely appreciated in such exceptional circumstances."³²⁵ Yet the very same day, Siim Kallas, the European Commissioner for

³¹⁷ *Convention for the Unification of Certain Rules for International Carriage by Air*, 28 May 1999, 2242 UNTS 309, TIAS 13038, ICAO Doc 9740 (entered into force 4 November 2003) [*Montreal Convention 1999*].

³¹⁸ See *Regulation 261/2004*, *supra* note 47.

³¹⁹ *CTA Decision 6-AT-A-2008*, *supra* note 61, prohibits Canada's airlines from charging a fare for an extra seat for an obese passenger or for a passengers who required an attendant.

³²⁰ 14 CFR Part 259 (2014).

³²¹ *Regulation 261/2004*, *supra* note 47 at 4, art 5. See also EC, *Answer given by Mr Kallas on behalf of the Commission*, Parliamentary questions, P-6962/2010 (23 September 2010), online: European Parliament <<http://www.europarl.europa.eu/sides/getAllAnswers.do?reference=P-2010-6962&language=EN>>.

³²² See *Air Canada v Canada (Canadian Transportation Agency)*, 2008 FCA 168, [2008] FCJ No 708. Different rules apply in the US. See *Luther v Southwest Airlines*, 2001 WL 34613346 (WL Can) (Cal 2d Dist Ct App 2001).

³²³ Airlines must accommodate customers' essential needs and the requirement of passengers with disabilities and other special-needs during tarmac delays. See 14 CFR § 259.5 (b)(6) (7) (2011).

³²⁴ EC, *Information Note to the Commission: The impact of the volcanic ash cloud crisis on the air transport industry*, SEC(2010) 533, OJ 1915 (2010) at 6, online: European Commission <ec.europa.eu/commission_2010-2014/kallas/headlines/news/2010/04/doc/information_note_volcano_crisis.pdf> (visited April 10, 2014)

³²⁵ *Ibid.*

Transport, estimated the cost of the volcano incident for the airlines at US\$ 3.3 billion, an amount in excess of their estimated profit, and proposed a potential case for state aid to support the industry.³²⁶

A strategy that relies on state aid to compensate airlines for the impact of state-imposed liabilities suggests that a re-examination of the reasonableness of the regulation in the first place may be in order. The European Commission appears to have realized this:

The proportionality of some current measures, like the unlimited liability regarding the right to care under major natural disasters, may merit assessment. Member States and the Commission need to reflect on how to ensure that, in the future, this vital support which in the volcano crisis was provided solely by part of the industry is correctly shared and financed.³²⁷

In February 2014, the European Parliament followed through by decreasing to five the number of nights' accommodation that an airline would have to cover for a passenger stranded due to volcanic action.³²⁸ Nonetheless, a case can be made that there should be a relationship between the fare paid and the compensation sought; an airline cannot afford to pay the same compensation to a passenger who spent €7.00 for a short-haul flight within the EU³²⁹ in 2014, as it did to a passenger who paid \$400 to travel the same journey in 1986.³³⁰ Indeed, the EU has recognized that the "financial costs of some of the obligations imposed by the Regulation may become disproportionate for the airlines in certain circumstances."³³¹

³²⁶ Andrew Hiles, ed, *The Definitive Handbook of Business Continuity Management*, 3d ed (Chichester, West Sussex, UK: John Wiley & Sons, 2011) at 617.

³²⁷ EC, *Communication from the Commission to the European Parliament and the Council on the application of Regulation 261/2004 establishing common rules on compensation and assistance to passengers in the event of denied boarding and of cancellation or long delay of flights - {SEC(2011) 428 final}*, COM(2011) 174 final (2011) at 4, online: EUR-Lex <eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52011DC0174&qid=1397172888731&from=EN>. See UK, House of Commons, European Scrutiny Committee, "Roadmap on victims' rights in the EU", 29th Report, 2010–12 Sess (31 May 2011) at 69.

³²⁸ See European Commission, Press Release, IP/14/119, "European Parliament votes on air passenger rights", (5 February 2014), online: European Union <europa.eu/rapid/press-release_IP-14-119_en.htm> (visited May 14, 2014). The European Commission had recommended a 3-night liability limit.

³²⁹ This amount includes all applicable taxes. See Fitzgerald, "Air Fare", *supra* note 308.

³³⁰ A Shannon-Prestwick flight in 1986 cost almost the same price as a transatlantic fare. See Fitzgerald, "Europe's Emissions", *supra* note 45, at 191.

³³¹ European Commission, Press Release, Memo/13/203, "Air Passenger Rights Revision – Frequently Asked Questions", (13 March 2013) online: European Union < europa.eu/rapid/press-release_MEMO-13-203_en.htm> (visited May 12, 2014).

b) Rights of "Special Needs" passengers

For the most part, the countries of the Global North, especially the US,³³² Canada³³³ and the European Union,³³⁴ have detailed regulations with respect to the transport of persons with mobility challenges. Regulatory authorities also have addressed the carriage and handling of service animals,³³⁵ wheelchairs³³⁶ and medically-required oxygen,³³⁷ and even the division of labour between airport authorities and airlines.³³⁸

Virtually every passenger rights regulation allocates new benefits to the travelling public, or vulnerable classes of passengers, at little or no cost to government. While this increases the popularity of the regulator with the public,³³⁹ regulators need to recognize that the imposition of new and sometime expensive obligations on the airline industry will inevitably increase the overall cost of travel for all passengers.³⁴⁰

5) Environmental Regulation

a) Aircraft Noise

Most developed countries regulate the amount of noise³⁴¹ that aircraft can emit based on ICAO guidelines.³⁴² In addition, there has been litigation,³⁴³ political action,³⁴⁴ and regulation³⁴⁵

³³² 49 USC § 41705 (2011); 14 CFR Part 382 (2014). See especially 14 CFR 382.29 for limited situation under which a US carrier must provide seating for an attendant.

³³³ *Canada Transportation Act*, *supra* note 292, ss 5(d), 170–172. See also *Personnel Training for the Assistance of Persons with Disabilities Regulations*, SOR/94-42.

³³⁴ EC, *Regulation (EC) 1107/2006 of the European Parliament and of the Council of 5 July 2006 concerning the rights of disabled persons and persons with reduced mobility when travelling by air*, [2006] OJ, L 204/1 [*Regulation 1107/2006*].

³³⁵ See *CTA Decision 327-AT-A-2008*, *supra* note 61. See further, 14 CFR 382.29 for limited situation under which a US carrier must provide seating for an attendant.

³³⁶ *Regulation 1107/2006*, *supra* note 334 at 6, art 12.

³³⁷ See Canadian Transportation Agency, Decision No 336-AT-A-2008.

³³⁸ *Regulation 1107/2006*, *supra* note 334 at 5–6, arts 7–10.

³³⁹ For an overview of the politics involved, see Fitzgerald, "Air Passenger", *supra* note 42 at 34 – 36. See also online: FlyersRights.org <flyersrights.org/index.php>; online: Association for Airline Passenger Rights <www.flyfriendlyskies.com/>.

³⁴⁰ Canadian Transportation Agency, Decision No 155-C-A-2008, requires Air Canada to reinstate the carriage of pets and their kennels weighing less than 70 lbs as checked baggage notwithstanding Air Canada's submission that its policy change had been due in part to an increase in the volume of checked baggage because of government-mandated security measures. See *In the matter of a complaint filed by Peter Griffiths against Air Canada respecting the carriage of pets and their kennels* (April 4, 2008), 155-C-A-2008, online: Canadian Transportation Agency <www.otc-cta.gc.ca/eng/ruling/155-c-a-2008>.

³⁴¹ See the fight over Concorde's bid to land at New York. See *British Airways Board v Port Authority of New York and New Jersey*, 564 F (2d) 1002 (2d Cir 1977) (available on WL Can).

³⁴² See ICAO, (2005) 4 *International Standards and Recommended Practices: Annex 16 to the Convention on International Civil Aviation: Volume 1, Aircraft Noise*.

dealing with airport curfews. So contentious is the problem³⁴⁶ that, in some cases, authorities wishing to avoid noise complaints have built airports far from urban areas.³⁴⁷ Most major airports have imposed noise abatement procedural requirements in an effort to minimize the noise impact of aircraft operations on populated areas.³⁴⁸

b) Aircraft Emissions

The need to reduce greenhouse gas emissions from commercial aviation activities is becoming increasingly apparent and is discussed below in *Chapter 5 – Achieving Global Environmental Harmony*.

VII) CONCLUSION

This chapter has shown the depth and breadth of the regulation of the airline industry, as well as the wide variety of regulatory tools, ranging from state-ownership to subsidy to imposition of regulatory standards, that have been used by governments. The fact that airlines are considered as a public good has provided the justification for government intervention. Desirable regulatory outcomes have included safe affordable air service, links to regional or remote sites, support of local industries and support of State diplomatic or even espionage efforts. With the privatization of airlines, direct government control has been replaced by the imposition of regulatory standards on private airlines that are now faced with new and emerging areas of regulation, including aviation security, passenger rights and the environment.

Given the international nature of the airline industry, and the fact that different jurisdictions may apply distinct regulatory solutions or vary in the degree of regulation imposed, overlapping and potentially incompatible regulations are inevitable. In particular, it will be seen that government-backed mega carriers (GBMCs) such as Emirates and Etihad may be more lightly regulated than

³⁴³ See *Citoyens pour une qualité de vie c Aéroports de Montréal*, 2007 QCCA 1274, confirmant 2004 CarswellQue 10095 (WL Can). See also *Sutherland v Canada (Attorney General)*, 2002 BCCA 416, 215 DLR (4th) 1.

³⁴⁴ Marlene Jennings, PC, MP, campaigned unsuccessfully to enforce a curfew at Montreal's Pierre Elliott Trudeau International Airport. See *Hon. Marlene Jennings, P.C., MP Notre-Dame-de-Grace-Lachine; Chronology of Intervention of Airport Noise* (on file with author).

³⁴⁵ See Raymond A Ausrotas et al, *Air freight: the problem of airport restrictions: final report of the Conference of Air Cargo Industry Considerations of Airport Curfews* (Cambridge, Mass: MIT, 1979).

³⁴⁶ See Thierry Bréchet & Pierre M Picard, "The economics of airport noise: How to manage markets for noise licenses" (2012) 17 Transportation Research Part D: Transport and Environment 169 (ScienceDirect).

³⁴⁷ Montreal's Mirabel Airport and Denver's Stapleton International Airport (DEN) are two examples of this strategy. DEN has a land area of 53 square miles or 141 square kilometers.

³⁴⁸ The legal authority for imposing noise abatement procedures at Canadian airports is found in *Canadian Aviation Regulations*, *supra* note 69, s 602.105.

airlines in North America, the European Union and the Antipodes in at least some respects, leading to the perception of them as competitive threats by many of the established carriers.³⁴⁹

In order to effectively assess these competitive concerns, regulators need to understand how the airline industry has evolved during the past two decades. This is the subject of the next chapter.

³⁴⁹ See below Chapter 3, III B) Emirates: an Instrument of State Intervention in the Marketplace

CHAPTER 2 METAMORPHOSIS OF THE AIRLINE INDUSTRY FROM 1992 TO 2013

I) INTRODUCTION

While the familiar sight of an Air France Airbus A320 at Paris, a Japan Airlines Boeing 767 at Tokyo or a United Airlines Boeing 737 at Chicago may suggest to the casual observer that not much has changed in the commercial aviation industry, it has undergone a profound metamorphosis over the past two decades.

Between the collapse of Pan Am in December 1991 and the emergence of Emirates as the world's biggest international airline³⁵⁰ in 2011, global travel patterns have changed dramatically. The evolution is due to a combination of factors, including notably the emergence of government-backed mega carriers (GBMCs) and metal neutral joint ventures (MNJVs).

This chapter describes and details nine developments that contributed to the international airline industry between 1992 and 2012, including notably the emergence of government-backed mega carriers (GBMCs) and metal neutral joint ventures (MNJVs). The focus is on the commercial aviation markets in Australia, Canada, the European Union (EU), New Zealand and the United States (US). It will be shown that as a result of these developments, the regulatory issues facing the airline industry today have very little in common with those it faced in 1992. Completely new issues have arisen such as whether MNJVs are a response to the potential distortions of competition some allege have been caused by the emergence of the GBMCs.

II) THE DEVELOPMENT OF THE INTERNATIONAL AIRLINE INDUSTRY PRIOR TO 1992

Aviation is ideally suited to efficiently link countries located across mountains or water. Indeed, one of the very first airline flights occurred on August 25, 1919 and linked London and Paris.³⁵¹ The benefits of the international linkages made possible by civil aviation have been evident from the infancy of the industry:

³⁵⁰ This is based on scheduled passenger-kilometres flown. See Bindu Suresh, "Emirates is world's 'largest' airline; Largest by scheduled international passenger kms flown: Ahmed", *Emirates* 24/7 (10 May 2011). online: Emirates 24/7 < <http://www.emirates247.com/news/emirates-is-world-s-largest-airline-2011-05-10-1.391095> > (visited April 30, 2014)

³⁵¹ "The London-Paris Airservice", *Flight: The Aircraft Engineer and Airships* 11:1 (28 August 1919) 1149 at 1149.

European governments were determined from the beginning to harness aviation to their own needs, and particularly to bind their colonies and overseas settlements ... to the home country.³⁵²

Two early international treaties; the Paris Convention of 1919,³⁵³ and the Warsaw Convention of 1929,³⁵⁴ were drafted to deal with the international character of civil aviation. The first focused on international aerial navigation, and the second created a regime to ensure uniform recovery for victims of international aviation accidents. But for the international character of aviation, neither convention would have been necessary as domestic laws would have been sufficient to deal with flights entirely within the territory of a single state, even very large single States such as Australia, Brazil, Canada, China, India, Nigeria, or Russia.³⁵⁵

With the notable exception of airlines in the United States,³⁵⁶ international routes in the early days of the airline industry were largely operated by government-owned or government-created airlines. As they were creations of government, they did the government's bidding without the need for any international regulatory regime to ensure compliance. Thus, in the majority of early bilateral agreements, especially with respect to intra-European routes, the two parties were state-owned airlines designated by their respective governments.³⁵⁷ These airlines quickly reached an amicable arrangement as to how to divide the routes' profits between them.³⁵⁸

The pre-1992 structure of the airline industry in each of Australia, Canada, the European Union, New Zealand and the United States is helpful in understanding the evolution of the worldwide industry in the two decades since. This section reviews that background.

³⁵² Sampson, *supra* note 57 at 24.

³⁵³ *Convention relating to the regulation of Aerial Navigation*, United States, Belgium, Bolivia, etc, 13 October 1919, 11 LNTS No 297 at 173 (not in force).

³⁵⁴ *Convention for the Unification of Certain Rules Relating to International Carriage by Air*, 12 October 1929, 137 LNTS 11, 49 Stat 3000, TS No 876, ICAO Doc 7838.

³⁵⁵ In Space Law, if a rocket is launched from a state and returns to a spot in the same state, domestic law applies. See Peter van Fenema, "Suborbital Flights and ICAO" (2005) 30 Air & Space L 396 at 396 (Kluwer Law Online).

³⁵⁶ There were important non-government owned airlines outside the United States, including Canadian Pacific Air Lines and Australia National Airways (later Ansett Australia), but the vast majority of 'flag carriers' were government owned or government controlled.

³⁵⁷ Between 1945 and 1996 most of Europe's 'flag carriers' were owned by their respective national governments. For details on the privatizations, see Staniland, *supra* note 207 at 183–274.

³⁵⁸ Kenneth J Button, "Opening US Skies to Global Airline Competition", CATO Institute Trade Policy Analysis No 5 (24 November 1998) at 3, online: CATO Institute <object.cato.org/sites/cato.org/files/pubs/pdf/tpa-005.pdf>.

A) Australia

In Australia, for many years,³⁵⁹ government-owned Qantas held a monopoly over international service, while intra-Australia services were offered by two competing domestic airlines, the government-created Trans Australia Airlines (later re-named Australian Airlines) and the private-sector-owned Australia National Airways (later Ansett Australia).³⁶⁰ The two carriers operated in a regulatory environment known as the "two airline policy." This policy attempted to prevent a monopoly in domestic aviation, while creating a favorable environment for the government-owned carrier and giving it advantages over private operators so as to preserve the viability of its international services.³⁶¹ The policy seems to have been to make almost indistinguishable any difference between the two carriers offering service on domestic routes:

Australia has in effect "... a monopoly of air transport divided between two massive organizations whose development is rigidly controlled by Acts of Parliament to the point where competition in the generally accepted sense of the word, is restricted to the peripheral comforts and minor variations in time-tabling."³⁶²

The government sought to avoid a situation where one airline might damage the other.³⁶³ In its effort to ensure a level playing field, it even required that the two competing airlines use similar aircraft.³⁶⁴ In this spirit of total equality, the two airlines in turn agreed to introduce the same types of aircraft on the same day and even at the same hour.³⁶⁵ Under the two-airline policy, pervasive regulation sought to ensure competition without any of its potential waste:

In Australia, competition through flight frequency (often considered to be "wasteful competition") is eliminated through the capacity determination procedures established by regulation. Under these procedures, demand for air services is estimated and then, on the basis of a chosen target load factor, the required total capacity is determined. Each airline is allowed to operate 50 percent of determined capacity on competitive routes. This procedure in effect

³⁵⁹ The policy began in 1952. See Michael G Kirby, "An Economic Assessment of Australia's Two Airline Policy" (1979) 4:2 *Australian Journal of Management* 105 at 107 (SAGE). Regulations were relaxed in 1977 and the policy officially ended on October 30, 1990. See John Quiggin, "Evaluating Airline Deregulation in Australia" (1997) 30 *Australian Economic Review* 45 at 46 (EBSCO HOST).

³⁶⁰ Davies, *Rebels*, *supra* note 57 at 404 – 406.

³⁶¹ Austl, Bureau of Transport and Communications Economics, *The Progress of aviation reform* (Canberra: Australian Govt Pub Service, 1993) at 7.

³⁶² David G Davies, "The Efficiency of Public versus Private Firms, the Case of Australia's Two Airlines" (1971) 14 *JL & Econ* 149 at 154 (HeinOnline).

³⁶³ *Ibid* at 155.

³⁶⁴ *Ibid* at 156.

³⁶⁵ *Ibid* at 157.

determines the quality of service to be offered to the consumer. Then, given the normal profit regulatory framework, price is determined.³⁶⁶

Australia's geography and population distribution limits the number of profitable routes, which in turn, restricts route design options. Thus, as noted later, it would seem that the consumer choices subsequent to deregulation in the post-1992 era are very similar to those that were offered under the two airline policy:³⁶⁷

The regulatory choice of two airlines was also consistent with cost minimization. The only binding constraint was the restriction on discounting. As a consequence, the outcome of open competition has been close to that which prevailed under regulation. The Australian airline industry is a natural duopoly and the market is not contestable.³⁶⁸

B) Canada

Canada's geography and history influenced the creation of Air Canada in 1937. A state-owned airline was to be a 'national instrument for providing air service', largely so that the Canadian flying public could cross Canada without having to fly through the United States.³⁶⁹ For the next four decades, Air Canada had a *de facto* monopoly and was heavily protected by government regulations which very tightly controlled the activities of privately-owned carriers.³⁷⁰ As a creature of government susceptible to political lobbying Air Canada was forced to do the government's bidding, including serving remote destinations in Atlantic Canada, Quebec, and Northern Ontario.³⁷¹ As recently as 1980, political promises were being made that Air Canada would someday serve Hamilton.³⁷² The airline was instructed to fly to specific foreign destinations,³⁷³ buy specific aircraft³⁷⁴ and promote Canada's official languages policy.³⁷⁵

³⁶⁶ Kirby, *supra* note 359 at 111.

³⁶⁷ Quiggin, *supra* note 359 at 54.

³⁶⁸ *Ibid.*

³⁶⁹ Stevenson, *supra* note 143 at 11.

³⁷⁰ See generally Fitzgerald, "Freedom", *supra* note 56.

³⁷¹ Stevenson, *supra* note 143 at 48.

³⁷² See *Canadian Aviation* (October 1980) 10.

³⁷³ Air Canada became the first North American airline to serve glamorous but unprofitable Moscow on November 1, 1966. See Smith, *It seems*, *supra* note 130 at 12; Collins, *supra* note 130 at 62–63, 83–84.

³⁷⁴ From 1947 to 1961 Air Canada operated 29 Canadair North Stars at the urging of the federal government. This "Canadian" aircraft was purely an American DC-4 airframe with British Rolls-Royce Merlin engines. See Stevenson, *supra* note 143 at 16, 51; Collins, *supra* note 130 at 88.

³⁷⁵ Canada's official languages policy applied to state-owned Air Canada and when Canada's Cabinet decided to delay the carrier's privatization in September 1987, the airline's official language role was cited as a critical factor in the decision. See Marjorie Nichols, "The Language of Privatization" (1987) 21 *Language and Society* 5 at 5. The policy still applies to Air Canada. See *Air Canada Participation Act*, *supra* note 73, s 10.

These policies imposed additional costs on Air Canada and the carrier tried to use profits from its trunk routes to subsidize marginal 'political' routes and to maintain its monopoly on trunk routes for as long as possible.³⁷⁶ Government regulators imposed various restrictions on would-be domestic competitors, including requirements to use a specific type of aircraft,³⁷⁷ make *en route* stops³⁷⁸ and serve a designated 'end-point',³⁷⁹ or prohibited local carriage of passengers.³⁸⁰ It was not until May 22, 1983 that a passenger could fly directly from Vancouver to Halifax with a carrier other than Air Canada.³⁸¹

C) Europe

Prior to the integration of EU skies in 1992,³⁸² routes between European countries were considered "international" and governed by bilateral air service agreements (BASAs). As early as 1946, British European Airlines and Aer Lingus were operating a comprehensive "joint venture" on routes between Ireland and the United Kingdom,³⁸³ and in 1957, Lufthansa and Air France began discussing how to "fix quotas and co-ordinate timetables"³⁸⁴ on routes within Europe. Once agreed, these arrangements endured for decades. In 1982, the European Civil Aviation Conference estimated that 75-85% of intra-European scheduled flights were still being

³⁷⁶ On May 4, 1959, Canadian Pacific Air Lines became the first airline to offer competition to Air Canada on a trunk route, once-daily service from Vancouver to Montreal via Winnipeg and Toronto. See LD Edwards, "Air Transport", *Canadian Aviation* 50th Anniversary Issue (1978) 29.

³⁷⁷ Fitzgerald, "Freedom", *supra* note 56 at 82.

³⁷⁸ Pacific Western Airlines, "Annual Report, 1979", at 6.

³⁷⁹ This is also called a 'turnaround restriction'. See Desmond Chorley, "CP Air; A Loveable David among the Airline Goliaths", *Canadian Aviation* (June 1977) 23 at 30.

³⁸⁰ Canadian Transport Commission Decision 8122 of June 26, 1984 allowed Pacific Western Airlines to fly between Regina and Saskatoon for scheduling reasons but denied local carriage. The restriction was overturned on August 31 of the same year. *Order Varying Canadian Transport Commission Decisions and Order Respecting Pacific Western Airlines, Limited*, SOR/84-751. Four decades earlier, in 1943 Air Canada was prohibited from carrying local traffic on the Victoria-Vancouver run. See Richard Schultz & Alan Alexandroff, *Economic Regulation and the Federal System* (Toronto: University of Toronto Press, 1985) at 40.

³⁸¹ See Fitzgerald, "Freedom", *supra* note 56 at 54. The actual deregulation of domestic routes within Canada occurred four years later, when Canada's Parliament passed the *National Transportation Act*, *supra* note 288.

³⁸² See *Regulation 2408/92*, *supra* note 121.

³⁸³ ICAO Doc 4954, AT/633-Ireland, at 5 – 6, cited in Walter H Wager, "International Airline Collaboration in Traffic Pools, Rate-Fixing and Joint Management Agreements – Part II" (1951) 18 J Air L & Com 299 at 299 (HeinOnline).

³⁸⁴ They were soon joined by Sabena and Alitalia. See Sampson, *supra* note 57 at 98–99.

performed under such agreements.³⁸⁵ Even 14 years later a European Commission study concluded that fully 94% of all intra-EU routes were still being run as a monopoly or duopoly.³⁸⁶

D) New Zealand

The geography and population distribution of New Zealand prompted the passage of the *New Zealand National Airways Act 1945*, through which the government merged a Royal New Zealand Air Force transport squadron, a commercial air service and several smaller operators into a state-owned domestic airline. The Act was based on the assumption that the trunk route between Auckland and Christchurch via Wellington could only support a single airline.³⁸⁷ New Zealand National Airways Corporation "had the power to acquire compulsorily the existing aeroplanes and equipment owned by the private company hitherto operating."³⁸⁸ Furthermore, the state financed the carrier and its surplus profits were paid into the national treasury.³⁸⁹ In 1978, the carrier was merged into New Zealand's international flag carrier, Air New Zealand.³⁹⁰

E) United States

The United States is one of the few countries that never established a government-owned airline. However, it divided its airlines into two groups, those that would fly domestic routes and those that would fly abroad. Pan Am and, to a lesser extent, Trans World Airlines (TWA) and Northwest,³⁹¹ quickly became the major international carriers linking the United States with foreign destinations around the world.³⁹² Prior to US deregulation in 1978, Pan Am did not have significant domestic routes whereas airlines such as United were essentially domestic carriers.³⁹³ With respect to domestic carriers, the United States had very comprehensive domestic airline

³⁸⁵ Keith G Debbage, "The international airline industry: globalization, regulation and strategic alliances" (1994) 2 *Journal of Transport Geography* 190 at 192 (ScienceDirect).

³⁸⁶ EC, *Communication from the Commission to the Council and the European Parliament – Impact of the Third Package of Air Transport Liberalization Measures*, COM(96)514 final (1996), online: EUR-Lex <eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:51996DC0514&qid=1397252703504&from=EN>.

³⁸⁷ See generally FH Bishop, "Air Services in New Zealand" (1953) 9 *New Zealand Geographer* 107 (Wiley).

³⁸⁸ Leslie Lipson, "Democracy and Socialism in New Zealand" (1947) 41 *The American Political Science Review* 306 at 310 (JSTOR).

³⁸⁹ *Ibid* at 311.

³⁹⁰ See *New Zealand National Airways Corporation Dissolution Act 1978* (NZ), 1978/48

³⁹¹ Northwest, formerly Northwest Orient, had a major route network between the US (and US territories in the Pacific) and destinations in Asia from 1947 onward. It had limited presence in Latin America and Europe.

³⁹² See Sampson, *supra* note 57 at 77–86.

³⁹³ Smith, *Airways*, *supra* note 168 at 233.

regulation based on three clusters: entry and exit regulations with respect to routes, the setting of rates for service, and government review of inter-airline cooperative agreements and mergers.³⁹⁴

Civil Aviation Board authority over route-level entry gave it control over airline network configurations. Over time, the CAB used this authority to generate implicit cross-subsidies, awarding lucrative new routes to financially weaker carriers and using these awards as "carrots" to reward carriers for providing service on less-profitable routes.³⁹⁵

By 1978, roughly 88% of the domestic airline traffic was shared among ten "trunk" carriers: Eastern, Continental, United, American, Delta, Western, Northwest, Trans World Airlines, Pan Am and Braniff.³⁹⁶ However, none of these carriers had a route system that served more than 30 states.³⁹⁷

The American airline industry was substantially deregulated³⁹⁸ with the passage of the Airline Deregulation Act in 1978.³⁹⁹ "Deregulation" is probably a misnomer given that the principal regulatory change was to abolish the "public convenience and necessity" requirements of previous route applications and to allow any carrier to serve any route it wanted. In addition, a new entrant had to prove that it was "fit, willing and able" to provide commercial air service and this included meeting a 90-day "zero revenue test"⁴⁰⁰ to ensure adequate capitalization.⁴⁰¹

F) Pre-1992 liberalization trends

By the early 1990s, in each of Australia, Canada, the United States and the European Union, strong de-regulatory currents had changed the landscape of the airline industry. State-owned airlines had been privatized, airline domestic routes and rates had been deregulated, and a new era of commercial aviation had begun. Inevitably, there was a consolidation period as the airline industry adapted to and then fully embraced the new regulatory regime.

³⁹⁴ Dempsey & Gesell, *Air Commerce*, *supra* note 116 at 133–142.

³⁹⁵ Severin Borenstein and Nancy L Rose, "How Airline Markets Work... Or Do They? Regulatory Reform in the Airline Industry" in Nancy L Rose, ed, *Economic Regulation and Its Reform: What Have We Learned?* (University of Chicago Press, forthcoming in July 2014).

³⁹⁶ Peter PC Haanappel & Tineke Kuijper, "Mergers, Take-overs and Co-operative Arrangements Between Airlines Outside Europe, particularly from the point of view of the airline user" [unpublished].

³⁹⁷ Eastern Airlines, which was one of the largest US airlines, served only 28 of the 50 states.

³⁹⁸ Ten years before Alfred Kahn first thought of deregulating the US market, TWA and Pan Am were competing fiercely for both international and transcontinental US domestic traffic. See Sampson, *supra* note 57 at 106-107.

³⁹⁹ *Airline Deregulation Act*, *supra* note 291. See Dempsey & Gesell, *Air Commerce*, *supra* note 116 at 226.

⁴⁰⁰ This test requires that the airline have enough financial resource to operate for 90 days without any revenue. See e.g. US, Department of Transportation, *Application of Sunbird Airways Inc*, Order 94-6-30 (1994).

⁴⁰¹ See Dempsey & Gesell, *Air Commerce*, *supra* note 116 at 226–229.

In the fall of 1990, following deregulation in Australia and the elimination of the "two-airline policy" for domestic air traffic described earlier, a new entrant, Compass Airlines, attempted to become a "low cost" third carrier. It collapsed with heavy losses 15 months later, and revival efforts failed.⁴⁰² Australia has thus been confirmed as a de facto two-airline market.

Since the passage of the National Transportation Act⁴⁰³ in 1987, there has been further consolidation of Canada's airline industry. However, the structure of the market, consisting of a dominant Air Canada, a large domestic rival with some international routes and a large charter-based airline with some scheduled service, is largely unchanged.⁴⁰⁴

In the United States, deregulation was almost immediately followed by tremendous instability as new carriers were launched and failed. Former regional carriers, such as US Air, became "majors"⁴⁰⁵ but by 1987, nine major airlines controlled 94% of the market, and the largest of them, United Airlines, served all 50 States.⁴⁰⁶ There has since been further consolidation, but the model that prevailed in the mid-1980s for international carriage — of competing mega-carriers with vast domestic networks and international routes emanating from their major hubs— remains today.⁴⁰⁷

III) THE REGULATION OF INTERNATIONAL AIR ROUTES: BASAS

The regulatory actions of the above-mentioned States and the restrictive BASAs that they concluded defined the international routes to be offered by their airlines. The BASAs also determined flight frequency, type of aircraft to be used, cities served, aircraft capacity and local carriage rights.⁴⁰⁸ The activities that regulations controlled at the domestic level were controlled

⁴⁰² See Quiggin, *supra* note 359 at 46.

⁴⁰³ *National Transportation Act*, *supra* note 288.

⁴⁰⁴ Briefly in 2000-2001 there were three major carriers in Canada. Canada 3000 offered domestic and international scheduled service before going bankrupt in November 2001. Similarly between June 2002 and March 2005 Canada had four domestic scheduled airlines: Air Canada; Canjet; Jetsgo; and Westjet. Twenty-one Canadian cities had service from three or more airlines.

⁴⁰⁵ This is a technical definition. See Air carrier groupings Department of Transportation Bureau of Transportation Statistics Office of Airline Information Accounting and Reporting Directive Research and Innovative Technology Administration No. 309 Issue Date: 10-01-2013 Effective Date: 1-1-2014 Part: 241Section: 04

⁴⁰⁶ The other carriers Delta, Continental, American, Eastern, Northwest, TWA, US Air and Pan Am, served 47, 46, 42, 42, 41, 37, 35 and 19 states respectively.

⁴⁰⁷ Naturally, a significant part of this service is operated by 'regional carriers'.

⁴⁰⁸ Local carriage rights should not be confused with cabotage, which is generally prohibited, but deals with the denial of 5th Freedom carriage rights on routes such as Frankfurt-Vienna or Zurich-Vienna as contained in the notes of the 1993 *Agreement between the Government of Canada and the Austrian Federal Republic on Air Transport*, 22 June 1993, Can TS 1993 No 19 (entered into force 1 September 1993).

by BASAs at the international level. Thus BASAs were, in many cases, an extension of domestic airline regulatory thinking into the international sphere. Predictably then, if a government had protected a state-owned airline within the domestic market, similar protectionist philosophies would inevitably shape the BASAs it concluded.

A) Negotiating Bilateral Air Service Agreements

BASAs are international treaties between two sovereign States and the negotiations may not be limited to aviation issues.

The [economic] regulation was firmly by governments, and in the subsequent bargaining the airlines were only on the sidelines, often never knowing the secret trade-offs containing in the "memoranda of understanding" – which might include deals right outside the airline business, over tariffs or quotas for exports.⁴⁰⁹

For example, at the time of the negotiation of the 1946 US-UK "Bermuda Agreement,"⁴¹⁰ one of Great Britain's primary concerns was to obtain a huge loan from the United States government and therefore, they negotiated very carefully to also accomplish that goal.⁴¹¹

In the end result, both "the British and the Americans thought they had outsmarted each other at Bermuda."⁴¹²

The Bermuda Agreement granted nearly twice as many world routes to the United States as to the United Kingdom, but the routes granted to the UK were of better quality. UK carriers gained the right to fly from London via New York and San Francisco and Hawaii to Australia and New Zealand and they had traffic rights on all sectors except for American domestic sectors (namely, New York-San Francisco, San Francisco-Honolulu and New York-Honolulu). American carriers gained important 5th Freedom rights and also 'beyond' rights from both Bombay and Calcutta⁴¹³

⁴⁰⁹ See Sampson, *supra* note 57 at 72.

⁴¹⁰ *Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the United States of America relating to Air Services between their Respective Territories*, 11 February 1946, UKTS 1946 No 3. The agreement was signed on February 11, 1946 after weeks of negotiation (talks started on January 15) and was one of the first BASAs, signed after the Chicago Convention. It became the basis of other BASAs.

⁴¹¹ Smith, *Airways*, *supra* note 168 at 256 – 257.

⁴¹² *Ibid* at 257.

⁴¹³ Rights beyond India would have been subject to approval by India authorities once that nation gained its independence from the UK. India became independent on August 15, 1947.

and even Singapore. However, the 5th Freedom rights were meaningless without the approval of destination countries.⁴¹⁴

The British renounced the Bermuda Agreement on June 22, 1976, after they became aware that US airlines were earning £300 million a year from their routes, compared to only £120 million earned by British airlines.⁴¹⁵ Indeed, the UK had expressed concerns as early as 1967 after learning that the market share of US–UK traffic carried by British airlines had fallen from 37.8% in 1961-62 to 30.9% in 1966-67 due to the practice of US carriers of combining non-stop transatlantic services from 'gateway' airports in the United States with feeder services from cities within that country.⁴¹⁶

Whether the majority of passengers were American was irrelevant; what mattered was the market share enjoyed, respectively, by American and British carriers. Thus the BASA was replaced by the 1977 US-UK 'Bermuda II Agreement',⁴¹⁷ which was "'a unique agreement which enshrine[d] an elaborate system of controlling capacity on routes between the two countries", in an attempt to "provide a framework within which the airlines of the two countries can compete on broadly equal terms."⁴¹⁸

[It] placed additional restrictions on services from Heathrow, in terms of the airlines permitted to operate trans-Atlantic services from the airport (initially British Airways, Pan American and TWA) and [US gateways] which could be served from Heathrow, and it instituted controls on fares, which had to be approved by regulatory authorities from both countries, ... and rights to operate many more routes between points in the US and Gatwick airport were granted.⁴¹⁹

Negotiators often saw international airline routes as a zero-sum game, a pie to be divided evenly between the airlines of the two States involved.⁴²⁰ A 1967 report of the US Senate Committee on Interstate and Foreign Commerce noted that American negotiators were required to consider the well-being of all segments of the United States— taking into consideration the areas served by

⁴¹⁴ Smith, *Airways*, *supra* note 168 at 258–260. In addition, the UK had insisted on US approval of the International Air Transport Association's (IATA) authority to set traffic rates.

⁴¹⁵ "Britain to end Bermuda Agreement", *Flight International* (3 July 1976) 4.

⁴¹⁶ See UK, HC, Environment, Transport and Regional Affairs Committee, "Air Service Agreements between the United Kingdom and the United States", 18th Report, 1999–2000 Sess (26 July 2000), online: UK Parliament <www.publications.parliament.uk/pa/cm199900/cmselect/cmenvtra/532/53202.htm>. British authorities also wanted to designate British Caledonian as a second British carrier on the New York-London route, see Davies, *Rebels*, *supra* note 57 at 273.

⁴¹⁷ *Agreement between the United States and the United Kingdom concerning air services*, 23 July 1977, 28 US Stat 5367, UKTS 1977 No 76, TIAS 8641 [*Bermuda II*]

⁴¹⁸ "Air Service Agreements", *supra* note 416.

⁴¹⁹ *Ibid.*

⁴²⁰ See Sampson, *supra* note 57 at 72.

air transport operations and the interests of the travelling public and also to attempt to balance all of these interests so that the welfare of the United States as a whole would be served.⁴²¹

Nonetheless, the interests of the travelling public often take a back seat to those of the airline industry. The US delegation that participated in the 2004 US-China air negotiations included industry representatives from nine major US airlines and eight major US airports,⁴²² but no one represented passengers. Airline delegates try to ensure that the economic spoils are divided evenly among the airlines of both countries concerned, and further, that the benefits that are accorded to one country's carriers are evenly divided among those carriers. The importance of the latter is evidenced by the lobbying by US airlines for routes to China following successful BASA negotiations with that country.⁴²³

The need to evenly split the fruits of the negotiations is at the heart of a restrictive BASA. Thus, the 1966 Air Transport Agreement between the Government of Canada and the Government of the United States of America⁴²⁴ authorized commercial air service on 33 city-pairs, of which only 12 were to receive competing service from both a US and a Canadian carrier.⁴²⁵ Eighteen routes were allocated to airlines designated by the Government of Canada and 27 routes were allocated to airlines designated by the Government of the United States.⁴²⁶ The agreement allowed the airlines to determine the capacity but either government could request consultations with the other for the purpose of reviewing the commercial operations of the airlines involved.⁴²⁷ Central to the BASA is the concept of equal opportunity to compete. However, when external events reduce the size of the bilateral air travel market, governments will consider a managed intervention. For example, the fuel constraints imposed by the October 1973 energy crisis

⁴²¹ OJ Lissitzyn, "Bilateral Agreements on Air Transport" (1964) 30:3 J Air L & Com 248 at 253 (HeinOnline).

⁴²² See, *Memorandum of Consultations Between Delegations representing the Governments of the United States of America and the People's Republic of China*, June 11, 2004. The nine US air carriers were American Airlines, Continental, Delta, Evergreen, Kalitta Airlines, Northwest, Polar Air Cargo, United Airlines and United Parcel Service. In addition, eight airport authorities were included in the official US delegation.

⁴²³ Northwest launched a now-defunct website <www.nwa.com/features/chinabid/> on July 16, 2007 and United Airlines lobbied for the rights to fly from Los Angeles to Shanghai. See "Los Angeles-Shanghai Route Would Bring Up to US\$ 647 Million, 3,120 Jobs to Regional Economy", *Aviation News Today* (2 August 2007) online: AviationNews.net <www.aviationnews.net/index.html?do=headline&news_ID=144135>.

⁴²⁴ *Air Transport Agreement between the Government of Canada and the Government of the United States of America*, 17 January 1966, Can TS 1966 No 2 (entered into force 17 January 1966 and was replaced on 24 February 1995 by Canada's first Open Skies agreement with the United States) [*Canada-US Air Transport Agreement 1966*].

⁴²⁵ Three of these routes, Prince Rupert-Ketchikan, Whitehorse-Fairbanks and Whitehorse-Juneau were not airline routes in the traditional sense but services aimed at meeting the needs of Northern communities.

⁴²⁶ See *Canada-US Air Transport Agreement 1966*, *supra* note 424, schs I & II

⁴²⁷ *Ibid*, art XII.

provoked the US Civil Aeronautics Board to approve capacity restrictions between the US and the UK, Italy and Greece.⁴²⁸

The idea that regulators are ideally situated and equipped to manage airline capacity in the context of a BASA has gained considerable ground and has been featured in many BASAs. The 1984 Canada – Greece BASA⁴²⁹ was a case study in conferring micromanagement powers on regulators. Article IX (5) of the Agreement provided the tools for regulators in both countries to control capacity:

- 5) The capacity to be provided on the specified routes, i.e., frequency of services, and type and configuration of aircraft, shall be agreed between the designated airlines . . . and subject to the approval of the aeronautical authorities of the Contracting Parties. In the absence of an agreement between the designated airlines, the matter shall be referred to the aeronautical authorities of the Contracting Parties which will endeavour to resolve the problem.

Once the two States had agreed on capacity limits, the agreement was formalized 11 years later by an exchange of notes.⁴³⁰ In that document, the Greeks allowed the "Canadian Designated Carriers" to "offer up to daily service provided that the total capacity offered on this basis does not exceed 800 seats per week in each direction."⁴³¹ The Canadian government used the Exchange of Notes to underscore the fact that service to Toronto was subject to certain conditions.

Service to Toronto shall be subject to the special conditions related to exemption from the moratorium on access of new foreign carriers to the Lester B. Pearson International Airport as set out in the Aide Mémoire "Access to Toronto International Airport by Foreign Carriers" dated October 31, 1983 and issued by the Department of External Affairs of Canada.⁴³²

Through the Exchange of Notes, the Greeks limited Air Canada to five weekly flights, as that carrier's least capacious aircraft with the range to operate the route had 163 seats.⁴³³ By restricting access to Toronto, Canadian authorities hindered the commercial viability of a service

⁴²⁸ Jesse J Friedman, *A new air transport policy for the North Atlantic: saving an endangered system*, 1st ed (New York: Atheneum, 1976) at 53.

⁴²⁹ *Agreement between the Government of Canada and the Government of the Hellenic Republic on Air Transport*, 20 August 1984, Can TS 1987 No 11 (entered into force 24 June 1987)

⁴³⁰ *Exchange of Notes constituting an Agreement between the Government of Canada and the Government of the Hellenic Republic amending the Agreement on Air Transport, done at Toronto on August 20, 1984*, 23 June 1995, Can TS 1995 No 34 (entered into force 19 July 1995).

⁴³¹ *Ibid*, Attachment 1, Schedule of Routes, s II, 9.

⁴³² *Ibid*, Attachment 1, Schedule of Routes, s I, 3. The text was identical to the wording of Annex Schedule of Routes, Section 1, (3) of the previous, i.e. 1984 Agreement.

⁴³³ Montreal-Athens is 4,730 miles (7,610 km). Air Canada's B767-200ER was the smallest aircraft to fly this route.

to be provided by a Greek carrier, as Montreal's Mirabel Airport had few domestic connections.⁴³⁴

The forced division of Montreal air traffic, international going to Montreal/Mirabel and domestic and US traffic going to Montreal/Dorval, has made Montreal inconvenient for transfer operations. Passengers, shippers and airlines have thus routed these operations through Toronto, to the general disadvantage of Montreal.⁴³⁵

As a result of such BASAs, and similar BASAs that Canada had concluded with Israel⁴³⁶ and Belgium⁴³⁷ in August 1992, Toronto was served by airlines from 19 countries,⁴³⁸ yet only four foreign airlines, British Airways, KLM, Lufthansa⁴³⁹ and Swissair, offered daily service. All flights were offered pursuant to a BASA, and British Airways was operating pursuant to the first BASA concluded by Canada since the privatization of Air Canada.⁴⁴⁰

The 1988 Agreement between the Government of Canada and the Government of the United Kingdom of Great Britain and Northern Ireland concerning Air Services⁴⁴¹ did not contain the earlier restrictions on operations at Toronto or an explicit limitation of capacity, either in terms of weekly seat offerings or a limit of the number of flights. Instead it contained text suggesting that a greater reliance should be placed on market forces, while granting governments the power to intervene. Article 7(4) of the Agreement reads:

- 4) The agreed services provided by the designated airlines of the Contracting Party shall bear a close relationship to the requirements of the public for transportation on the specified routes and shall have as their primary objective the provision at a reasonable load factor of capacity adequate to

⁴³⁴ The Canada-Israel BASA had similar restrictions. See *Agreement between the Government of Canada and the Government of the State of Israel on Air Transport*, 13 April 1986, Can TS 1987 No 17 (entered into force 24 March 1987) So did the Canada-Belgium BASA. See *Agreement between the Government of Canada and the Government of Belgium on Air Transport*, 13 May 1986, Can TS 1986 No 5 (entered into force 13 May 1986).

⁴³⁵ Richard de Neufville, *Amsterdam Multi-airport System: Policy Guidelines*, Draft Final Report 4/12/00 (Cambridge, Mass: Massachusetts Institute of Technology, 1995) at 40, online: Massachusetts Institute of Technology <ardent.mit.edu/airports/ASP_papers/multi-airport%20systems%20policy%20guidelines.PDF> (visited May 12, 2014).

⁴³⁶ See *supra* note 434.

⁴³⁷ See *supra* note 434.

⁴³⁸ The countries were: Argentina, Brazil, China, Czech Republic, Finland, France, Germany, Greece, India, Italy, Jordan, Netherlands, Pakistan, Portugal, Spain, Thailand, Venezuela, United Kingdom, and Switzerland. See OAG *Desktop*, *supra* note 32 at 1286–1294.

⁴³⁹ See *Exchange of Notes between the Government of Canada and the Government of the Federal Republic of Germany amending the Air Transport Agreement signed at Ottawa on March 26, 1973*, 16 December 1982, Can TS 1983 No 4 (entered into force 20 January 1983).

⁴⁴⁰ The BASA was signed on June 22 1988 by Canadian Prime Minister Brian Mulroney and British Prime Minister Margaret Thatcher within days of Canada's Parliament approving the *Air Canada Participation Act*, *supra* note 73.

⁴⁴¹ *Agreement between the Government of Canada and the Government of the United Kingdom of Great Britain and Northern Ireland concerning Air Services*, 22 June 1988, Can TS 1988 No 28 (entered into force 22 June 1988) [*Canada-UK Air Services Agreement*].

carry the current and reasonably anticipated requirements for the carriage of passengers and cargo including mail coming from or destined for the territory of the Contracting Party which has designated the airline.

The 1989 Canada-Netherlands BASA⁴⁴² is more liberal than the Canada-UK BASA, explicitly prohibiting the routing and capacity restrictions that had been present in earlier BASAs. Article X(4) of this Agreement reads:

- 4) Neither Contracting Party shall, in respect of air transportation performed under this Agreement by a designated airline of the other Contracting Party, without the agreement of the other Contracting Party limit or restrict, or permit any person or entity under its jurisdiction to limit or restrict that airline's traffic, capacity, frequency of service, regularity of service, aircraft type(s), aircraft configuration(s), or rights specified in this Agreement, except as may reasonably be required for customs, technical, operational or environmental reasons . . .

The article does not limit the prohibition to routes specified in an Annex, but is to be seen as a condition of general application. It only allows for restrictions where they do not affect competition, where they are applied equally to foreign and domestic airlines and where the reasons for such restriction are provided as soon as possible to the other Contracting Party. This language is consistent with that of the Chicago Convention,⁴⁴³ in particular Article 9, with respect to the obligations of a Contracting State wishing to close part or all of its airspace to commercial air traffic. However, Canada's BASAs with the UK and the Netherlands were exceptions to the then-restrictive policy, rather than the introduction of a new legal regime. Canada's 1989 BASA with Thailand⁴⁴⁴ was signed within a month of the Canada-Netherlands BASA and uses very different language:

The designated airline shall be entitled to operate three return flights weekly using B747 or equivalent aircraft or four return flights weekly using DC10 or equivalent aircraft. Increases in the number of weekly flights shall be subject to the approval of the aeronautical authorities of the Contracting Parties.⁴⁴⁵

The very different traffic rights contained in BASAs concluded by a single country's government within a relatively short period of time serves to underscore the degree to which international traffic rights are regulated by governments, as well as the impact their decisions have on the

⁴⁴² *Agreement between Canada and the Kingdom of the Netherlands relating to Air Transport between Canada and the Netherlands*, 2 June 1989, Can TS 1990 No 12 (entered into force 1 February 1990).

⁴⁴³ *Chicago Convention*, *supra* note 14.

⁴⁴⁴ *Agreement between the Government of Canada and the Government of the Kingdom of Thailand on Air Services*, 24 May 1989, Can TS 1989 No 16 (entered into force 30 June 1989).

⁴⁴⁵ *Ibid.* The text appears in four places: Annex Section 1, Route 1, Note (f); Annex Section 1, Route 2, Note (e); Annex Section 2, Route 1, Note (f) and Annex Section 2, Route 2, Note (e).

operation and scheduling of international air routes. Canada's 1988 BASA with the UK and its 1989 BASA with the Netherlands showed that it was aware of an increasingly strong current of route deregulation, but its 1989 BASA with Thailand may indicate that Thailand was not as strong an advocate of route deregulation as were the UK and the Netherlands.⁴⁴⁶ Nonetheless, Canada's 1989 BASA with Thailand was consistent with dozens, if not hundreds of similar agreements signed by Canada and States with similar philosophies, right around the world.

B) Allocating Traffic Rights

Prior to 1992, the vast majority of international airline traffic was offered pursuant to a BASA that permitted only a single designation, meaning that each of the two parties to the BASA could designate only one airline to operate on each route between the two countries. Most European countries, as well as Australia and New Zealand, designated a single carrier,⁴⁴⁷ usually the 'flag carrier' to exercise all international bilateral traffic rights.⁴⁴⁸ However, Germany,⁴⁴⁹ along with the United Kingdom, France, Canada and the United States, designated more than one carrier to operate international services where possible. Germany designated Lufthansa to operate on all international routes; in addition, it designated Lufttransport-Unternehmen (LTU) to serve US destinations from Düsseldorf⁴⁵⁰ and also to serve as a second German airline on routes between Frankfurt and California, Florida and New York.⁴⁵¹ The United Kingdom did likewise, designating British Airways on all routes to North America, and then allowing Virgin Atlantic to compete with British Airways on routes serving Boston, Los Angeles, Miami, New York and Orlando.⁴⁵² France divided the world between its two flag carriers, government-owned Air France and its private sector homologue, Union de Transports Aériens (UTA).⁴⁵³ Although two airlines were designated for international routes, rarely was there direct competition between

⁴⁴⁶ Indeed, Thailand did not conclude an open skies agreement with the United States until September 2005.

⁴⁴⁷ Denmark, Norway and Sweden all designated Scandinavian Airlines System (SAS), a carrier in which all three governments had a financial interest.

⁴⁴⁸ Qantas, Austrian, Sabena, Olympic KLM Royal Dutch Airlines, Alitalia, Aer Lingus, Transportes Aereos Portugueses, Air New Zealand, Iberia and Swissair were the *de facto* flag carriers of respectively Australia, Austria, Belgium, Greece, the Netherlands, Italy, Ireland, New Zealand, Portugal, Spain and Switzerland.

⁴⁴⁹ In 1955, the US granted Germany valuable routes in exchange for political considerations unrelated to aviation. See Paul Stephen Dempsey, *Public International Air Law* (Montreal: McGill University, Institute and Center for Research in Air & Space Law, 2008) at 530.

⁴⁵⁰ LTU was designated on routes between Düsseldorf and Atlanta, Los Angeles, Miami, New York and Orlando and also on routes between Munich and Los Angeles. See *OAG Desktop*, *supra* note 32 at 423, 426, 427, 865, 866.

⁴⁵¹ LTU was also designated as a second German airline competing with Lufthansa on routes between Frankfurt and both of Los Angeles and Miami as well as between Munich and New York. See *ibid* at 458, 459, 866 – 867.

⁴⁵² See *ibid* at 682, 693, 695, 697, 698.

⁴⁵³ See Sampson, *supra* note 57 at 94.

them;⁴⁵⁴ Air France was designated on all routes between France and North America with the exception of the Paris–San Francisco route, which was awarded to UTA.⁴⁵⁵

In the mid-20th Century, Canada was in a very different situation. A non-government-owned airline, Canadian Pacific Air Lines, (CPAL) had over the years been designated to serve international routes that were of little interest to Air Canada. These routes included Australia,⁴⁵⁶ Japan,⁴⁵⁷ Mexico and South America.⁴⁵⁸ By 1957, CPAL's route system radiated from Vancouver to Amsterdam,⁴⁵⁹ Japan, Australia and South America with connections from South America via Mexico City to Toronto. When CPAL applied to serve Lisbon from Toronto/Montreal, it justified the route as being an extension of its South American services rather than as an attempt to compete with Air Canada's European services.⁴⁶⁰

On May 10, 1985, when Canada and the UK re-opened their BASA, Wardair Canada was designated as a second Canadian carrier (after Air Canada) on every Canada-UK route.⁴⁶¹ Shortly thereafter, in the fall of 1987, Canada's Transport Minister, the Hon. John Crosbie, approved the reallocation of international routes between Air Canada and Canadian Airlines International (CAIL), the successor of CPAL. Under the reallocation, Air Canada was granted access to Spain, Portugal (previously CPAL territory), Greece, Turkey, Cyprus, the Middle East, Morocco, Algeria, Tunisia, Libya, Korea, Malaysia, the Philippines, and Singapore, while CAIL gained access to Germany (from Western Canada only) and also to Denmark, Sweden, Norway, the USSR, Columbia, Guyana, Surinam, French Guyana, and Indonesia.⁴⁶² In 1989, the Pacific

⁴⁵⁴ The only route where two French airlines competed directly was Montreal-Paris, where both Air France and Air Liberté were designated. See *OAG Desktop*, *supra* note 32 at 842, 942.

⁴⁵⁵ UTA's Paris–San Francisco route was part of its route between Paris and Papeete in French Polynesia. It was also designated to Singapore and Australia. See *ibid* at 967, 987, 990, 992 and 1107.

⁴⁵⁶ DM Bain, *Canadian Pacific Air Lines: Its History and Aircraft* (Calgary: Kishorn Publications, 1987) at 29. The route did not make money for 20 years, but CPAL persevered. See also Smith, *It seems*, *supra* note 130 at 12.

⁴⁵⁷ Fortunately for CPAL, Canada's government thought that Air Canada's lack of interest in the Australia route extended to Japan. See Stevenson, *supra* note 143 at 47. Chorley, *supra* note 379 suggests CPAL's international routes were mainly those "Air Canada did not want or Ottawa did not want Air Canada to have." See also Corbett, *supra* note 208 at 176. Service to Athens, Madrid, and Tel Aviv was later suspended for lack of traffic.

⁴⁵⁸ Chorley, *supra* note 379, 23 at 47. See also Bain, *supra* note 456 at 30.

⁴⁵⁹ "Europe had been reserved for Air Canada and it took special action by the Cabinet to change the policy." Edwards, "Air Transport", *supra* note 376 at 28. Air Canada had no interest in serving Amsterdam.

⁴⁶⁰ See Corbett, *supra* note 208 at 171. The route application was primarily based on 6th Freedom traffic.

⁴⁶¹ *Canadian Aviation* (August 1985) 8. See also Ward, *supra* note 59 at 295.

⁴⁶² Tae Hoon Oum & AJ Taylor, "Emerging Patterns in Intercontinental Air Linkages and Implications for International Route Allocation Policy" (1995) 34:4 *Transportation Journal* 5 at 22 (JSTOR). See also Canadian Airline Pilots Association, *Pilot* 44:4 (April 1988) 13 at 13 – 14.

Western Airlines Corporation, the parent of CAIL, acquired Wardair Canada⁴⁶³ and its rights to London and Paris.⁴⁶⁴ By the summer of 1992, Canada had divided its international routes between its two international carriers and although the two carriers sometime served the same foreign country, they competed directly only on seven routes.⁴⁶⁵

The US adopted different practices depending on the available traffic rights. On many routes where only a single designation was possible, rights would normally be awarded to provide service from a carrier's hub. Thus with respect to the traffic rights pursuant to the Bermuda II Agreement⁴⁶⁶ between the United States and the United Kingdom, each of American, Continental, Delta, Northwest, TWA, United and US Air was the sole carrier designated by the US on a route between one of its major hubs⁴⁶⁷ and London.⁴⁶⁸ In addition, American authorities designated two carriers to serve London from Boston (American and Northwest), Los Angeles (American and United) and Miami (American and Delta). They followed similar practices on routes between the United States and France and Germany, often designating a single carrier to provide service from its hub,⁴⁶⁹ but designating two carriers where practicable.⁴⁷⁰ US authorities took a totally different approach with respect to routes between Europe and New York, designating up to five US airlines to provide service.⁴⁷¹ Finally, they designated three carriers, Continental, Northwest and United to operate service to Australia.⁴⁷²

⁴⁶³ The acquisition was complete on May 2, 1989. Ward, *supra* note 59 at 1–8, 311–312.

⁴⁶⁴ Wardair had been designated to serve Paris and a second French city to be decided. See *ibid* at 318.

⁴⁶⁵ Between London and each of Vancouver, Calgary, Edmonton and Toronto; between Manchester and Toronto and between Paris and both Montréal and Toronto. See *OAG Desktop*, *supra* note 32, 687, 706, 707, 765, 983 and 993.

⁴⁶⁶ *Bermuda II*, *supra* note 417. See amendments 25 April 1978, 29 UST 2680, TIAS 8965; 4 December 1980, 33 UST 655, TIAS 10059; 19 August and 7 October 1991, TIAS 11794. The agreement originally allowed only British Airways, Pan Am, and TWA to fly from Heathrow to the US. In 1991, Pan Am and TWA sold their rights to United and American respectively, and Virgin Atlantic was added to the list of airlines allowed to operate on these routes.

⁴⁶⁷ Thus American, Continental, Delta, Northwest, TWA, United and US Air served London from respectively Dallas, Houston, Atlanta, Minneapolis, St. Louis, Washington, and Philadelphia.

⁴⁶⁸ Flights from the United States to London Heathrow were restricted to Boston, Chicago, Detroit, Los Angeles, Miami, New York, Philadelphia, Seattle, San Francisco and Washington. Flights from all other airports had to be to London Gatwick without exception. Even after buying TWA's Heathrow rights, American was only permitted to use existing rights. Thus, the Dallas-based carrier was forced to fly from Dallas to London Gatwick.

⁴⁶⁹ Thus American, Continental, Delta, Northwest, TWA, United and US Air served Paris from respectively Dallas, Houston, Atlanta, Detroit, St. Louis, San Francisco, and Philadelphia. Similarly, Delta, Northwest and US Air served Frankfurt respectively from Atlanta, Detroit and Pittsburgh.

⁴⁷⁰ Two carriers served Paris from Boston (Northwest and TWA), Chicago (American and United), Los Angeles (TWA and United) and Washington (TWA and United). Similarly two carriers served Frankfurt from Chicago (American and United), Dallas (American and Delta) and Washington (Delta and United).

⁴⁷¹ Five American carriers were designated to Paris (American, Continental, Delta, Tower and TWA); three were designated to each of Brussels (American, Delta, TWA), Frankfurt (Continental, Delta, TWA) and London

In every case, the decision of which carrier to designate depended on the number of potential designated carriers in the relevant BASA and the designating government's policy with respect to the designation of carriers. These two factors dictated which foreign routes a carrier could fly. As early as 1971, the British Overseas Airways Corporation (BOAC), which had been devised to "try and keep the Commonwealth linked with Commonwealth airlines,"⁴⁷³ could promote its flights to 74 cities on every inhabited continent,⁴⁷⁴ as could Pan Am.⁴⁷⁵ By contrast, at the same time Delta only had three international routes.⁴⁷⁶ Even as late as 1980, United Airlines⁴⁷⁷ was only serving five destinations outside the United States,⁴⁷⁸ while Eastern Airlines was serving 25.⁴⁷⁹ That large US airlines such as Delta and United would be largely confined to domestic markets, while others would be granted international routes, underscores the importance of being designated to serve international routes. Thus, such privileges can be considered commercial assets and are recorded on balance sheets in corporate annual reports.⁴⁸⁰

Being designated in a single BASA was not sufficient to enable an airline to become a significant international carrier. The global route networks of BOAC and Pan Am relied on a complex system of traffic rights contained in dozens of BASAs negotiated by their respective

(American, Continental and United) and two airlines were designated to each of Amsterdam (Delta, TWA), Rome (Delta, TWA) and Zurich (American, Delta).

⁴⁷² See *OAG Desktop*, *supra* note 32 at 721, 1216.

⁴⁷³ Sir Matthew Slattery, BOAC's Chairman, as quoted by Anthony Sampson. See Sampson, *supra* note 57 at 88.

⁴⁷⁴ See "BOAC jet routes" in British Overseas Airways Corporation, *BOAC Timetable: 1 April 1971 – 30 June 1971*, online: Timetable Images <www.timetableimages.com/ttimages/ba2/ba71/> (visited May 13, 2014) [*BOAC Sched 1971*]. BOAC had been designated by the UK in every BASA with a country outside Europe.

⁴⁷⁵ Pan Am had similar status with the American government and could boast a similar worldwide network of 84 cities on six continents, but with no US domestic route network. See "Map" in Pan Am, *Pan Am System Time Table: June 1-30, 1969*, 22 at 22–23, online: Timetable Images <www.timetableimages.com/ttimages/pa/pa69/> (visited May 13, 2014) [*Pan Am Timetable 1963*].

⁴⁷⁶ Delta had three international routes, one from New Orleans to Montego Bay, a second route between San Juan and Montego Bay and a third route between Montego Bay and Caracas. See "Delta System Route Map" in Delta Airlines, *Delta Air Lines System Timetable: Effective February 1 Thru April 24, 1971*, online: Timetable Images <www.timetableimages.com/ttimages/dl.htm> (visited May 13, 2014).

⁴⁷⁷ United bought Pan Am's trans-Pacific rights in 1985 to become an international carrier. See Robert E Dallos & Paul Houston, "United Agrees to Buy Pan Am Pacific Routes: \$750-Million Deal, Which Must Be Approved by US Is Seen as Strengthening both Companies", *Los Angeles Times* (23 April 1985), online: Los Angeles Times <articles.latimes.com/1985-04-23/news/mn-11435_1_united-airlines> (visited April 13, 2014).

⁴⁷⁸ These were Toronto and Vancouver in Canada and Merida, Cancun and Cozumel in Mexico. See "United Airlines System Map" in United Airlines, *United Airlines Schedule: Our Friendly Times: October 26, 1980*.

⁴⁷⁹ Three were in Canada, five were in Mexico and 17 were islands in the Caribbean. See "Eastern system route map" in Eastern Airlines, *Eastern Timetable: Effective January 31, 1981*.

⁴⁸⁰ Air Canada stated that the value of its international route rights and slots was CA\$ 97 million as of December 31, 2010. See Air Canada, "Annual Report 2011", at 96, online: Air Canada <www.aircanada.com/en/about/investor/documents/2011_ar.pdf>. American Airlines estimated the value of its international slots and route authorities in 2010 at US\$ 708 million. See AMR Corp (AMR), "10-K: Annual report pursuant to section 13 and 15(d)" (Filed on 16 February 2011, period 31 December 2010) at 41 (WL Business).

governments and the airlines' consistent designation as their country's flag carrier on the routes specified in those BASAs. Intercontinental itineraries relied on the traffic rights of more than one BASA. The traveler's flight from the point of departure to the airline's hub operated pursuant to the first BASA and the onward flight was operated pursuant to the second.⁴⁸¹

Few understood this better than British Airways. It used its ability to operate daily flights to dozens of international points to create an impressive global network of routes all served daily from London, allowing daily connections via London between nearly a hundred cities around the globe.⁴⁸² In 1983, Saatchi and Saatchi, British Airways' advertising agency, realized that due to the airline's routes throughout the former British Empire, it flew more people to more destinations than any of its competitors.⁴⁸³ More specifically, it carried "more passengers than any other across national borders."⁴⁸⁴ These facts supported the advertising slogan 'The World's Favorite Airline' which debuted in an award-winning television commercial in April 1983.⁴⁸⁵

IV) WORLD TRAVEL PATTERNS CIRCA 1992

The "vast cobweb of bilateral international agreements"⁴⁸⁶ shaped international air routes to such an extent that by August of 1992, major world travel patterns followed time-worn paths. The major international air routes were between the Eastern US,⁴⁸⁷ particularly New York,⁴⁸⁸ and

⁴⁸¹ British Airways has long promoted services between the US and cities in nearly three dozen countries in the Middle East, South Asia, Africa, East Asia and Europe. See *OAG Desktop*, *supra* note 32, at 237, 397–403, 892–910, 912–915. Each of these itineraries was a 6th Freedom service based on the traffic rights in the US-UK BASA and in the BASA between the UK and the destination country.

⁴⁸² As early as 1980, British Airways was promoting daily connections between Quebec City and 65 foreign destinations (13 in UK/Ireland, 42 in Europe, and 10 in the Middle East and Africa) via its daily Montreal-London flight. Not all of the connecting flights were with British Airways, but all the connections were offered daily. See British Airways "Tous les jours de Québec à 14h50 vers l'Europe, le Moyen-Orient et l'Afrique" en vigueur du 12 mai au 12 octobre, 1980. (on file with the author).

⁴⁸³ Alison Fendley, *Commercial break: the inside story of Saatchi & Saatchi* (London: Hamish Hamilton, 1995) at 76.

⁴⁸⁴ Bernard C Reimann, "Conference reports – part 2: Managers of transformation" (1993) 21:3 *Strategy & Leadership* 42 at 45 (Emerald Insight).

⁴⁸⁵ The commercial, known as "Manhattan Landing", is posted on Youtube. Online: British Airways TV Ad from 1983 – Manhattan, Youtube <www.youtube.com/watch?v=kfdTEJUcW98> (visited May 13, 2014).

⁴⁸⁶ Prof Bin Cheng, describing the use of BASAs instead of a multilateral agreement, quoted by Anthony Sampson. See Sampson, *supra* note 57 at 72.

⁴⁸⁷ Excluding the New York area, there were 415 weekly flights over 38 routes between cities in the Eastern time zone and Western Europe and all but 8 of these routes were served non-stop daily. There were 84 weekly Atlanta-Western Europe flights to 8 cities: Amsterdam (13), Dusseldorf (1), Frankfurt (21), Hamburg (7), London (21), Madrid (7), Paris (7) and Zurich (7). There were 91 weekly Boston-Western Europe flights to 9 cities: Amsterdam (7), Brussels (6), Frankfurt (14), Glasgow (7), London (21), Paris (21), Rome (3), Shannon (5) and Zurich (7). There were 35 weekly Detroit-Western Europe flights to 4 cities: Amsterdam (7), Frankfurt (7), London (14) and Paris (7). There were 86 weekly Miami-Western Europe flights to 9 cities; Frankfurt (15), Hamburg (2), London

Western Europe, with some non-stop flights from Western⁴⁸⁹ or Central US⁴⁹⁰ to Western Europe, as well as some non-stop flights from the Eastern US to Central and Eastern Europe.⁴⁹¹ There were only seven non-stop flights per week from the United States to the Middle East⁴⁹² and five to Africa⁴⁹³ and only a single weekly flight from South America to Africa.⁴⁹⁴ From London and Frankfurt, and other Western European hubs, there were very good connections to Eastern Europe,⁴⁹⁵ as well as to points in South Asia and the Middle East.⁴⁹⁶

(33), Madrid (14) Milan (2), Munich (3) Paris (12) Rome (3) and Vienna (2). There were 28 weekly Philadelphia-Western Europe flights to 2 cities: London (14) and Paris (14). There were also 91 weekly Washington-Western Europe flight to 6 cities: Brussels (7), Frankfurt (21), London (28), Madrid (7), Milan (7), and Paris (21). See *OAG Desktop*, *supra* note 32 at 134, 136, 137, 138, 141, 234, 235, 236, 238, 240, 242, 397, 399, 400, 401, 806, 807, 808, 809, 810, 811, 1004, 1005, 1342, 1344, 1346, 1347, 1349.

⁴⁸⁸ With over 625 weekly non-stop flights to Europe, the New York area international airports (Newark and JFK) had almost as many transatlantic flights as all the other American airports combined, and it had strong competition on many routes. From Frankfurt to New York, 4 airlines offered 8 non-stop flights daily with over 2,200 seats/day. From London to New York, 6 airlines offered 18 non-stop flights with over 5,000 seats/day. Excluding flights to London, Frankfurt and Paris, New York had 353 weekly flights to 23 Western European cities: Amsterdam (28), Athens (11), Barcelona (3), Berlin (7), Brussels (28), Copenhagen (19), Dusseldorf (8), Geneva (7), Glasgow (3), Hamburg (12), Helsinki (9), Lisbon (21), Madrid (21), Manchester (14), Milan (21), Munich (22), Nice (7), Oslo (12) Rome (28) Shannon (13), Stockholm (20), Tel Aviv (22), Vienna (11), and Zurich (29). See *ibid* at 893, 894, 895, 896, 898, 899, 900, 901, 904, 905, 906, 907, 908, 910, 911, 912, 913, 914, 915.

⁴⁸⁹ The 136 weekly flights from Europe US cities West of the Rockies looks impressive but of the 10 routes served, only 6 were flown on a daily basis, and 5 of these were to points in California. Los Angeles was served weekly 5 times from Amsterdam, 15 times from Frankfurt, 3 from Geneva, 56 times from London, 14 times from Paris and 4 times from Zurich. San Francisco was served 7 times from Frankfurt, 16 times from London and 6 times from Paris. Seattle was served 10 times from London. See *ibid* at 296, 297, 710, 714, 717, 719, 723, 1103, 1105, 1107, 1147.

⁴⁹⁰ There were 230 weekly flights over 23 routes between cities in the Central Time Zone and Western Europe and all but 3 of these routes were served non-stop daily. There were 147 weekly Chicago-Western Europe flights to 16 cities: Amsterdam (8), Berlin (7), Brussels (3), Copenhagen (4), Dusseldorf (7), Frankfurt (21), Glasgow (7), London (21), Manchester (10), Milan (7), Munich (7), Paris (21), Rome (5), Stockholm (7), Warsaw (5), and Zurich (7). There were 48 weekly Dallas-Western Europe flights to 4 cities: Frankfurt (2), London (14), Madrid (7) and Paris (7). There were also 35 weekly Houston-Western Europe flights to 3 cities: Amsterdam (7) London (14) and Paris (14). See *ibid* at 321, 323, 324, 325, 328, 329, 330, 331, 332, 334, 374, 374, 376, 561, 564, 565.

⁴⁹¹ The 22 weekly New York-Eastern Europe flights include two flights to Budapest, three to Kiev, four to Moscow, four to Prague two to Sophia and seven to Warsaw. See *ibid* at 897, 903, 907, 909, 912, 915.

⁴⁹² These figures do not include service to Israel. There were two non-stop flights to New York from Cairo, three from Jeddah and two from Riyadh. There were also two flights to Casablanca. See *ibid* at 897, 902, 910.

⁴⁹³ There were two non-stop flights to New York from Dakar and three from Lagos. See *ibid* at 898, 904.

⁴⁹⁴ This was Varig's weekly Lagos- Rio de Janeiro flight. See *ibid* at 647, 1054.

⁴⁹⁵ Within a year of the Soviet Union's 1991 dissolution, Lufthansa was flying 87 weekly flights to 12 formerly communist cities: Bucharest (5), Budapest (7), Kiev (4), Minsk (3), Moscow (21), Prague (14), Riga (5), St. Petersburg (4), Sophia (4), Tallinn (3), Vilnius (3) and Warsaw (14). See *ibid* at 451, 457, 460, 461–463, 466, 467.

⁴⁹⁶ London had 116 weekly non-stop flights to 19 cities in the Middle East and South Asia: Abu Dhabi (3) Amman (4), Beirut (4), Bahrain (8), Bombay (9), Cairo (12), Delhi (8), Dhahran (2), Dhaka (2), Doha (6), Dubai (10), Islamabad (2), Istanbul (21), Jeddah (3), Karachi (1), Kuwait (9), Muscat (4) Riyadh (5) and Tehran (2). There were 122 weekly non-stop flights from Frankfurt to 17 cities in the Middle East and South Asia: Amman (3), Beirut (2), Bombay (9), Cairo (11), Damascus (5), (Delhi (12), Dhaka (2), Doha (1), Dubai (5), Islamabad (2), Istanbul (42), Jeddah (4), Karachi (4), Kuwait (5), Riyadh (2), Tehran (8) and Tripoli (5). See *ibid* at 72, 91, 151, 152, 190, 226–227, 289, 290, 379, 385, 386, 407, 409, 414, 415, 577, 580, 581, 595, 596, 615, 641, 642, 1059, 1060, 1244, 1299.

Thus a typical routing from South America to South Asia would involve at least two transfer points: one in the United States, and the other in Western Europe, with possible additional transfer points in South America or South Asia, depending on the actual origin and destination points of the journey. For example, the most highly available Mexico-Bombay itinerary involved stops in London and Delhi, and a change of airline at New York.⁴⁹⁷ The most highly available routing between Sao Paulo and Madras involved three *en route* connections.⁴⁹⁸ A trip from Rio de Janeiro to Karachi would have involved a change of plane in New York and three *en route* stops.⁴⁹⁹ Similarly, the most highly available Buenos Aires-Colombo itinerary involved changing planes at New York and London.⁵⁰⁰ In almost every case, a non-stop flight between South America and Europe would have reduced the travel time by several hours, but that travel market was severely fragmented. The 92 weekly flights were divided between a dozen airlines from as many countries providing non-stop service over 23 non-stop routes,⁵⁰¹ with the result that only three routes were served daily; Rio de Janeiro–Lisbon,⁵⁰² Rio de Janeiro–Madrid⁵⁰³ and Buenos Aires–Madrid.⁵⁰⁴ Of these, only the last route was offered daily non-stop service from the same airline.

By contrast, Buenos Aires,⁵⁰⁵ Rio de Janeiro,⁵⁰⁶ Santiago⁵⁰⁷ and Sao Paulo⁵⁰⁸ all had daily non-stop service to Miami, which meant that someone traveling with a connection in Miami would

⁴⁹⁷ Mexicana Flight 002, Mexico-New York, connecting to Air India Flight 112 New York-London-Delhi-Bombay. This itinerary was offered on Mondays, Wednesdays, Fridays and Sundays. See *ibid* at 228.

⁴⁹⁸ American Airlines Flight 950, Sao Paulo-New York, connecting to American Airlines Flight 106 New York-London, connecting to British Airways 145 London-Bombay and finally connecting to Indian Airlines 171 Bombay-Madras. This itinerary was available only Tuesdays, Saturdays and Sundays. The passenger departed Sao Paulo at 22:20 and arrived in Madras at 15:30, 33 hours and 40 minutes later. See *ibid* at 227, 704, 734.

⁴⁹⁹ American Airline Flight 2715, Rio de Janeiro-Miami-New York, connecting to Pakistan International Flight 718 New York-Frankfurt-Damascus-Karachi. See *ibid* at 617, 911.

⁵⁰⁰ United Flight 988, Sao Paulo- Rio de Janeiro-New York, connecting to United Flight 906, New York-London, connecting to Air Lanka Flight 704 London-Dubai-Colombo. This itinerary was available 4 times a week. See *ibid* at 350, 697, 897.

⁵⁰¹ See *ibid* at 106-107, 451, 463-465, 683, 674, 701, 704, 737, 743-745, 819-820, 989, 991, 1073-1074, 1373-1374.

⁵⁰² Of the seven weekly flights, Varig offered four and Transportes Aereos Portugueses (TAP Portugal) offered three. The flights departed at dramatically different times on different days of the week. See *ibid* at 674.

⁵⁰³ Of the 17 weekly flights, Iberia and Varig offered six each, and Varig's flights departed at a consistent time. Aerolíneas Argentinas, LAN Chile and PLUNA (of Paraguay) offered respectively 1, 2 and 2 flights. See *ibid* at 743.

⁵⁰⁴ Of the eleven weekly flights, Aerolíneas Argentinas offered four and Iberia offered seven. See *ibid* at 737.

⁵⁰⁵ American and United both served Buenos Aires daily non-stop from Miami. See *ibid* at 278.

⁵⁰⁶ American and United flew Miami- Rio de Janeiro daily, and United also flew from New York. See *ibid* at 1054 – 1055.

⁵⁰⁷ American and United flew Miami-Santiago daily. See *ibid* at 1128 – 1129.

⁵⁰⁸ American, United and TransBrasil all served Sao Paulo daily non-stop to Miami. American also provided daily non-stop service to New York and Varig provided daily direct service to New York. See *ibid* at 1138–1139.

have consistent departure times throughout the year.⁵⁰⁹ Moreover, Miami had daily non-stop service to Frankfurt,⁵¹⁰ London,⁵¹¹ Madrid,⁵¹² Paris⁵¹³ and frequent non-stop service to Italy.⁵¹⁴

For the business traveler, daily service implied a consistent departure time and arrival time— and even a consistent connection in most cases. Not only would the airline that offered daily service be more flexible; in almost every case advancing or delaying the itinerary by a day or two would have no impact on the itinerary itself, as the flight numbers would be the same and the only piece of data altered would be the actual travel date. As a result, even in the competitive Mexico-Madrid market, where both Aeroméxico Aero Mexico and Iberia each offered six non-stop flights a week, American, Continental and Delta each promoted their daily one-stop routings via their respective hubs in Dallas, Newark and Atlanta.⁵¹⁵ Thus airlines that could offer daily service, even if the total travel time was slightly longer, could compete effectively against airlines that offered non-stop service unless that non-stop service was offered at a consistent time on a daily basis.

V) THE EVOLUTION OF GLOBAL AVIATION: 1992-2012

From 1992 to 2012 nine new developments⁵¹⁶ have re-defined the international airline industry. First, the concept of “**Open Skies**” was defined. It facilitated a second development, increased **Regulatory Flexibility**, as regulators begin to take a more laissez-faire approach with respect to the terms of BASAs. Open Skies is coincident with the third development, the formation of **Equity Alliances** and their regulatory blessing. Open Skies also facilitated the fourth development, the launching of **New Routes** which have provided unprecedented connectivity between far-flung corners of the earth. Fifth, **Regional Airports** have emerged luring airline service. Sixth, major airlines have delegated service to smaller centres to **Regional Carriers**. These first six developments coincided with the seventh development, the transformation of

⁵⁰⁹ Indeed, American Airlines has departed Sao Paolo non-stop to Miami at roughly the same time over the last two decades. In 1992, Flight AA 956 departed at 22:05; in 2012, Flight AA 998 departed at 22:30. See *ibid* at 810; *oneworld, oneworld Timetable*: June 22, 2012–July 20, 2012 [OWT 712].

⁵¹⁰ Both Delta and Lufthansa served Frankfurt. See *OAG Desktop, supra* note 32 at 806.

⁵¹¹ American, British Airways and Delta served London. See *ibid* at 807.

⁵¹² American and Iberia served Madrid. See *ibid* at 808.

⁵¹³ American served Paris daily, and Air France flew the route 5 times weekly. See *ibid* at 809.

⁵¹⁴ Alitalia flew to Miami 6 times/weekly, 4 times non-stop and twice via Milan. See *ibid* at 809.

⁵¹⁵ Both Continental and Delta actually promoted the connection as a single flight number. See *ibid* at 741, 800.

⁵¹⁶ This paper does not address additional factors such as the divestiture of airports and even air navigation service providers in the late 1980s and early 1990s in jurisdictions such as Canada and Europe.

former backwater airports⁵¹⁷ into **New Global Hubs**.⁵¹⁸ The explosion of **Aviation Security** regulatory initiatives that emerged in the aftermath of September 11 is the eighth development, affecting airline passengers and perhaps even influencing itinerary choices for some travellers. The ninth development, **Emerging Environmental Concerns** about the impact of greenhouse gases from commercial aviation, will continue to shape the airline industry in the years ahead. Taken alone, any single one of these changes would be remarkable; their combination redefines international commercial aviation and challenges regulators to adapt to new realities.

A) Open Skies

In the early 1990s, "open skies," the aviation equivalent of free trade agreements, was born and rapidly spread throughout the industrialized world. On July 23, 1992 the European Common Aviation Area Agreement (ECAA) came into force, allowing any EU carrier to establish a new route or base anywhere within the EU without prior approval.⁵¹⁹ This was revolutionary. For the first time, a British carrier could operate domestic flights within France (and *vice versa*), a practice that previously had been prohibited as cabotage.⁵²⁰

Within two weeks of the ECAA, the US Department of Transport had laid out the 11 conditions of an open skies agreement,⁵²¹ and the US promptly signed the first transatlantic open skies agreement.⁵²² In short order, Canada and the United States began⁵²³ negotiating an open skies agreement,⁵²⁴ which was later expanded.⁵²⁵ In similar manner Australia and New Zealand

⁵¹⁷ Dubai Airport served only a few thousand passengers in 1959. See Dubai Airports, "Connecting the world today & tomorrow Strategic Plan 2020" at 2, online: Dubai Airport <www.dubaiairport.com/en/media-centre/Documents/Dubai%20Airports%20-%20Strategic%20Plan%202020.pdf> (visited May 13, 2014).

⁵¹⁸ Airports Council International, *Preliminary 2012 World Airport Traffic and Rankings*, online: ACI <www.aci.aero/News/Releases/Most-Recent/2013/03/26/Preliminary-2012-World-Airport-Traffic-and-Rankings-> (visited May 13, 2014). Dubai Airport served an estimated 57.6 million passengers in 2012, a 1,400% increase over the 3.775 million passengers served in 1986.

⁵¹⁹ *Regulation 2408/92*, *supra* note 121.

⁵²⁰ See *Chicago Convention*, *supra* note 14, art 7.

⁵²¹ US, Department of Transportation, Order 92-8-13 (1992).

⁵²² The *US-Netherlands Air Transport Agreement* 14 October 1992, TIAS 11976, was the first open skies agreement the US negotiated.

⁵²³ Informal negotiations for the 1995 Canada-US Open Skies Agreement started in 1991. See, Raymon J Kaduck, *Break in Overcast: the negotiation of the 1995 Canada-US Open Skies Agreement* (Thesis, Norman Paterson School of International Affairs, Faculty of Graduate Studies and Research, Carleton University, Ottawa, 1996) [np].

⁵²⁴ *Air Transport Agreement between the Government of Canada and the Government of the United States of America*, 24 February 1995, online: US Department of State <www.state.gov/documents/organization/114328.pdf> [*Canada-US Air Transport Agreement 1995*]. Statistics Canada described this agreement as "Open Skies". See Sangita Dubey & François Gendron, "The US-Canada Open Skies Agreement: Three Years Later", *Travel-log* 18:3 (Summer 1999).

created a "Single Air Market"⁵²⁶ and the Multilateral Agreement on the Liberalization of International Air Transportation (MALIAT), the first trans-oceanic multilateral open skies agreement, was signed.⁵²⁷ By the end of 2008, both Canada and the US had reached open skies agreements with the EU⁵²⁸ and New Zealand,⁵²⁹ the US had signed an agreement with Australia,⁵³⁰ and Australia⁵³¹ and New Zealand⁵³² had discussed open skies agreements with the EU.

B) Operational Flexibility

Regulators quickly embraced the spirit of route liberalization. By 2007, a Scottish-based carrier was flying between Canada and Ireland with an Icelandic aircraft and crew.⁵³³ Likewise, when a defunct Costa Rican carrier applied to fly from San Jose to Toronto via San Salvador pursuant to the 1996 Agreement between the Government of Canada and the Government of the Republic of Costa Rica on Air Transport,⁵³⁴ using the aircraft and crew of the El Salvadoran airline that had

⁵²⁵ See *Air Transport Agreement Between the Government of Canada and the Government of the United States of America*, 12 March 2007, Can TS 2007 No 2 (entered into force 12 March 2007) [*Canada-US Air Transport Agreement 2007*].

⁵²⁶ The Agreement came into force on November 1, 1996, and granted airlines of both countries "unrestricted rights to fly anywhere within the other country, and have unrestricted rights to fly trans-Tasman services." See *Australia-New Zealand Single Aviation Market Arrangements*, 19 September 1996, online: Australian Government Department of Foreign Affairs and Trade <www.dfat.gov.au/geo/new_zealand/documents/sam.pdf>.

⁵²⁷ *Multilateral Agreement on the liberalization of international air transportation*, 1 May 2001, 2215 UNTS 33 (negotiated on 31 October - 2 November 2000, entered into force 21 December 2001 and signed by, *inter alia*, Chile, New Zealand, Singapore and the United States of America) [*MALIAT Agreement*].

⁵²⁸ *Air Transport Agreement*, United States and European Union, 30 April 2007, 46 ILM 470, [2007] OJ, L 134/ 4 [*US-EU Open Skies Agreement*]; *Agreement on Air Transport between Canada and the European Community and its Member States*, 17-18 December 2009, [2010] OJ, L 207/ 32 [*Canada-EU Open Skies Agreement*].

⁵²⁹ See *Agreement between the Government of Canada and the Government of New Zealand on Air Transport*, 21 July 2009, Can TS 2011 No 18 (entered into force 18 October 2011). The US and New Zealand had co-signed MALIAT in 2001.

⁵³⁰ See *Air Transport Agreement between the Government of Australia and the Government of the United States of America*, March 31, 2008, [2013] ATS 23.

⁵³¹ The EU and Australia began negotiations in Brussels in November 2009, but no deal has been reached. See online: European Commission <ec.europa.eu/transport/modes/air/international_aviation/country_index/australia_en.htm>.

⁵³² Negotiations between the EU and New Zealand on a Comprehensive Air Agreement began in Brussels on November 25, 2008, but there have been few developments since. See online: European Commission <ec.europa.eu/transport/air/international_aviation/country_index/new_zealand_en.htm>.

⁵³³ Scottish-based Globespan Airways served Canada via Ireland with wet-leased aircraft from Icelandair. See Canadian Transportation Agency, Decision No 210-A-2007. This author provided legal advice on this issue

⁵³⁴ This has never been ratified. See online: Canadian Transportation Agency, *Report on Air Relations Between Canada and Other Countries, Costa Rica*, online: CTA <www.otc-cta.gc.ca/eng/costa-rica> (visited April 25, 2014). A new agreement was signed in 2009, but was not ratified until 2012. See *Agreement between the Government of Canada and the Government of the Republic of Costa Rica on Air Transport*, 11 August 2012, Can TS 2012 No 10 (entered into force 27 April 2012).

acquired it, regulators approved the arrangement.⁵³⁵ This was extraordinary as there was no BASA between Canada and El Salvador at the time and five years earlier, the International Brotherhood of Teamsters had asked the US National Mediation Board (Labor) to examine whether the Costa Rican carrier was essentially anything more than a shell company.⁵³⁶ Decisions such as these, and the emergence of an Irish company, Ryanair, as one of the major airlines operating out of the UK,⁵³⁷ shows the impact of the regulatory changes over the past two decades.

C) Equity Alliances and Anti-Trust Immunity

On January 23, 1991, the US Department of Transportation (DOT), in light of the "liberalized aviation relationship that prevails between the United States and KLM's homeland"⁵³⁸ permitted KLM Royal Dutch Airlines (KLM) to hold up to 49% equity interest in Northwest's parent, Wings Holdings, Inc., and acquire up to 25% of the voting shares.⁵³⁹ This decision was sufficiently precedent setting that the DOT reserved the right to review each subsequent case on its own merits, but there was a link between regulatory approval of the equity alliance and the promotion of open skies agreements:

[Beginning] in the 1990's, the US Department of Transportation used the carrot of code-sharing and anti-trust immunity approval as the quid-pro-quo to attain market liberation through "open skies" bilateral air transport agreements.⁵⁴⁰

Driven by the need to access the US interior,⁵⁴¹ other foreign airlines followed KLM's example and acquired significant equity in US airlines.⁵⁴² Once the equity acquisition had been blessed by

⁵³⁵ For the approvals, see Canadian Transportation Agency, Decision No 661-A-2006; Canadian Transportation Agency, Decision No 608-A-2007; Canadian Transportation Agency, Decision No 482-A-2008; Canadian Transportation Agency, Decision No 389-A-2009. A new Canada-El Salvador BASA was signed in 2010 and was still awaiting ratification in 2015. See "Report of the Canadian Parliamentary Delegation Respecting the Bilateral Visit to Guatemala City, Guatemala and San Salvador, El Salvador Canadian Section of ParlAmericas Guatemala City, Guatemala and San Salvador, El Salvador January 19th to 26th, 2013" (Ottawa: Parliament of Canada, January 2013) at 1, online: Parliament of Canada < www.parl.gc.ca/IIAPublications/SmartBook/Documents/36eb6f8c-15c3-4a33-b1cf-f084d4f04949/36eb6f8c-15c3-4a33-b1cf-f084d4f04949.pdf > (visited May 13, 2014).

⁵³⁶ See *In the Matter of the Application of the International Brotherhood of Teamsters*, *supra* note 46.

⁵³⁷ London Stansted is Ryanair's main base. See Ryanair, "History of Ryanair", online: Ryanair < corporate.ryanair.com/about-us/history-of-ryanair/ >.

⁵³⁸ *In the matter of the acquisition of Northwest Airlines, Inc by Wings Holding Inc.* DOT Order 91-1-41 (1991) at 7.

⁵³⁹ *Ibid.* See also Gregory P Cirillo & Christopher M Mills, "Chapter 13: Federal Restrictions on Foreign Participation in Commercial Aviation and Related Fields" in J Eugene Marans et al, eds, *Manual of foreign investment in the United States*, 3d ed (Eagan, Minn: Westlaw, 2012) § 13 at § 13:6.

⁵⁴⁰ Dempsey & Gesell, *Air Commerce*, *supra* note 116 at 257.

regulators, the relationship between the two carriers often "evolved into joint ventures and multilateral marketing, pricing and operational coordination groups."⁵⁴³ Indeed, within two years of approving KLM's participation in Wings Holdings, Inc., the DOT granted antitrust immunity (ATI) to Northwest and KLM, allowing them to "integrate their services and operate as if they were a single carrier."⁵⁴⁴ The granting of antitrust immunity to the Northwest-KLM alliance provoked a flurry of similar requests,⁵⁴⁵ and within three years, ATI had been granted to Delta and three European partners,⁵⁴⁶ as well as to United Airlines and Lufthansa.⁵⁴⁷ United subsequently sought ATI for closer cooperation with Air Canada⁵⁴⁸ and began working with both of its partners to form the Star Alliance,⁵⁴⁹ which is the first multilateral airline alliance.⁵⁵⁰ The membership of the alliances has changed slightly, but the main airlines in each have remained relatively constant since their foundation. A more focused version of the alliance is the MNJV, the very existence of which is predicated on a regulatory analysis of competition as being between alliances rather than between airlines.

D) New Routes

Route development has also been affected by the dramatic pace of change. In 1992, the Russian and American governments began working to establish trans-polar routes that link North

⁵⁴¹ This can be loosely defined as the 30 states without non-stop flights to Europe: AL, AR, CT, DE, HA, IA, ID, IN, KS, KY, LA, ME, MO, MS, MT, ND, NE, NH, NM, OK, RI, SC, SD, TN, UT, VT, WI, WV and WY. In the past, Nashville and St. Louis have had nonstop flights to Europe.

⁵⁴² SAS purchased shares in Continental; Singapore Airlines and Swissair each acquired shares in Delta; and British Airways after failing to invest in United, bought shares in US Air. See Laurence E Gesell & Paul Stephen Dempsey, *Air Transportation: Foundations for the 21st Century*, 2d ed (Chandler, Ariz: Coast Aire Publications, 2005) at 647 [Gesell & Dempsey, *Air Transport*].

⁵⁴³ Dempsey & Gesell, *Air Commerce*, *supra* note 116 at 257.

⁵⁴⁴ US, Department of Transportation, *Joint Application of Northwest & KLM*, Order 93-1-11 (1993).

⁵⁴⁵ Dempsey & Gesell, *Air Commerce*, *supra* note 116 at 261.

⁵⁴⁶ US, Department of Transportation, *Delta/Swissair/Sabena/Austrian*, Order 96-6-33 (1996).

⁵⁴⁷ US, Department of Transportation, *United/Lufthansa*, Order 96-5927 (1996).

⁵⁴⁸ US, Department of Transportation, *Joint Application of United Airline, Inc and Air Canada*, Order 97-9-21 (1997). United and Air Canada filed their request for antitrust immunity on June 4, 1996.

⁵⁴⁹ SAS and Thai Airways are also founding members. Star Alliance was born on May 14, 1997. See Jaan Albrecht, "Star Alliance Celebrates 10 Years" (Speech by CEO Star Alliance delivered at the Star Alliance 10th Anniversary , Copenhagen, Denmark, , 14 May 2007), online: Star Alliance <www.staralliance.com/assets/doc/en/press/media-library/word/200705_speech_JAAN_10YearCelebration.doc> [Star Alliance 10].

⁵⁵⁰ The others, oneworld and SkyTeam were created on January 25, 1999 and June 22, 2000, respectively. See oneworld, oneworld News, "oneworld: The alliance to serve the world takes off on February 1" (26 January 1999), online: PR Newswire <www.prnewswire.com/news-releases/oneworld--the-alliance-to-serve-the-world-takes-off-on-february-1-73494042.html>; SkyTeam, Press Release, "SkyTeam Celebrates Tenth Anniversary" (22 June 2010) online: SkyTeam <www.skyteam.com/en/About-us/Press/News/2010/SkyTeam-Celebrates-Tenth-Anniversary/> .

America with China, Japan and Southeast Asia.⁵⁵¹ Their impact has been profound. The ability to overfly the North Pole and much of Eastern Siberia has reduced travel time by up to 4.5 hours and this, combined with modern long-range jets, has enabled new non-stop services to Hong Kong, Shanghai and Delhi from Chicago, Detroit, New York⁵⁵² and Toronto.⁵⁵³

Similar developments have shaved over 2 hours flying time from routes between Europe and Japan⁵⁵⁴ and between America and Africa,⁵⁵⁵ and allowed the introduction of new nonstop services⁵⁵⁶ over routes such as Houston–Lagos,⁵⁵⁷ Los Angeles–Tel Aviv,⁵⁵⁸ New York–Johannesburg,⁵⁵⁹ Toronto–Karachi⁵⁶⁰ and Washington–Kuwait,⁵⁶¹ offering a much faster and more direct routing than past itineraries, which would often have required connections in Europe. Moreover, based on the developments outlined here, Emirates negotiated with the governments of Russia, Iceland, Canada and the United States to secure access to an 'over the pole' route to facilitate an otherwise unfeasible non-stop service between Dubai and San Francisco.⁵⁶²

⁵⁵¹ Edward R Hanson Jr & David Jensen, "Over the Top: Flying the Polar Routes", *Avionics Today* (1 April 2002) online: Aviation Today <www.aviationtoday.com/av/commercial/Over-the-Top-Flying-the-Polar-Routes_12647.html> (visited May 14, 2014).

⁵⁵² United Airlines, Mike Stills, "Space Weather and Polar Operations" (January 2008) online: George Washington University <www.gwu.edu/~spi/assets/docs/Mike_Stills-UnitedAirlines.pdf> (visited May 13, 2014).

⁵⁵³ Air Canada's first flight operated on Aug 1, 2004 and saved 4.5 hours over travel via Vancouver. See Air Canada, "New non-stop service between Toronto - Hong Kong" (22 April 2004) online: Air Canada, <www.aircanada.com/en/agents_na/flash/canada/2004/document/040423_nonstop.pdf> .

⁵⁵⁴ Negotiations between the EU and Russia allow flight to operate non-stop between the EU and Japan; previously many of these flights made *en route* stops in Moscow.

⁵⁵⁵ As a result of the end of Apartheid in 1994, Sub-Saharan African countries allowed South African Airways to over fly their territories on service to the United States and Europe.

⁵⁵⁶ To provide some perspective, the distance between Los Angeles and Hong Kong, a route that has been flown non-stop since July 1, 1990 is 7,230 miles.

⁵⁵⁷ UA Flight 143: Boeing 777, 6,511 miles. Star Alliance Timetable, (June 21st 2012 – August 2nd 2012), 226 [STAR 712].

⁵⁵⁸ Boeing 777, 7,650 miles. "El Al Launches the only nonstop flights between Los Angeles and Israel", *eTurboNews: Global Travel Industry News* (11 June 2006) online: eTurboNews <archive.today/YQjQ> (visited May 13, 2014).

⁵⁵⁹ SA Flight 204: Airbus A346, 7,970 miles. "South African Airways Now Non-Stop Exclusively From Johannesburg to New York", *Travel World News* (25 April 2011) online: Travel World News <travelworldnews.com/2011/04/25/south-african-airways-now-non-stop-exclusively-from-johannesburg-to-new-york/> (visited May 13, 2014). The flight saves 90 minutes in each direction over previous routings.

⁵⁶⁰ 7,250 miles. Boeing, News Release, "PIA First to Fly Boeing 777-200LR Worldliner" (27 February 2006) online: Boeing <boeing.mediaroom.com/2006-02-27-PIA-First-to-Fly-Boeing-777-200LR-Worldliner> (visited May 14, 2014).

⁵⁶¹ UA Flight 981: Boeing 777, 6,574 miles. See STAR 712, *supra* note 557 at 225.

⁵⁶² See Emirates, "Emirates Airline Launches San Francisco Service With World's Longest Green Flight Trial" (10 December 2008) online: Emirates <www.emirates.com/english/about/news/news_detail.aspx?article=389973>. The flying time is 16 hours and avoids congested airspace over the EU.

The inauguration of these new non-stop routes has had profound consequences for former global crossroads such as Gander,⁵⁶³ Shannon⁵⁶⁴ and Anchorage;⁵⁶⁵ today they exist to a greater or lesser extent as regional airports.⁵⁶⁶ In contrast, Bahrain, a former fuel stop on Asia-Europe routes for many years, worked hard to evolve from a situation where in 1989, 52% of its 1.8 million passengers were in transit to another destination, to the situation three years later, where roughly 86 percent of the nearly 2.8 million passengers arriving at the airport were actually visiting the country.⁵⁶⁷

E) Regional Airports

Around the world, the growth of small airports, and the converting of former military airfields to civilian use,⁵⁶⁸ is predicated upon luring new carriers and launching new routes.⁵⁶⁹ Each new route means greater connectivity to the outside world⁵⁷⁰ and airline flights create jobs.⁵⁷¹ Given the importance of connectivity, it is not surprising that small regional airports might consider

⁵⁶³ Adman Gollner, "Gander Airport: When the Going Was Good", *The New York Times* (20 March 2005), online: The New York Times <www.nytimes.com/2005/03/20/travel/tmagazine/20TGANDER.html?_r=1&>.

⁵⁶⁴ Ireland's Shannon Airport was once a re-fueling point on trans-Atlantic routes. The Shannon stopover, a scheme that required 50% of transatlantic flights serving Dublin to land at Shannon was phased out in 2007. See Colm Fitzgerald, "Shannon Airport", online: The Historical Aviation Society of Ireland <historicalaviationireland.com/archives/shannon.html> (visited May 14, 2014). See also Ray O'Hanlon, "New Shannon stopover threat", *The Irish Echo* (16 February 2011) online: The Irish Echo <irishecho.com/2011/02/new-shannon-stopover-threat-2/> (visited May 14, 2014).

⁵⁶⁵ Twenty years ago, Anchorage was a busy fuel stop on routes between East Asia and Western Europe. Thus, Icelandair's August 2012 announcement of flights between Reykjavik and Anchorage was well received. See Icelandair, Press Release, "Icelandair Announces Non-stop Service from Anchorage and New Routes to Zurich and St. Petersburg" (24 August 2012) online: News, Icelandair <www.icelandair.us/information/media/newslist/detail/item599444/Icelandair_Announces_Non-stop_Service_from_Anchorage_and_New_Routes_to_Zurich_and_St_Petersburg/> (visited May 14, 2014).

⁵⁶⁶ Gander is a shadow of its former self, Anchorage has lost most of its international passenger flights (while retaining cargo services), and Shannon has become a major base for Ryanair.

⁵⁶⁷ See Anthony Vandyk, "Bahrain blows its horn", *Air Transport World* 30:9 (September 1993) 107 (ProQuest). From 1932 to 1992 Bahrain was a fuel stop of British Airways flights to India and Hong Kong.

⁵⁶⁸ In the US, the former Plattsburgh Air Force Base, south of Montreal, has become Plattsburgh International Airport as a result of the Military Airports Program and is now trying to lure Montreal passengers. See "Plattsburgh Becomes Newest Member of Military Airport Program", *Airports* 19:30 (23 July 2002) 3 (FACTIVA); "Plattsburgh Campaign Uses New Terminal To Lure Montreal Pax", *Airports* 25:20 (22 May 2007) 1 (FACTIVA); In Europe, Frankfurt Hahn and Paris Beauvais are former air force bases. See Frankfurt Hahn Airport, Press Release "Wizz Air flies 3 routes to Frankfurt-Hahn" (13 April 2005), online: Frankfurt Hahn Airport <www.hahn-airport.de/default.aspx?menu=press_archive&cc=en&dataid=508458> (visited May 14, 2014) and "Practical information on Beauvais-Tillé Airport" Discover France <air-travel.discoverfrance.net/bva_info.shtml>.

⁵⁶⁹ Anna Aero, Airline Network News and Analysis, seems to exist to help airports promote themselves as destinations for major airlines. See online: Anna Aero <www.anna.aero/>.

⁵⁷⁰ New services are so important to an airport that when an airline launches new service at an airport local dignitaries and the media are often involved.

⁵⁷¹ Doubters of this last point should examine the impact on Cincinnati after Delta decided to close its hub operations there. See Kelly Yamanouchi, "Hub changes hit Cincinnati hard", *Atlanta Journal-Constitution* (30 November 2011), online: ajc.com <www.ajc.com/news/business/hub-changes-hit-cincinnati-hard/nQN3C/>.

offering enticements to attract new airline services,⁵⁷² or that small towns in Europe would build brand new airports.⁵⁷³ Consequently, the European Commission has provided advice on how to best structure such enticements.⁵⁷⁴ Nonetheless, Ryanair's competitors have complained that the carrier has received millions in enticements from roughly 200 airports right across Europe and that the value per passenger of such enticements was as high as €32.⁵⁷⁵

F) Contacting Out to Regional Carriers

Around the world, major carriers are abandoning short-haul and regional routes and contracting out the operation of these services to regional carriers whose aircraft wear the paint of the major carrier and whose flight bears the two-letter code assigned to that carrier by the International Air Transport Association (IATA). Thus an American Airlines flight between Dallas and Little Rock might be operated by an American Airlines aircraft or by an aircraft operated by American Eagle, but wearing American Airlines colours and operating as an American Airlines flight under a capacity purchase agreement (CPA). Typically in a CPA, the major airline purchases 100% of the seats and cargo capacity of the affiliate and pays the affiliate on a fee-for-departure basis. The affiliate's seats and cargo capacity are then marketed by the major carrier as its own flights.

The practice is omnipresent in Australia,⁵⁷⁶ Canada,⁵⁷⁷ the European Union,⁵⁷⁸ New Zealand,⁵⁷⁹ and the United States⁵⁸⁰ and is not limited to regional services. For example in 1992, three major carriers offered 20 flights a day between Chicago O'Hare and Detroit Metropolitan Wayne

⁵⁷² See generally Fitzgerald, "Europe's Emissions", *supra* note 59.

⁵⁷³ Castellon, a brand-new airport opened in March 2011 on Spain's Eastern coast, has yet to see a passenger. See Fiona Govan, "Spain's white elephant airport spends 30 million euros on advertising", *The Telegraph* (9 January 2012), online: *The Telegraph*, <www.telegraph.co.uk/news/worldnews/europe/spain/9003214/Spains-white-elephant-airport-spends-30-million-euros-on-advertising.html> (visited May 14, 2014).

⁵⁷⁴ "Questions on State aid", *supra* note 273.

⁵⁷⁵ Byrne, *supra* note 277.

⁵⁷⁶ Some of Qantas' regional flights within Australia are operated with jet and turboprop aircraft by Qantaslink, See OWT 712, *supra* note 509.

⁵⁷⁷ Most of Air Canada's regional flights within North America are operated with jet and turboprop aircraft by Air Georgian, Exploits Valley Air Services, Jazz Aviation and Sky Regional Airlines all doing business as Air Canada Express. See STAR 712, *supra* note 557.

⁵⁷⁸ Some of British Airways' regional flights are operated with turboprop aircraft by BA Cityflyer, bmi and Eastern Airways, See OWT 712, *supra* note 509. Some of Lufthansa's regional flights within Germany are operated with jet and turboprop aircraft by Augsburg Airways, Lufthansa Cityline or Eurowings. See STAR 712, *supra* note 557.

⁵⁷⁹ Some of Air New Zealand's regional flights within New Zealand are operated with turboprop aircraft by Air Nelson doing business as AirNZ Link. See STAR 712, *supra* note 557.

⁵⁸⁰ Many of American Airlines' regional flights are operated with turboprop aircraft by American Eagle. See OWT 712, *supra* note 509. Many of United Airlines' regional flights within North America are operated by Expressjet Airlines, Shuttle America or SkyWest all doing business as United Express. See STAR 712, *supra* note 557.

County Airport. Two decades later, fully 86% of the 23 daily flights on this route were flown by regional carriers on behalf of the three major airlines.⁵⁸¹ In almost every case the regional carriers operate smaller aircraft than do the major carriers and the smaller size of the regional aircraft facilitates new routes to smaller centers. The Austin–Washington route was not commercially viable twenty years ago⁵⁸² but now sees service twice daily.⁵⁸³ It is just one example of the hundreds of new routes inaugurated by regional carriers on behalf of their affiliated major carriers.

G) New Global Hubs

Coincident with the explosive growth of regional airports in Europe, and the delegation by major airlines of short-haul flying to regional carriers, powerful new hubs in the Greater Middle East⁵⁸⁴ have changed international air traffic patterns. For example, in 1992 it was almost inconceivable that Abu Dhabi, Doha and Dubai would ever be more than fuel stops on routes between Europe and South Asia. Dubai⁵⁸⁵ did not have daily dedicated non-stop service to London,⁵⁸⁶ Paris⁵⁸⁷ or Frankfurt⁵⁸⁸ or any point in India⁵⁸⁹ and had only weekly same-plane service to New York.⁵⁹⁰ Abu Dhabi⁵⁹¹ saw a slightly lower level of service,⁵⁹² and Doha⁵⁹³ saw fewer than 9 weekly

⁵⁸¹ Of the 23 flights offered in 2012, only 2 Northwest and 1 United Airlines flights were flown by the carrier whose name appeared on the fuselage. See *below* Chapter 5, Part III B) 1) *Contracting to Commuter Carriers*.

⁵⁸² See *Official Airline Guides: OAG Desktop Flight Guide [North American Edition]* 18:21 (August 1992) at 76 [OAG Desktop:NA].

⁵⁸³ See United Airlines, *United System Timetable: June 30, 2012 to July 28, 2012*, at 106 [UST 712].

⁵⁸⁴ In this paper the term "Greater Middle East" will include Qatar, Turkey and the United Arab Emirates.

⁵⁸⁵ Dubai's population in 1992 was roughly 395,000. See Helen Chapin Metz, ed, *Persian Gulf States: A Country Study* (Washington: GPO for the Library of Congress, 1993) online: Country Studies <countrystudies.us/persian-gulf-states/82.htm>.

⁵⁸⁶ Dubai was a stopover on flights between London and Abu Dhabi, Colombo, Karachi and Madras. See *OAG Desktop*, *supra* note 32 at 415, 686.

⁵⁸⁷ Dubai was a stopover on flights between Paris and Kuala Lumpur, Mauritius and Muscat. See *ibid* at 416, 975.

⁵⁸⁸ Dubai was a stopover on flights between Frankfurt and Brunei, Karachi, Katmandu, Kuala Lumpur and Kuwait. See *ibid* at 414, 454.

⁵⁸⁹ Emirates offered just 5 flights a week to Delhi and 12 to Bombay. *Ibid* at 226, 385, 413

⁵⁹⁰ Dubai was one of two stops on Biman Bangladesh's Dhaka–Dubai–Brussels–New York service. See *ibid* at 417, 899. This status remained through the summer of 2000, although Dubai also became the only stop on Malaysia Airlines' thrice weekly Kuala Lumpur–Dubai–New York service. See Port Authority of New York & New Jersey, *Airport Flight Guide, July 1, 2000 – Sept 1, 2000*.

⁵⁹¹ Abu Dhabi's population in 1992 was roughly 475,000. See Metz, *supra* note 585.

⁵⁹² See *OAG Desktop*, *supra* note 32 at 70 – 74.

⁵⁹³ Qatar's population in 1992 was roughly 484,000 and 84% lived in the capital, Doha. See Metz, *supra* note 585.

flights to Europe.⁵⁹⁴ Even big cities like Istanbul, which had a population of 7.3 million in 1990,⁵⁹⁵ were regional centers with few services to the United States,⁵⁹⁶ India⁵⁹⁷ or China.⁵⁹⁸

Two decades later, each of the four above-mentioned cities serves as the principal hub for a GBMC with intercontinental reach, featuring non-stop service to most major cities in the European Union and the Middle East as well as to important business centers in Australia,⁵⁹⁹ Brazil, Canada, China, India, Russia, South America and the United States.

H) New Security Standards

In the aftermath of the events of September 11, 2001, new aviation security standards⁶⁰⁰ with respect to passenger and baggage screening, No-Fly lists and the use of air marshals have been adopted by various countries. One unintended consequence of these measures may have been an avoidance of US airports by many Canadian and Latin American passengers. For example, in 2002 Toronto was served by 18 weekly non-stop flights to three cities in Latin America,⁶⁰¹ but a decade later it was linked by 54 weekly non-stop flights to ten Latin American cities.⁶⁰² These flights are typically more expensive than routings via the United States and thus the impressive growth rate in Canada–Latin America flights may be explained in part by a desire on the part of many travelers to avoid the intensive security screening imposed by US airports even on passengers in transit.⁶⁰³

⁵⁹⁴ Literally, Doha saw 8 non-stop flights a week to Europe: 5 to London, 2 to Paris and 1 to Frankfurt. See *OAG Desktop*, *supra* note 32 at 409 – 410.

⁵⁹⁵ Istanbul Metropolitan Municipality, "Population and Demographic Structure, Istanbul – 2010", online: İstanbul Büyükşehir Belediyesi <www.ibb.gov.tr/sites/ks/en-us/0-exploring-the-city/location/pages/populationanddemographicstructure.aspx>.

⁵⁹⁶ There were 2 weekly non-stop flights from New York to Istanbul. See *OAG Desktop*, *supra* note 32 at 582, 902.

⁵⁹⁷ There were 2 weekly flights between Istanbul and India. See *ibid* at 227, 579.

⁵⁹⁸ There was a weekly 1-stop flight between Istanbul and China (Beijing). See *ibid* at 187, 579.

⁵⁹⁹ Australia is the exception. As of April 15, 2015 it was not yet served by Turkish Airlines.

⁶⁰⁰ See Chapter 4, below.

⁶⁰¹ It saw 9 flights to Mexico and 6 to Sao Paulo. See Air Canada, *Air Canada Timetable: Effective September 6, 2002*, at 20 [ACT 902]. It was also linked with San Salvador 3 times weekly.

⁶⁰² It saw a weekly flight to San Jose, 4 flights to Lima, 5 flights to each of Bogota, Caracas and Santiago/Buenos Aires, 7 to each of Havana and Sao Paulo and 12 flights to Mexico. See Star Alliance, *Star Alliance Timetable September 12th, 2021 - October 26th 2012* at 442–444, 446 [STAR 912]. It also saw 4 weekly services to San Salvador and 4 weekly services to Panama City.

⁶⁰³ A successful Ottawa-based travel agency that specializes in Latin America informed this writer that most of its clients would rather pay more and have a worse connection at Toronto, than have to change planes at a US airport.

I) Emerging Environmental Concerns

The impact of aviation greenhouse gas emission was first identified in 1999,⁶⁰⁴ but so far only the European Union has adopted formal regulation. This issue will be explored *infra* in *Chapter 5 – Achieving Global Environmental Harmony*

VI) THE IMPACT OF THE RECENT EVOLUTION OF GLOBAL AVIATION

Any one of the first seven developments listed above would be significant but when combined they have changed global travel patterns and the global structure of the airline industry. By way of example, four of the world's ten longest non-stop flights⁶⁰⁵ serve Dubai⁶⁰⁶ and are operated by Emirates, a GBMC, which relies heavily on 6th Freedom traffic. Each of the four routes exists as a result of three of the seven developments described above. It is trans-polar,⁶⁰⁷ serves a new global hub⁶⁰⁸ and operates pursuant to an open skies agreement.⁶⁰⁹ Absent any one of these three developments these four ultra-long intercontinental routes would not exist. The same factors have propelled other ultra-long non-stop intercontinental flights to Abu Dhabi,⁶¹⁰ Doha⁶¹¹ and Istanbul⁶¹² and there is every reason to believe the number of such routes will expand.⁶¹³

New trans-border routes such as Houston-Montreal are the result of three of the seven developments: it is marketed by two members of the A++ MNJV,⁶¹⁴ flown by a regional

⁶⁰⁴ John F Hennigan et al, "Regulatory and Market-Based Mitigation Measures" in Joyce E Penner et al, eds, *Aviation and the Global Atmosphere: A Special Report of IPCC Working Groups I and III in collaboration with the Scientific Assessment Panel to the Montreal Protocol on Substances that Deplete the Ozone Layer* (Cambridge: Cambridge University Press, 1999) 333 at 338.

⁶⁰⁵ In November 2013, the world's 3rd, 5th, 6th and 10th longest flights were between Dubai and Los Angeles (8,339 miles), Houston (8,168 miles), San Francisco (8,103 miles) and Dallas (8,040 miles) respectively. See Mark Johanson, "The World's Longest Flight Just Got a Lot Shorter", *International Business Times* (26 November 2013), online: International Business Times <www.ibtimes.com/worlds-longest-flight-just-got-lot-shorter-1485648>.

⁶⁰⁶ Emirates also has ultra-long haul routes from Dubai to Sao Paulo (7,592 miles) and Sydney (7,480 miles).

⁶⁰⁷ See above section D New Routes

⁶⁰⁸ See above section G New Global Hubs

⁶⁰⁹ See above section A Open Skies See also *Air Transport Agreement Between the Government of the United States of America and the Government of the United Arab Emirates*, 11 March 2002, TIAS 02-1211 (entered into force 11 December 2002); Jens Flottau, "Asian Ambitions: UAE Carrier Plans To Maximize Open Skies Agreements", *Aviation Week & Space Technology* 175:19 (10 June 2013) 32 (EBSCO HOST).

⁶¹⁰ Etihad's routes between Abu Dhabi and each of Sao Paulo and Sydney cover 7,532 and 7,492 miles respectively.

⁶¹¹ Qatar Airways' Doha-Houston route covers 8,040 miles.

⁶¹² Turkish Airlines' Istanbul-Los Angeles route covers 6,871 miles.

⁶¹³ See Shane McGinley, "Emirates targets 20-hour ultra long-haul flights", *Arabian Business* (14 June 2013), online: Arabian Business <www.arabianbusiness.com/emirates-targets-20-hour-ultra-long-haul-flights-505051.html>.

⁶¹⁴ See above section C) Equity Alliances and Anti-Trust Immunity. As of July 2013, UA 5127 was marketed by Air Canada as AC 4758. See Star Alliance, *Star Alliance Timetable: June 17th 2013 – August 2nd 2013*, at 269 [STAR 713]; Air Canada, *Air Canada Timetable: Effective June 13, 2013 to September 15, 2013*, at 84 [ACT 713].

carrier⁶¹⁵ and operated pursuant to an open skies agreement.⁶¹⁶ Absent any one of these developments the routes would probably never have been initiated. Without an open skies agreement, airlines are often restricted to certain agreed cities in each of the signing countries, and thus a route such as Houston-Montreal might not be possible. Once this hurdle has been eliminated by an open skies agreement, the MNJV or the use of a regional carrier, or both, allows the airline to reduce its risk by limiting the number of seats for which it is responsible. The MNJV allows the airline to share the risk with its partner and the use of the regional carrier allows the airline to reduce the number of seats offered by flying a smaller aircraft. For example if United flies between Montreal and Houston on its own account, its least capacious aircraft with sufficient range to operate the service is the 114-seat Boeing 737-700. If it shares the flight's capacity with Air Canada, it can reduce its seat inventory by 50% to 57 seats. If it contracts the flight to a regional carrier, the latter can fly the route with a 70-seat Embraer 170 and this would reduce United's seat offering by 38%. If United and Air Canada share the capacity of a regional airline's Embraer 170, United is only responsible for the marketing of 35 seats, 69% fewer seats than if it flew the Boeing 737-700 on its own account. By cooperating to market the flight, and by contracting the operation of the flight to a regional airline, Air Canada and United are able to offer this route (although even with these measures, the route does not seem to be commercially viable year round; it is only served in the summer season).

Both the ultra-long intercontinental routes and the new trans-border routes show how the fusion of two or more of these developments can facilitate the inauguration of new routes and services. Where one of the developments might be appear insignificant or insufficient to warrant new or expanded airline services, a combination of them has the power to alter travel patterns.

The two Tables attached to this Chapter (Table 1 The Top 10 World Airlines by Revenue Passenger Kilometres 1992 and 2012) and (Table 2 The 30 busiest Airports in 1992 and 2012) illustrate the evolution described here. Both tables show the growth in worldwide passenger

⁶¹⁵ See above section F) Contacting Out to Regional Carriers. UA 5127 was actually flown by Shuttle America doing business as United Express. See STAR 713, *supra* note 614 at 269.

⁶¹⁶ See above section A) Open Skies. See *Canada-US Air Transport Agreement 2007*, *supra* note 525. Since October 2012, Air Canada and United have agreed to compete on 14 trans-border routes, including Montreal-Houston. See, "Competition Bureau Reaches", *supra* note 301.

traffic over the two decades. They also show the increasing importance of China's airports and airlines as a result of that country's movement from "isolation toward global involvement."⁶¹⁷

Careful comparison of the two lists provides interesting insights into the profound changes that have affected the airline industry over the past two decades. Dubai, Singapore and Istanbul, the respective hubs of GBMCs Emirates, Singapore Airlines and Turkish Airlines, were respectively the 10th, 15th and 20th busiest airports in 2012 whereas none were among the 30 busiest airports in 1992.⁶¹⁸ Similarly Emirates, absent from the 1992 list of the Top 10 World Airlines, emerges in 2012 as the 4th largest international carrier, ahead of Lufthansa, Air France and British Airways, behind only Delta, United and American.⁶¹⁹ Seven of the Top 10 World Airlines today are either GBMCs or partners in an MNJV. Tables 1 and 2 are just snap-shots, comparisons of two instances 20 years apart, and yet they confirm the combined impact of the emergence of GBMCs, the merger of major airlines and the corresponding rise of MNJVs.

VII) CONCLUSION

The two decades bookended by 1992 and 2012 have truly re-shaped the international airline industry; even if some of the familiar names survive, the nature of inter-continental competition has been fundamentally altered. Each of the nine developments identified herein has had a profound impact on the industry; their conflux has sculpted new alliances, forged new competitive strategies and carved a new competitive landscape.

This chapter has sought to provide insight into the degree to which the industry has been altered in order that regulators may better understand the current industry landscape and how it evolved. There have been few independent⁶²⁰ studies of the economic impact of GBMCs competing against the established airlines of North America, Europe or the Antipodes, and even fewer studies as to whether the MNJVs are a competitive response to the GMNCs, or an attempt to

⁶¹⁷ Between 1993 and 2008, annual China-World two-way trade advanced from US\$ 195.7 billion to US\$ 2.56 trillion. See Thomas G Rawski, "The Rise of China's Economy", *Footnotes [Newsletter of Foreign Policy Research Institute]* 16:6 (June 2011) online: Foreign Policy Research Institute <www.fpri.org/footnotes/1606.201106.rawski.chineseconomy.html>. Thus Beijing, Guangzhou and Shanghai were the 2nd, 18th, and 21st busiest airports in 2012 and China Southern Airlines and China Eastern Airlines were confirmed as the world's 9th and 10th largest airline in 2012. China's airports and airlines did not rank on either list in 1992.

⁶¹⁸ See "Table 1: The 30 busiest Airports in 1992 and 2012", below.

⁶¹⁹ See "Table 2: The Top 10 World Airlines by Revenue Passenger Kilometres 1992 and 2012", below.

⁶²⁰ Most of these studies have been written by persons with a direct connection to a GBMC or its MNJV competitors. See *infra* notes 764 to 767.

dominate international markets. The industry has evolved with few regulators asking the obvious questions: Is an international airline industry dominated by GBMCs and MNJVs in the public interest? Or is an industry dominated by GBMCs and MNJVs more in the public interest than an industry dominated by newly privatized former state-owned international airlines that have public service obligations in their domestic markets? To what degree do GBMCs and MNJVs distort the competitive playing field for all airlines, large and small?

To the extent that these issues provoke concern, meaningful solutions are typically beyond the unilateral regulatory authority of a single nation. Moreover, it is important that solutions be adopted in a multilateral forum, to address the problems created by the emergence of overlapping and incompatible regulations on either ends of an international route as documented in the next chapters.

Table 1: The Top 10 World Airlines by Revenue Passenger Kilometres 1992 and 2012.

1992	Airline	RPKs	2012	Airline	RPKs
1	American Airlines	156,786	1	Delta Air Lines	310,228
2	United Airlines	149,166	2	United Airlines	292,594
3	Delta Airlines	129,632	3	American Airlines	203,621
4	Northwest Airlines	94,442	4	Emirates	160,446
5	British Airways	80,473	5	Lufthansa	141,055
6	Continental	70,047	6	Air France	133,036
7	Lufthansa	61,274	7	British Airways	117,348
8	US Airways	56,482	8	Qantas	106,759
9	Air France	55,504	9	China Southern	101,637
10	Japan Airlines	54,188	10	China Eastern	100,744

Data from Airports Council International and Airline Business Magazine

The 2012 results for Delta and United include respectively Northwest and Continental Airlines which were independent in 1992.

Emirates, absent from the 1992 list, emerges on the 2012 list as the 4th largest international carrier, ahead of Lufthansa. Airlines present on the 1992 list but absent from the 2012 list are 8th ranked US Airways and 10th ranked Japan Airlines.

Table 2: The 30 busiest Airports in 1992 and 2012.

1992	Airport	Passengers	2012	Airport	Passengers
1	CHICAGO (ORD)	64.44	1	ATLANTA (ATL)	95.46
2	DALLAS (DFW)	51.94	2	BEIJING (PEK)	81.93
3	LOS ANGELES (LAX)	46.96	3	LONDON (LHR)	70.04
4	LONDON (LHR)	45.57	4	TOKYO (HND)	66.80
5	TOKYO (HND)	42.64	5	CHICAGO (ORD)	66.63
6	ATLANTA (ATL)	42.03	6	LOS ANGELES (LAX)	63.69
7	SAN FRANCISCO (SFO)	31.81	7	PARIS (CDG)	61.61
8	DENVER (DEN)	30.88	8	DALLAS (DFW)	58.59
9	FRANKFURT (FRA)	30.76	9	JAKARTA (CGK)	57.77
10	NEW YORK (JFK)	27.77	10	DUBAI (DXB)	57.68
11	MIAMI (MIA)	26.48	11	FRANKFURT (FRA)	57.52
12	PARIS (CDG)	25.23	12	HONG KONG (HKG)	56.06
13	PARIS (ORY)	25.18	13	DENVER (DEN)	53.16
14	NEWARK (EWR)	24.29	14	BANGKOK (BKK)	53.00
15	OSAKA (KIX)	23.52	15	SINGAPORE (SIN)	51.18
16	HONOLULU (HNL)	23.00	16	AMSTERDAM (AMS)	51.04
17	BOSTON (BOS)	22.99	17	NEW YORK NY (JFK)	49.29
18	MINNEAPOLIS (MSP)	22.91	18	GUANGZHOU (CAN)	48.55
19	HONG KONG (HKG)	22.51	19	MADRID (MAD)	45.18
20	DETROIT (DTW)	22.12	20	ISTANBUL (IST)	45.12
21	PHOENIX (PHX)	22.12	21	SHANGHAI (PVG)	44.88
22	TOKYO (NRT)	22.03	22	SAN FRANCISCO (SFO)	44.40
23	SEOUL (SEL)	21.33	23	CHARLOTTE (CLT)	41.23
24	ORLANDO (MCO)	21.15	24	LAS VEGAS (LAS)	40.80
25	ST LOUIS (STL)	20.98	25	PHOENIX (PHX)	40.42
26	LAS VEGAS (LAS)	20.91	26	HOUSTON (IAH)	39.89
27	TORONTO (YYZ)	20.03	27	KUALA LUMPUR (KUL)	39.89
28	LONDON (LGW)	19.87	28	MIAMI (MIA)	39.47
29	NEW YORK (LGA)	19.66	29	INCHEON (ICN)	39.15
30	HOUSTON (IAH)	19.35	30	MUNICH (MUC)	38.36

Data from Airports Council International. Passenger numbers are expressed in millions and include departing and arriving passengers, so connecting passengers are counted twice.

Dubai, Singapore and Istanbul, all absent from the 1992 list are ranked 10th, 15th and 20th respectively in 2012. Each of the three is a base for a major GBMC that depends heavily on 6th Freedom traffic.

At the same time, the 1992 list included several hubs for major North American, European and Asia carriers: 14th ranked Newark, (Continental), 20th ranked Detroit (Northwest), 22nd ranked Tokyo Narita (Japan Air Lines), and 27th ranked Toronto (Air Canada), but these airports do not appear on the 2012 list. The 13 airports on both lists had average traffic growth of 78%.

CHAPTER 3 – COMPETITION AND THE EVOLVING VALUE OF THE FREEDOMS OF THE AIR

I) INTRODUCTION

The evolution from traditional airlines based on the bilateral traffic between the two countries at the opposite ends of an international route to a government-backed mega carrier (GBMC) heavily dependent on 6th Freedom traffic is remarkable. The growth of the GBMCs is largely based on what some may consider to be a creative reinterpretation of the various BASAs signed between the GBMC's home State and other countries. The rise of the metal neutral joint venture (MNJV) is based on changes in competition law to permit practices which were prohibited in earlier decades. This chapter will examine the evolving value of the Freedoms of the air which have given rise to the GBMCs and some of the changes in competition law which have fostered the growth and creation of MNJVs.

II) BILATERAL AIR SERVICE AGREEMENTS (BASAs)

The bilateral air service agreement (BASA) has two elements: it is an agreement between two sovereign States and it usually does not expressly grant 6th Freedom traffic rights; and it focuses on creating the conditions to facilitate commercial air service between the two contracting States.

A) The Meaning of Bilateral

The word 'bilateral' has its origins in Latin: '*bi*' means 'two' and '*latus*' or '*lateris*' means 'side', thus 'bilateral' means two sided and therefore a bilateral agreement is between two and only two contracting States. It is consistent with the doctrine of privity of contract in that none of its terms can bind a third nation. Thus the two negotiating States only have the legal authority to grant traffic rights on routes between them. Rights to or via any third country are subject to the approval of the authorities in that country. During Canada's 2007 negotiations of a BASA with Singapore, the latter wanted rights over routings "via selected intermediate points".⁶²¹ However, Canada was unable to confirm landing rights in third States and could only grant traffic rights to

⁶²¹ See Karamjit Kaur, "S'pore, Canada sign new air pact allowing unlimited flights", *The Straits Times* (7 November 2007), online: ASIAONE NEWS <news.asiaone.com/News/AsiaOne+News/Singapore/Story/A1Story20071107-35091.html> (visited May 13, 2014). The Singaporeans actually claimed that the BASA gave them these rights but Canada could not speak on behalf of potential intermediate points, such as Anchorage, Osaka, Seoul or Taipei.

"any number of air carriers from either country to operate non-stop passenger and all-cargo scheduled air services as frequently as desired, between any city in Canada and Singapore."⁶²²

This illustrates that a bilateral agreement is not to be confused with 'trilateral' (three sided) or 'multilateral' (many sided) agreement; a BASA must be focused principally on creating the conditions that create, manage and regulate commercial air service between the two contracting States that have negotiated it. For example, Canada's BASA with Mexico⁶²³ has been carefully designed to stimulate bi-directional air transport between the two countries.⁶²⁴ On any given non-stop flight between the two countries, the vast majority of passengers have, as their final destination, a point in the territory of either of the parties to the BASA.

B) Bilateral Traffic Rights are the basis of International Commercial Aviation

Most airlines around the world operate in this spirit. For example, a list of the world's largest international carriers includes airlines from Australia, China, France, Germany, Japan, United Arab Emirates, United Kingdom, and the United States.⁶²⁵ With the exception of airlines based in the United Arab Emirates and Qatar, on a given flight operated by an airline based in any of the States mentioned in the previous sentence, the majority of the passengers will either be citizens or residents of the country where the airline is based or of the other country served by the route.

A decade ago Emirates, Qatar Airways and Etihad Airways, based in Abu Dhabi, were insignificant. But these three "super-connectors", in recent years joined by Turkish Airlines, increasingly dominate long-haul routes between Europe and Asia. Whereas most other international airlines rely heavily on travellers to or from their home countries, the super-

⁶²² See Transport Canada, News Release, H 213/07, "Canada's Government Announces Air Transport Agreement with Republic of Singapore" (7 November 2007). online: Government of Canada <news.gc.ca/web/article-en.do?crtr.sj1D=&crtr.mnthndVl=11&mthd=advSrch&crtr.dpt1D=6695&nid=359629&crtr.lc1D=&crtr.tp1D=&crtr.yrStrtVl=2007&crtr.kw=&crtr.dyStrtVl=6&crtr.aud1D=&crtr.mnthStrtVl=11&crtr.page=1&crtr.yrmdVl=2007&crtr.dyndVl=8>.

⁶²³ *Air Transport Agreement between the Government of Canada and the Government of the United Mexican States*, 21 December 1961, Can TS 1964 No 4 (entered into force 21 February 1964) as amended by *Exchange of Notes amending the Air Transport Agreement*, 20 December 1996, Can TS 1998 No 17, *Exchange of Notes constituting an Agreement to amend the Air Transport Agreement*, 9 April 1999, Can TS 2000 No 20, and *Protocol amending the Air Transport Agreement*, 27 May 2010, Can TS 2011 No 29.

⁶²⁴ Mexico is one of Canada top 12 source countries for foreign tourists and 161,000 Mexicans visited Canada in 2009, the year preceding the requirement for Mexicans to have a visa to visit Canada. In 2010, Mexico was the top foreign (non-US) country visited by Canadians, receiving roughly 1.4 million Canadian tourists. See Statistics Canada, "International Travel" (66-201-X), online: Statistics Canada <www5.statcan.gc.ca/olc-cel/olc.action?ObjId=66-201-X&ObjType=2&lang=en&limit=0> (visited May 13, 2014).

⁶²⁵ See "Chapter 2, Table 2: The Top 10 World Airlines by Revenue Passenger Kilometres 1992 and 2012", above.

connectors' passengers mostly just change planes at the carriers' hub airports on their way to somewhere else.⁶²⁶

Indeed, so widespread and universal is the practice of basing routes on bilateral traffic demand, in cases where an open skies BASA exists, and an international route is not served by airlines based in either of the BASA's partners,⁶²⁷ the explanation is almost always a lack of sufficient bilateral traffic to support the route. Thus, despite open skies agreements between the EU and both Canada and the US,⁶²⁸ 4 Canadian provinces and 30 American States are not served by a non-stop flight to a destination in the EU.⁶²⁹ For example, while non-hub routes such as Ottawa–London,⁶³⁰ Boston–Ireland,⁶³¹ Chicago–Warsaw⁶³² and Cleveland–Ljubljana⁶³³ exist based on strong bilateral demand, luring an inter-continental carrier to a non-hub airport is difficult absent sufficient bilateral traffic:

Indianapolis, ranked at 12 by population in the US, is the third largest city with no transatlantic service. The airport is the largest in the state of Indiana and 99% of its seat capacity is domestic. [...] Indianapolis might have some appeal to European airlines, given the size of the city and the presence of network airlines, although its relative proximity to Chicago O'Hare (less than 180 miles) and low profile as a tourist destination mean that it is unlikely to be a priority.⁶³⁴

⁶²⁶ See *supra* note 7 at 1.

⁶²⁷ As early as the summer of 1970 British Airways offered a daily non-stop flight over the London-Toronto route and Air Canada offered a daily Toronto-Montreal-Paris-Frankfurt service. See Air Canada, *International Services Advance Booking Timetable: Summer 1970*.

⁶²⁸ See *supra* note 528.

⁶²⁹ See *supra* note 541, the Canadian provinces are Manitoba, New Brunswick, Prince Edward Island and Saskatchewan.

⁶³⁰ Greater Ottawa has a population of roughly 1.2 million and is approximately 95 miles (150 km) from Montreal's Pierre Elliott Trudeau International Airport. Nonetheless, perhaps due to its role as Canada's capital and the site of various diplomatic services, it has been linked via a daily non-stop flight to London since at least 2000, and this author flew this route as early as 1990, at a time before it was served on a daily basis.

⁶³¹ Boston's large Irish diaspora population attracted Aer Lingus to start service to that city in 1960. See Aer Lingus, "Milestone events at Aer Lingus 1936 -2012", online: Aer Lingus <corporate.aerlingus.com/companyprofile/history/milestoneevents/> (visited April 15, 2014).

⁶³² Chicago's large Polish diaspora attracted LOT Polish Airlines charter flights in the 1970s and the carrier initiated scheduled service on the Warsaw–Chicago route in 1985. See LOT Polish Airlines, "History" online: LOT Polish Airlines, <www.lot.com/ca/en/history> (visited April 15, 2014).

⁶³³ Cleveland's large Slovenian diaspora attracted YAT Yugoslav Airlines to serve that city as part of a Zagreb–Ljubljana–Cleveland–Chicago weekly service in the early 1980s. See Airline Routes, "1985/86: JAT Yugoslav Airlines Long-haul Network", online: Airline Route <airlineroute.net/2011/01/21/w85-ju/> (visited April 15, 2014).

⁶³⁴ CAPA-Centre for Aviation, "787 and A350 airline operators will open up new Europe-US routes - despite some inertial resistance" (17 Sept 2014) online: CAPA-Centre for Aviation <centreforaviation.com/analysis/787-and-a350-airline-operators-will-open-up-new-europe-us-routes---despite-some-inertial-resistance-187229> (visited May 8, 2015).

Thus, when British Airways inaugurated service to a third point in Texas, the relative estimated bilateral traffic influenced it to choose Austin,⁶³⁵ not San Antonio.⁶³⁶ Similarly, when Air France inaugurated service to a third point in Canada, it picked Vancouver, a city already linked to Paris by Air Transat, a carrier based solely on origin-destination traffic.⁶³⁷ Quite simply, where the potential bilateral US-EU or Canada-EU traffic is sufficient to profitably sustain a route, it will be flown. Thus, the principle that an international route is based on substantial bilateral traffic between the two parties to a BASA is central to route analysis at virtually every airline in the world.

C) Sixth Freedom Traffic is incidental to a BASA

The parties to a BASA want to promote commercial airline service on non-stop routes between them, but the airlines that they designate often have other intentions. They might focus not only on the Freedoms that are within the BASA, but also on providing services which are not forbidden. For example, in addition to liberalizing bilateral traffic between the United Kingdom and Canada, the 1988 Canada-UK BASA⁶³⁸ also specified 5th Freedom routes for British carriers between Canada and the US, the Caribbean and the South Pacific⁶³⁹ and for Canadian carriers between the United Kingdom and Europe, Israel, and points in South East Asia.⁶⁴⁰ What the text of the BASA did not specifically authorize was 6th Freedom rights:⁶⁴¹ For example, the carriage by a British airline of Canadians via the UK to points in Europe and South Asia, or the carriage by a Canadian airline of British passengers via Canada to points in the US and Latin America. On the other hand, the BASA did not explicitly prohibit these activities and so British

⁶³⁵ Austin's pitch to British Airways included focusing on the city's standing as a high tech hub and mentioned many companies with big offices there –3M, Dell and IBM. See Rachel Phua "New Austin-London Nonstop Paves the Way for More International Flights, Reporting Texas", *Reporting Texas* (25 November 2014) online: Reporting Texas <reportingtexas.com/new-austin-london-nonstop-paves-the-way-for-more-international-flights/> (visited May 8, 2015).

⁶³⁶ See *supra*, note 634. San Antonio, Texas, has a population of roughly 2.3 million and is 190 miles (306 km) and 248 miles (400 km) respectively from Houston George Bush Intercontinental Airport and Dallas/Fort Worth International Airport. It has never been served by a non-stop flight to any city in the EU.

⁶³⁷ See Dan Fumano and Bethany Lindsay "Air France launches non-stop service to Vancouver", *The Vancouver Sun* (30 March 2015), online: Vancouver Sun <www.vancouversun.com/news/France+launch+stop+service+Vancouver/10930203/story.html> .

⁶³⁸ *Canada-UK Air Services Agreement*, *supra* note 441.

⁶³⁹ These were Honolulu, Nandi and Tahiti.

⁶⁴⁰ Ultimately, one of these points was Singapore.

⁶⁴¹ See International Civil Aviation Organization, *Manual on the Regulation of International Air Transport*, ICAO Doc 9626, 2d ed (Montreal: International Civil Aviation Organisation, 2004) at 4.1, online: International Civil Aviation Organization <www.icao.int/Meetings/atconf6/Documents/Doc%209626_en.pdf> (visited April 15, 2014).

and Canadian carriers quickly pursued them as they broaden the market appeal of the flights and may consequently increase load factors and therefore profits. The Chicago Convention⁶⁴² neither recognizes nor defines 6th Freedom, but if an airline's base is geographically located between major markets, its ability to generate 6th Freedom traffic is substantial.⁶⁴³

Nonetheless, most airlines see 6th Freedom traffic as incremental revenue, rather than the basis on which to launch a new route. The decision as to which route to launch, what size of aircraft to use and how often to serve the route is primarily made on the basis of local traffic between the BASA's contracting States. The presence of carriers who only offer non-stop flights between two States, without meaningful connections at either end of the route, testifies to the paramountcy of strong bilateral traffic demand in initiating routes. For example, Canada's Air Transat is an origin-destination carrier which offers 39 flights a week over 14 routes between the UK and Canada,⁶⁴⁴ and Air Canada and British Airways offer competing flights from London to each of Calgary, Montreal, Toronto and Vancouver.⁶⁴⁵ The existence of these routes suggests that both airlines carry a significant number of passengers from the UK to Canada and *vice versa*.⁶⁴⁶ To the extent that the airlines are carrying 6th Freedom traffic, such traffic is not the basis of the route, but rather additional traffic which incrementally increases the profitability and viability of a route which is otherwise based on the assessed demand of the bilateral marketplace. Indeed, if one were to propose that on a transatlantic route, no more than 40% of the airline's passengers could connect onwards to a jurisdiction⁶⁴⁷ outside the borders of the jurisdiction in which the other party to the BASA is based,⁶⁴⁸ it is likely that there would be remarkably little opposition from most IATA members. This is because, with the exception of GBMCs, most passengers

⁶⁴² See JP Hanlon, "Sixth freedom operations in international air transport" (1984) 5 *Tourism Management* 177 at 178 (ScienceDirect).

⁶⁴³ *Ibid*, 180-181.

⁶⁴⁴ During each week of July 2013, Air Transat offered 12,000 seats on 39 non-stop flights over 14 routes from 7 Canadian cities to 4 cities in the UK. Air Transat's flights are origin-destination and do not promote connections.

⁶⁴⁵ During each week of July 2013, Air Canada offered 20,000 seats a week on 84 non-stop flights from 8 Canadian cities to London while British Airways offered 12,400 seats on 42 non-stop flights from 4 Canadian cities to London. See *ACT 713*, *supra* note 614; oneworld, *oneworld Timetable: Valid: May 31, 2013 to June 28, 2013* [OWT 713].

⁶⁴⁶ Air Canada does not promote US destinations via Toronto from London in its timetable. See *AC 713 supra* note 614. British Airways actively promotes the UK as a tourist destination for Canadians.

⁶⁴⁷ Jurisdiction is used here to denote all member states of the European Union as part of a single jurisdiction since major EU carriers now consider the EU to be a single market. Similarly, the Gulf Cooperation Council, of which both the UAE and Qatar are members, could be considered a single jurisdiction. See below "In order".

⁶⁴⁸ The actual target would be set by OSIAB. The 40% figure compares to 50% limitations on 5th Freedom traffic in the Canada-UAE BASA, *infra* note 1898 and in the 1998 US-Japan Memorandum of Understanding (MOU). See *infra*, Part D) 2) Formula for limiting 5th Freedom capacity on US – Tokyo flights.

arriving on an airline's flight at its major hub, whether in the EU, the US, or Canada, have their final destination in the jurisdiction where the hub is located.⁶⁴⁹

D) The Evolving Value of Traffic Rights

Over the course of the last half century, the value of each of the "Freedoms" or traffic rights has fluctuated. 3rd and 4th Freedoms remain the basis of all BASAs, but the use of increasingly long-range aircraft has slightly raised the importance of the 1st Freedom (over-flight)⁶⁵⁰ and significantly diminished the value of the 2nd Freedom (technical stop).⁶⁵¹ Similarly, the commercial value of 5th Freedom rights, the ability of an airline to carry passengers from its home country to a second country and from there on to a third country, has declined in recent years. In previous decades, a European airline might fly from its home base to Montreal's Mirabel airport and from there to Boston, Chicago, Detroit, New York, Philadelphia or Mexico.⁶⁵² In each case, the foreign carrier's 5th Freedom flights potentially competed with trans-border services offered by Canadian or US carriers. However, the timing of the 5th Freedom flights as continuations of transatlantic services often did not permit the punctuality desired by local business persons. European airlines used their Freedom rights to combine two North American cities on a single transatlantic flight while having the ability to use 5th Freedom rights to replace with local passengers some of the intercontinental passengers who had disembarked at the first stop.

Moreover, the granting of 5th Freedom rights is often over a route with limited economic potential. Consider the Montreal-Mexico route, which was flown as a 5th Freedom segment of Iberia's Madrid-Montreal-Mexico service for many years.⁶⁵³ Following Iberia's introduction of non-stop Madrid-Mexico flights in 1980, the number of Madrid-Montreal-Mexico flights

⁶⁴⁹ Air Canada and Emirates both allege that 70% of KLM's traffic at Amsterdam is 6th Freedom, See Air Canada, "Investor Day 2013", (10 June 2013) at 45, online: Air Canada <www.aircanada.com/en/about/media/presentations/documents/investor_day_2013.pdf> See also Emirates, "Taking the sixth – in defence of sixth freedom", *Open Sky* (August 2009) at 45, online: Emirates <content.emirates.com/downloads/ek/pdfs/open_sky/Aug2009.pdf> (visited April 15, 2014). Given that KLM is an EU carrier and many of its passengers are connecting to other destinations in the EU, the true 6th Freedom traffic is probably closer to 30%. See also Economist *supra* note 7 at 1.

⁶⁵⁰ See "Emirates Airlines Launches San Francisco" *supra* note 562.

⁶⁵¹ See *supra* notes 563-566.

⁶⁵² Various European carriers exercised 5th Freedom rights between Mirabel and various US cities. British Airways had rights to Boston and Detroit, Czechoslovak Airlines and Royal Air Maroc had rights to New York, Air France and Sabena had rights to Chicago. Lufthansa and Iberia had rights to Philadelphia and Mexico respectively.

⁶⁵³ Very few local passengers flew the Montreal-Mexico segment of the flight (on file with author).

declined until Iberia discontinued service to Montreal in 1999.⁶⁵⁴ Mexicana flew the route from 1996 until 2005⁶⁵⁵, and Air Canada flew it for five years⁶⁵⁶ before abandoning it in July 2011.⁶⁵⁷

In cases where the 5th Freedom route had significant economic potential, such negotiations could provoke strong negative reactions from local carriers. When the US granted US-South America 5th Freedom traffic rights to Lufthansa in 1957, US airlines protested and the US Civil Aeronautics Board produced figures showing that for every US\$ 10.00 that Lufthansa would earn from its 5th Freedom traffic rights between the US and South America, US airlines would only earn US\$ 5.60 from their 5th Freedom traffic rights between Germany and points in Europe.⁶⁵⁸ Today, the fights over 5th Freedom routes are few and far between, and the usage of 5th Freedom traffic rights is in decline. Currently no European carrier operates 5th Freedom flights within North America and no North American carrier operates a significant number of 5th Freedom flights within the European Union; in fact only a few 5th Freedom flights are still operated in the Americas.⁶⁵⁹ Elsewhere in the world, 5th Freedom flights are principally in use on routes where non-stop flights are not yet commercially feasible such as Southeast Asia-US,⁶⁶⁰ Japan-South America,⁶⁶¹ Australia/NZ-Europe⁶⁶² or Australia/NZ-South America⁶⁶³ but many

⁶⁵⁴ The service operated from as early as 1972 to as late as 1999 (on file with author).

⁶⁵⁵ Air Canada Flight 9707 was operated by Mexicana up to December 2005. See Air Canada, *Air Canada Timetable*, December 9, 2005. The service started as a single weekly flight in 1996 and had increased to daily flights by 2002.

⁶⁵⁶ Air Canada had initially announced it would fly the Montreal-Mexico route daily starting December 13, 2003 but that service never started (on file with author). The service ultimately started on June 17, 2006 and was listed as Air Canada Flight 994. See Air Canada, *Air Canada Timetable*, July 14, 2006.

⁶⁵⁷ The route was dropped on July 1, 2011. See JL, "Air Canada cancels Montreal – Mexico City from Jul 2011", *Airline Route* (20 May 2011), online: Airline Route <airlineroute.net/2011/05/20/ac-yulmex-jul11/>. So Iberia got Montreal-Mexico 5th Freedom rights and Air Canada got 5th Freedom rights between Madrid and Amsterdam, Frankfurt, Lisbon and Nice. See *Agreement Between the Government of Canada and the Government of Spain on Air Transport*, 15 September 1988, Can TS 1991 No 59, ANNEX A, Schedule of Routes, Section I.

⁶⁵⁸ Lissitzyn, *supra* note 421 at 252.

⁶⁵⁹ The only North American 5th Freedom service was the Vancouver-New York segment on Cathay Pacific's Hong Kong-Vancouver-New York service. See OWT 712, *supra* note 509. The only South American 5th Freedom services were the Santiago-Buenos Aires portion of Air Canada's Toronto-Santiago-Buenos Aires service and Rio de Janeiro-Buenos Aires as part of Emirate's Dubai-Rio de Janeiro-Buenos Aires service. See STAR 712, *supra* note 557. See Emirates, *Emirates Timetable June 2012*.

⁶⁶⁰ Singapore Airlines flies to New York via Frankfurt, to Los Angeles via Tokyo and to San Francisco via Seoul. See *infra* note 1729. Thai Airways flies to Los Angeles via Seoul. See STAR 712, *supra* note 557. Jet Airways flies from India to North America via Brussels and Malaysian Airways flies to Los Angeles via Tokyo.

⁶⁶¹ Japan Airlines Flights 48/47 operated Tokyo-New York-Sao Paulo 5 times weekly and had 5th Freedom US-Brazil traffic rights; Japan Airlines Flights 64/63 operated Tokyo-Los Angeles-Sao Paulo weekly and had 5th Freedom US-Brazil traffic rights. See Japan Airlines, *JAL International Timetable July 1 – Aug 31, 2000*, at 6, 10. In 2010, Japan Airlines dropped the 5th Freedom route after concluding an agreement with its oneworld partner American Airlines to codeshare on the latter's New York-Sao Paulo service. See Japan Airlines, Press Release,

services which formerly relied on 5th Freedom trans-Atlantic traffic rights are now operated non-stop.⁶⁶⁴

1) The case of 5th Freedom rights at Tokyo.

The only remaining area of significant 5th Freedom activity is East and Southeast Asia, where Tokyo's Narita Airport served as a hub for Northwest Airlines (now Delta) and Pan Am (United) for many years. As late as 2009, Northwest operated from nine US cities via Tokyo to 10 Asian cities,⁶⁶⁵ but in 2007 on any given flight from the US, at least 35% of the passengers had Japan as their final destination. Three years later, Delta had significantly reduced its dependence on 5th Freedom rights; it was then flying from 12 American cities via Tokyo to eight cities in Asia.⁶⁶⁶ Moreover, on any given flight from the US, at least 50% of the passengers would have had Japan as their final destination⁶⁶⁷ and some of the passengers destined to other points in Asia would have been connecting to a flight operated by an Asian carrier.⁶⁶⁸

The extraordinary use of 5th Freedom rights by American carriers at Tokyo can be explained both in terms of geography and history. At the end of World War II, Americans saw Tokyo as the backdoor to China, Hong Kong, Korea, Malaysia, the Philippines, Singapore, Taiwan and Thailand.⁶⁶⁹ Moreover, Japan's location made it an ideal re-fueling point for services between the US and those Asian points which were beyond the range of aircraft at the time.⁶⁷⁰ Several factors combined to encourage Japanese authorities to grant liberal 5th Freedom rights to the US. First,

"Japan Airlines to Codeshare on American Airlines' New York=Sao Paulo Flight" (25 October 2010), online: Japan Airlines <press.jal.co.jp/en/release/201010/001658.html>.

⁶⁶² Most Australia-UK flights route through Singapore, or Bangkok. Air New Zealand operates two daily flights to London, one via Los Angeles and one via Hong Kong. It operates 5th Freedom flights between Hong Kong and London and between Los Angeles and London. See STAR 712, *supra* note 557.

⁶⁶³ LAN Flights 800 and 801 flew Santiago-Auckland-Sydney in 2012 with 5th Freedom traffic rights across the Tasman Sea. See OWT 712, *supra* note 509.

⁶⁶⁴ Two decades ago, Aeroflot, Air India, El Al, Pakistan International Airlines and Royal Jordanian flew to North America via European cities such as Amsterdam, Frankfurt, London and Shannon with 5th Freedom transatlantic traffic rights. Today those same airlines fly non-stop to North America.

⁶⁶⁵ US cities: Detroit, Guam, Honolulu, Los Angeles, Minneapolis, Portland, Saipan, San Francisco and Seattle. Asian cities: Bangkok, Beijing, Busan, Guangzhou, Hong Kong, Manila, Seoul, Shanghai, Singapore and Taipei.

⁶⁶⁶ The 4 new US points were Atlanta, Detroit, Koror and New York. Busan and Guangzhou lost service.

⁶⁶⁷ In August 2012, Delta flew 140 US-Tokyo flights and 53 5th Freedom Tokyo-Asia flights per week.

⁶⁶⁸ Delta's connections to Busan and Seoul in Korea are operated by its SkyTeam partner, Korean Airlines.

⁶⁶⁹ Pan Am and/or Northwest flew from Tokyo to each of these countries from the early 1950s until the mid 1980s.

⁶⁷⁰ The DC-8's range (5,846 miles/9,408 km) meant that only Tokyo, which is 5,110 miles (8220 km) from San Francisco, was reachable non-stop from the US. Boeing 747s built before 1973 could only fly 6,100 miles (9,800 km).

Japan Airlines was depending on technical assistance from US carriers⁶⁷¹ and was not focusing on international flights within Asia.⁶⁷² Second, the US Army was using Tokyo's main airport as an air base.⁶⁷³ Third, some of the most viable commercial air routes from Tokyo were to large US military bases in Okinawa (Japan) and Subic Bay (Philippines), and two of America's South Pacific territories, Guam and Saipan, are much closer to Tokyo than they are to Honolulu.⁶⁷⁴ Last, the 1952 Civil Air Transport Agreement between Japan and the United States was signed just 15 weeks after the Treaty of San Francisco took effect⁶⁷⁵ when Japan was not in the strongest position to rebut US requests. Thus Tokyo's Haneda⁶⁷⁶ Airport became a major hub for both Northwest and Pan Am.

However, when United bought Pan Am's Asian routes for US\$ 750 million on April 22, 1985,⁶⁷⁷ Japanese officials, concerned about United's massive US domestic network, opposed the transfer of Pan Am's Japan-Asia traffic rights to United.⁶⁷⁸ The dispute not only delayed United's plans but it "heightened international tensions over negotiations for revising the 30-year-old US-Japan air treaty."⁶⁷⁹ A January 1986 settlement reportedly granted United only 50% of the 5th Freedom capacity that Pan Am had enjoyed on its Tokyo-Asia routes.⁶⁸⁰

⁶⁷¹ The first aircraft were operated by Northwest airlines. See Japan Airlines, "History of JAL: 1951 – 1960", online: History, Japan Airlines <www.jal.com/en/history/history/age_51-60.html> (visited May 14, 2014).

⁶⁷² Japan Airlines first international flight within Asia was to Hong Kong on February 4th, 1955. See *ibid.*

⁶⁷³ The airport served as "Haneda Army Air Base" from 1945 until 1952 when it was handed over to Japanese authorities and named Tokyo International Airport. See online: Haneda Tokyo Airport <haneda-airport.com/>.

⁶⁷⁴ Guam is 1,560 miles (2,510 km) from Tokyo and 3,800 miles (6,120 km) from Honolulu. Saipan is 1,460 miles (2,350 km) from Tokyo and 3,700 miles (5,950 km) from Honolulu.

⁶⁷⁵ *Treaty of Peace with Japan*, 8 September 1951, 136 UNTS 45, 3 UST 3169 (entered into force 28 April 1952, often referred to as *Treaty of San Francisco*).

⁶⁷⁶ Haneda was replaced as Tokyo's International Airport by Narita in 1978. International flights resumed at Haneda after the completion of a 4th runway and a new international terminal in 2010.

⁶⁷⁷ Carol Jouzaitis & George Curry, "United Buys Pan Am's Pacific Unit: Cash Deal For \$750 Million Awaits Approval By US", *Chicago Tribune* (23 April 1985), online: Chicago Tribune <articles.chicagotribune.com/1985-04-23/business/8501240117_1_pan-am-chairman-edward-acker-united-airlines>.

⁶⁷⁸ Carol Jouzaitis, "United Expecting Asian Routes to Fly: Competition Keen, Chaotic", *Chicago Tribune* (9 March 1986), online: Chicago Tribune <articles.chicagotribune.com/1986-03-09/business/8601170969_1_asian-carriers-united-airlines-travel-agents>.

⁶⁷⁹ *Ibid.*

⁶⁸⁰ "The Japanese connection on US airlines in the Philippines: The Need for Stop-over in Japan", *The Exciting Centennial of Philippine Aviation* (13 April 2009), online: Philippine Air Space <philippineairspace.blogspot.ca/2009/04/japanese-connection-on-us-airlines-in.html>.

This settlement, in turn prompted negotiations between the US and Japan with a view to updating the 1952 Agreement and focusing on the "Japan—US aviation relationship."⁶⁸¹ Indeed, both parties to the 1952 US-Japan BASA acknowledged that for various reasons it had never really been a 'bilateral' agreement as such, and that it was now time to create a true BASA between the two nations⁶⁸² that focused on traffic between the two countries. The result was the 1998 US – Japan Memorandum of Understanding (MOU)⁶⁸³ which contained a unique formula.

2) Formula for limiting 5th Freedom capacity on US – Tokyo flights

Negotiators sought language that would avoid abuse of 5th Freedom rights by the two incumbent American carriers, Delta and United.⁶⁸⁴ The first clause of the formula⁶⁸⁵ requires that over a six month period the number of passenger miles (passengers multiplied by distance travelled) flown by passengers on 5th Freedom flights between Japan and Asia destinations be exceeded by a combination of the passenger miles flown by passengers on flights between Japan and cities in the United States or the Americas and the passenger miles flown by passengers travelling from the United States or the Americas via Japan to points in Asia.⁶⁸⁶ The formula exists to ensure that there is a link between the trans-Pacific traffic and the intra-Asian 5th Freedom flight. In other words, a US airline may not operate a stand-alone Japan-Asia flight without carrying connecting passengers from its trans-Pacific flights as such traffic would be considered 7th Freedom and is not authorized in the US-Japan BASA.

A second element of the formula requires that over a six month period, the number of passenger miles flown by passengers travelling from the United States or the Americas via Japan to points in Asia is always greater or equal to 25% of the number of passenger miles flown by passengers on 5th Freedom flights between Japan and Asia destinations.⁶⁸⁷ This second clause ensures that at least some of the passengers on any 5th Freedom flight actually be passengers who originated

⁶⁸¹ Kunihiko Saito, Japan's Ambassador to the United States in an April 20, 1998 letter to US Secretary of State Madeleine K Albright, in which the former acknowledged Japanese support for a March 14, 1998 Memorandum of Understanding reached between negotiators representing the two countries.

⁶⁸² The 1998 MOU has since been replaced by the 2010 MOU, which is based on an open skies philosophy. This has been negotiated in order to grant Japan Airlines ATI with respect to its joint venture with American Airlines.

⁶⁸³ See *Memorandum of Understanding Between the Government of Japan and the Government of the United States of America*, 14 March 1998, TIAS 12495 [*Japan-US MoU*].

⁶⁸⁴ United Airlines operates a smaller hub at Narita than does Delta. It operates 5th Freedom routes from Tokyo to 5 Asia cities: Bangkok, Hong Kong, Seoul, Singapore, and Taipei.

⁶⁸⁵ See *Japan-US MoU*, *supra* note 683.

⁶⁸⁶ *Ibid*, Part I A 2 (a)(i)(1).

⁶⁸⁷ *Ibid*, Part I A 2 (a)(i)(2).

their travel in the United States or the Americas; this prevents the airline from simply replacing disembarking American passengers with Japanese originating passengers on its Japan-Asia services. The combined effect of the clauses underscores the fact that the US-Japan bilateral Civil Air Transport Agreement⁶⁸⁸ is precisely that, a bilateral agreement.

E) The importance of the Sixth Freedom

Being designated in a single BASA is rarely sufficient to enable an airline to become a significant international carrier. The global route networks of British Overseas Airways Corporation (BOAC), Pan Am and Trans World Airlines (TWA) relied on a complex system of routes based on the traffic rights contained in the dozens of BASAs negotiated by their respective governments and the airlines' consistent designation as their country's flag carrier on those routes. Most intercontinental itineraries relied on the traffic rights of more than one BASA as long-haul flights typically made *en route* stops in multiple countries and the airlines required local traffic rights to carry passengers between the *en route* stops.⁶⁸⁹

When an airline sends connecting international traffic via its hub, the first leg typically relies on the BASA between the country of origin and a 'stopover' country (usually the airline's home country) where a flight connection is to be made, and the second leg typically relies on the BASA between the 'stopover' country and the destination country.⁶⁹⁰ In the 1980s, only a minority of the traffic carried by Pan Am, TWA and BOAC would have been 6th Freedom; these airlines focused on passengers travelling between their hubs and destinations around the world.⁶⁹¹

1) Brazil-Middle East: a rapidly growing market.

⁶⁸⁸ *Civil Air Transport Agreement between Japan and the United States*, 11 August 1952, TIAS 2845, 212 UNTS 27, 4 UST 1948.

⁶⁸⁹ For example, in 1963 Pan Am Flight 2 flew from New York to San Francisco making *en route* stops in London, Frankfurt, Vienna, Istanbul, Beirut, Karachi, Calcutta, Rangoon, Bangkok, Hong Kong, Tokyo and Honolulu. See *Pan Am Timetable 1963*, *supra* note 475, at 6. BOAC's Sydney-London service in 1971 made *en route* stops in Darwin, Hong Kong, Bangkok, Delhi, Tehran and Tel Aviv. See *BOAC Sched 1971*, *supra* note 475 at 72–76.

⁶⁹⁰ See *supra* note 481.

⁶⁹¹ In 1974 BOAC and British European Airway were merged as a result of legislation. See *Civil Aviation Act 1971* (UK), c 75, s 37. The resulting carrier, British Airways, inherited a BOAC's strong transatlantic presence and BEA's strong European route network and began to route North America–Europe 6th Freedom traffic via London Heathrow.

As of July 2013, Sao Paulo Brazil had non-stop flights to Abu Dhabi,⁶⁹² Doha,⁶⁹³ Dubai,⁶⁹⁴ and Istanbul.⁶⁹⁵ To put this into perspective, the distance between Sao Paulo and Dubai⁶⁹⁶ is similar to that between Chicago and Hong Kong.⁶⁹⁷ In each case, the routes may overfly important population centers in Europe, but presumably the respective airlines can justify operating these routes on a non-stop basis. Nonetheless, an analysis of the passenger manifest of any of these flights might turn up some interesting surprises.

United has been offering non-stop service between Chicago and Hong Kong since 1996⁶⁹⁸ and it needs to be able to identify those persons who will fill the 273,000 seats that will be offered in the course of a year⁶⁹⁹ in order to ensure the ongoing viability of the service. Clearly there are Chicagoans who want to visit Hong Kong and Hong Kongers with a desire to see America's second city. However, United Airlines also offers 50 daily flights⁷⁰⁰ from cities in the Eastern Seaboard, Indiana, Louisiana, Michigan, Missouri, Ohio, and Tennessee that feed the Chicago-Hong Kong flight service.⁷⁰¹ Thus the flight offers roughly 200 million Americans a one-stop connection to Hong Kong via Chicago. It follows that even if United Airlines were to rely solely on 3rd and 4th Freedom traffic rights, the authority to serve the bilateral Hong Kong-US market, the Chicago-Hong Kong route would be profitable.⁷⁰²

⁶⁹² As of June, 2013, Etihad Flights 190/191 offered thrice weekly Abu Dhabi-Sao Paulo round-trip service. See Etihad Airways, "Flight timetables", online: Etihad Airways <www.etihad.com/en-us/plan-and-book/flight-timetables/>.

⁶⁹³ As of June, 2013, Qatar Airways Flights 921/922 offered Doha-Sao Paulo round-trip service 5 times a week. See online: Qatar Airways <www.qatarairways.com/global/en/homepage.page>.

⁶⁹⁴ As of June, 2013, Emirates Flights 261/262 offered daily Dubai-Sao Paulo round-trip service. See online: Emirates <www.emirates.com/>.

⁶⁹⁵ As of June 2013, Turkish Airlines Flights 15/16 offered Istanbul-Sao Paulo round-trip service 4 times a week. See online: Turkish Airlines <www.turkishairlines.com/>.

⁶⁹⁶ Emirates launched the Sao Paulo-Dubai route on October 1, 2007. See Mark Caswell, "Emirates launches Dubai-Sao Paulo service," *Business Traveller* (4 October, 2007), online Business Traveller <www.businesstraveller.com/news/emirates-launches-dubai-sao-paulo-service> (visited April 28, 2014).

⁶⁹⁷ The Chicago-Hong Kong route is roughly 7,770 miles or 12,500 km. From Sao Paulo to Abu Dhabi, Doha, Dubai and Istanbul it is respectively 7,530 miles (12,100 km); 7,590 miles (12,200 km); 7,360 miles (11,800 km); and 6,550 miles (10,500 km).

⁶⁹⁸ See "United Airlines to fly Chicago-Hong Kong nonstop; longest scheduled route in history", *Business Wire* (22 April 1996), online: The Free Library <www.thefreelibrary.com/United+Airlines+to+fly+Chicago-Hong+Kong+nonstop%3B+longest+scheduled...-a018214558> (visited April 15, 2014).

⁶⁹⁹ United's Boeing 747-400 carries 374 passengers; 12 in first class, 52 in business class, 70 in economy plus and 240 in economy. The yearly total of all the seats offered by this flight in both directions is 273,020.

⁷⁰⁰ See "United Airlines to fly", *supra* note 698.

⁷⁰¹ United routed passenger living in states west of the Mississippi River to its San Francisco-Hong Kong service.

⁷⁰² In September 2011, Cathay Pacific Airlines launched Hong Kong-Chicago service in cooperation with American Airlines. See Lewis Lazare, "Cathay bringing Hong Kong-bound flights to Chicago", *Chicago Sun Times* (7

United Airlines also offers connections to the service to passengers in sixteen cities in Canada, Mexico and the Caribbean (6th Freedom traffic) and connections at Hong Kong to United Airlines services to Singapore and Ho Chi Minh City (5th Freedom traffic). It is evident that such connections are not the commercial basis of the flight, but incremental revenue to support a service that is very much based on bilateral traffic between the United States and Hong Kong. Thus, on any given Chicago–Hong Kong flight, Canadians, Mexicans, Singaporeans and Vietnamese would be a minority on an aircraft mostly filled with Americans and Hong Kongers.

The same cannot be said with respect to routes between Sao Paulo and the Middle East. As of June 2013, Sao Paulo residents have a weekly offering of 4,530 seats on non-stop flights to the Greater Middle East, including 1,248 seats to Istanbul,⁷⁰³ 1,295 to Qatar⁷⁰⁴ and 3,235 seats to the United Arab Emirates).⁷⁰⁵ Absent an impressive number of samba aficionados in the Middle East and Turkey or similar quantities of Arab sword dance fans or dervish-adherents in Brazil, the traffic on which such routes are based is not immediately evident.

III) GOVERNMENT-BACKED MEGA CARRIERS

A) A more aggressive use of Sixth Freedom

Whereas United Airlines is an American carrier linking the United States with the world, airlines based near the Persian Gulf often see themselves as global air transport companies that just happen to be based in the Middle East. Therefore while the route analysis of the Chicago–Hong Kong service follows traditional assumptions, a completely different analysis applies to the flights between Brazil and the Middle East. Conceivably there will be some Brazilians travelling only to the flight's destination and some Emiratis and Qataris visiting Sao Paulo, but it is doubtful that these would be a majority of the flight's passengers. A significantly more probable scenario would be 6th Freedom traffic between Brazil and South Asia. When inaugurating Qatar Airways' Doha-Sao Paulo-Buenos Aires service, its Chief Executive Officer, Akbar Al Baker stated:

December 2011), online Chicago Sun Times <[www.suntimes.com/business/2726573-420/cathay-hong-kong-chicago-service.html#VAYXo9Rzall](http://www.suntimes.com/business/2726573-420/cathay-hong-kong-chicago-service.html#.VAYXo9Rzall)>.

⁷⁰³ Turkish Airlines Flights 15 and 16 offer 8 first class (F) seats, 30 business class (J) seats and 274 economy (Y) seats for a total of 312 seats/day or 1,248 seats per week in each direction between Sao Paulo and Istanbul.

⁷⁰⁴ Qatar Airways Flights 921 and 922 offer 42 J seats and 217 Y seats for a total of 259 seats/day or 1,295/week.

⁷⁰⁵ Etihad Flights 190 and 191 offer 12 F, 32 J and 248 Y seats for a total of 292 seats/day or 876 per week in each direction between Sao Paulo and Abu Dhabi. Similarly, Emirates Flights 261 and 262 offer 8 F, 35 J and 294 Y seats for a total of 337 seats/day or 2,359 per week in each direction between Sao Paulo and Dubai.

With a large Lebanese and Japanese community living in Brazil, Argentina and neighbouring South American countries, the route is a perfect match for our business model, which carries passengers from East to West and vice versa via our Doha hub.⁷⁰⁶

Thus the flight is based on 6th Freedom traffic in a business model that bases its route analysis on 6th Freedom traffic. Qatar Airways' CEO's statements also apply to Emirates, Etihad and Turkish Airlines; in each case, a government-backed⁷⁰⁷ mega carrier (GBMC), based on 6th Freedom traffic, flying non-stop to the four corners of the world⁷⁰⁸ and based in a brand new global hub.⁷⁰⁹

The emergence of these new global hubs is a game-changer, with the potential to reshape long-standing travel patterns.⁷¹⁰ For the first time, intercontinental flight itineraries require just one *en route* connection. This simplifies travel from Buenos Aires to Bangalore, Hamburg to Hyderabad, Los Angeles to Lahore, Montreal to Melbourne, Prague to Perth, Sao Paulo to The Seychelles, or Toronto to Thiruvananthapuram. New global hubs allow a single connection, compared with a multi-connection itinerary offered by other carriers or alliances. Reducing the number of connections decreases the number of security checkpoints, baggage transfer locations, and immigration and customs procedures. The power of such a reduction cannot be understated; the explosive growth rate of Emirates, Etihad, Qatar Airways and Turkish Airlines suggests that an important percentage of South Asia-North America traffic that previously transited through hubs in the European Union now transits through hubs in the Greater Middle East.

⁷⁰⁶ Qatar Airways, Press Release, "Qatar Airways Makes Its South American Debut" (27 June 2010), online: Qatar Airways <www.qatarairways.com/global/en/press-release.page?pr_id=PressRelease_27Jun10&locale_id=en_gl> (visited May 15, 2014).

⁷⁰⁷ The level of state financial support is debated but each State has control over its respective carrier. Emirates is 100% owned by the Government of Dubai. See "Emirates and Dnata now under ICD", *Reuters* (30 December 2008), online: Gulf News <gulfnews.com/business/aviation/emirates-and-dnata-now-under-icd-1.47280>. Etihad is "owned by the Abu Dhabi government". See Praveen Menon, "Analysis: Etihad Airways' push into Europe carries risks", *Reuters* (4 January 2012), online: Reuters <www.reuters.com/article/2012/01/04/us-etihad-emirates-idUSTRE8030WJ20120104>. Qatar Airways is 50% owned by government and 50% by the private sector. See Alicia Buller, "Special Report: Turbulent Times For Qatar Airways", *Gulf Business* (10 June 2013), online: Gulf News <gulfbusiness.com/2013/06/special-report-turbulent-times-for-qatar-airways/>. Turkish Airlines is 49.12% government-owned with 50.88% offered to the public. See Turkish Airlines, "Organization", online: Turkish Airlines <www.turkishairlines.com/download/investor_relations/kurumsal_yonetim/ortaklik_yapisi_en.pdf>.

⁷⁰⁸ Fully five of the world's 12 longest non-stop commercial airline routes serve Middle East hubs: Dubai-Los Angeles 13,420 km (8,339 mi); Dubai-Houston 13,144 km (8,168 mi); Dubai-San Francisco 13,041 km, (8,103 mi); Doha-Houston 12,951 km (8,047 mi); and Dubai-Dallas 12,940 km (8,040 mi).

⁷⁰⁹ In 1984, none of these airlines were significant. The major Middle East carriers were Egyptair, Gulf Air, Kuwait Airways, Royal Jordanian, Syrian Arab Airlines and Middle East Airlines. See Hanlon, *supra* note 642 at 180.

⁷¹⁰ See generally Karim Al-Sayeh, *The rise of the emerging Middle East carriers : outlook and implications for the global airline industry*, Massachusetts Institute of Technology, (June 2014). This document was a thesis in support of a Masters of Science in Transportation.

1) Transit Visa Policy Favours GBMCs

The majority of the global airline industry's future passengers live in States where visa-free travel is limited to 60 or fewer countries,⁷¹¹ and increasingly these passengers are considering immigration and visa issues when making travel purchase decisions. For example, citizens of Bangladesh, India, Pakistan and Sri Lanka have visa-free access to 40, 51, 32 and 37 countries respectively.⁷¹² If they plan to visit North or South America they may require a Transit Visa to change planes at a European hub but typically they do not need a Transit Visa to change planes in the United Arab Emirates.⁷¹³ It is therefore not surprising that the two Emirati airlines provide more than 60 daily flights between their hubs and 17 cities in four countries in South Asia.⁷¹⁴

2) Access to India is Essential for GBMC Success

The growth of the Greater Middle East hubs is due in part to liberal BASAs with South Asia and in particular with India. When Emirates started service between Dubai and Dallas in February 2012, an Emirates executive said "business centers in the Middle East, Africa and the Indian Subcontinent [are] now just one stop away."⁷¹⁵ Similarly, Etihad, in announcing the purchase of 24% of Jet Airways, one of India's largest international carriers, stated:

The Indian market is fundamental to our business model This deal will allow us to compete more effectively in one of the largest and fastest-growing markets in the world.⁷¹⁶

The India–United Arab Emirates Air Services Agreement⁷¹⁷ is based on the UAE's sizeable Indian expatriate community⁷¹⁸ and an uncompetitive Air India enhances the attractiveness of the

⁷¹¹ Citizens of most Asian and African States can visit fewer than 60 countries without a visa. Here are some examples: China (41); Egypt (44); Ghana (62); Iran (37); Lebanon (35); and Nigeria (46). This compares to 160 countries for citizens of the EU, Australia, Canada, New Zealand and the United States. See online: The Henley & Partners Visa Restrictions Index, International Visa Restrictions, Henley & Partners <www.henleyglobal.com/citizenship/visa-restrictions/> (visited April 15, 2014).

⁷¹² *Ibid.*

⁷¹³ South Asians do not need a visa for a quick connection, and can obtain a visa on arrival if necessary. See International Air Transport Association, "Passport, Visa & Health travel document requirements", online: IATA <www.iatatravelcentre.com/travelinformation.php>.

⁷¹⁴ In April 2013, Emirates offered 264 flights a week between Dubai and Ahmadabad, Bangalore, Chennai, Colombo, Dhaka, Delhi, Hyderabad, Islamabad, Karachi Kochi, Kolkata, Kozhikode, Lahore, Mumbai, Peshawar and Thiruvananthapuram. Etihad and Qatar Airways offer similar connections to South Asia from their hubs.

⁷¹⁵ See Dallas/Fort Worth International Airport, Press Release, "DFW International Airport Welcomes Emirates Inaugural Flight From Dubai", (2 February 2012), online: Dallas/Fort Worth International Airport <www.dfairport.com/pressroom/Emirates_Inaugural_Flight.php> (visited May 15, 2014).

⁷¹⁶ See Etihad Airways, "Etihad Airways to invest US \$379 million for a 24 per cent stake in Jet Airways" (24 April 2013) online: Etihad Airways <www.etihad.com/en-ca/about-us/news/archive/2013/jet-airways-and-etihad-airways-forge-alliance/> (visited April 15, 2014).

⁷¹⁷ *Memorandum of Understanding*, Government of India and Government of the United Arab Emirates, 7 December 2005, online: Directorate General of Civil Aviation, India <dgca.nic.in/bilateral/mou_UAE.pdf>.

Indian market. For example, in May 2013 Air India offered roughly 1,300 seats/day over 8 non-stop routes between India and the United Arab Emirates⁷¹⁹ compared to 7,300 seats/daily from Dubai to India offered by Emirates.⁷²⁰ The latter seat capacity is 40% greater than the number of seats offered by US carriers between the United States to France in June 2008.⁷²¹ Moreover, while US-France traffic is consistent with historical trends⁷²² Dubai–India seat offerings⁷²³ have grown by over 500% between 1992 and 2011.⁷²⁴ This explosion in India–Dubai traffic has provided the feed necessary to propel Emirates' westward expansion; by 2012 the carrier was serving more destinations in Europe⁷²⁵ than Icelandair⁷²⁶ and more destinations in the Americas⁷²⁷ than Swiss.⁷²⁸ By March 2013, Emirates' fleet⁷²⁹ could carry 40% of the national population of Dubai at the same time⁷³⁰ and more aircraft were on order.⁷³¹

⁷¹⁸ Roughly 1.75 million Indians work in the UAE. See online: Embassy of India, Abu Dhabi, UAE, "UAE Indian Community", online: Embassy of India, Abu Dhabi <uaeindians.org/profile.aspx?AspxAutoDetectCookieSupport=1> (visited May 15, 2014).

⁷¹⁹ The airline flew 53 weekly flights over six non-stop routes from Dubai to each of Chennai, Delhi, Goa, Hyderabad, Kozhikode and Mumbai and two non-stop routes from Abu Dhabi to each of Delhi and Mumbai. See Air India, *Air India Timetable, May 2013*.

⁷²⁰ See P Paul Fitzgerald, "The Pros and Cons of an Open Sky Policy: Canada-UAE" (Presentation delivered at the International Foundation For Aviation and Development Business Luncheon, Hotel Marriot Château Champlain, Montreal, Canada, 10 May 2011) at slide 31 (not published). Emirates offered 25 flights/day to 10 Indian cities: Ahmadabad, Bangalore, Chennai, Delhi, Hyderabad, Kochi, Kolkata, Kozhikode, Mumbai and Thiruvananthapuram.

⁷²¹ In June, 2008, US carriers offered 23 flights/day to France and served Paris from 14 US cities: Atlanta, Boston, Chicago, Cincinnati, Cleveland, Dallas, Detroit, Houston, Miami, Minneapolis, New York, Philadelphia, Salt Lake City, and Washington. See *SkyGuide* supra note 30 at 337 – 338.

⁷²² In August, 1992, US carriers offered 23 flights/day to France and served Paris from 14 US cities: Atlanta, Boston, Chicago, Cincinnati, Dallas, Detroit, Houston, Los Angeles, Miami, New York, Philadelphia, Raleigh, San Francisco and Washington. See *OAG Desktop*, supra note 32 at 969, 971 – 975, 978, 981, 985, 988 – 990, 995.

⁷²³ In 1992, five airlines, (Air India, Biman Bangladesh, British Airways, Cathay Pacific and Emirates) offered a combined total of 35 flights/week and roughly 1,124 seats/day from Dubai to three Indian cities, Mumbai, Delhi and Chennai. See *ibid* at 226, 385, 413, 415, 735, 1379 – 1380.

⁷²⁴ The number of weekly flights has gone from 35 to 178, a 410% increase, and the number of weekly seats has increased 548% from 1,124 in 1992 to 7,300 in 2011.

⁷²⁵ As of November 2012 Emirates was flying to 31 destinations in Europe: Amsterdam, Athens, Barcelona, Birmingham, Copenhagen, Dublin, Dusseldorf, Frankfurt, Geneva, Glasgow, Hamburg, Istanbul, Larnaca, Lisbon, London, Madrid, Malta, Manchester, Milan, Moscow, Munich, Newcastle, Nice, Paris, Prague, Rome, St. Petersburg, Venice, Vienna, Warsaw and Zurich.

⁷²⁶ Icelandair flies non-stop from Reykjavik to 23 destinations in Europe: Amsterdam, Barcelona, Bergen, Billund, Brussels, Copenhagen, Frankfurt, Glasgow, Gotenburg, Hamburg, Helsinki London, Madrid, Manchester, Milan, Munich, Oslo, Paris, Stavanger, Stockholm, St. Petersburg, Trondheim and Zurich. Icelandair Summer Schedule, 31 March – 26 October 2013. Not all destinations are served daily.

⁷²⁷ As of November 2012, Emirates was flying to 11 destinations in the Americas from Dubai: Buenos Aires, Dallas, Houston, Los Angeles, New York, Rio de Janeiro, San Francisco, Sao Paulo, Seattle, Toronto and Washington.

⁷²⁸ Swiss serves 8 destinations in the Americas from Zurich: Boston, Chicago, Los Angeles, Miami, Montreal, New York, San Francisco and Sao Paulo. See *STAR 712*, supra note 557 at 465 – 466.

⁷²⁹ As of March 31, 2013, Emirates had 187 wide-body aircraft with a capacity of 69,066 seats. It had 31 492-seat Airbus A380s, 87 389-seat Boeing 777-300 ERs, 28 266-seat Boeing 777s, 3 346-seat Boeing 777-200s, 10 258-seat

B) Emirates: an Instrument of State Intervention in the Marketplace

Emirates is seen by many as an engine of economic growth for Dubai, facilitating tourism and creating jobs for an Emirate which has dwindling oil reserves.⁷³² Paul Griffiths, CEO of Dubai Airports, has argued that aviation's contribution to society is more recognized and better nurtured in Dubai than anywhere else.⁷³³ He further states, "The growth of the aviation industry in Dubai has been a main engine for the economic growth and success of the entire emirate."⁷³⁴ Consequently, efficient decision-making and the rapid execution of business decisions by Emirates Airlines (Emirates) is facilitated by efficient and rapid access to the relevant State officials:

Emirates' decision-making abilities are greatly helped by the lean management structure of the State-owned carrier, which allows for bold moves to be discussed and quickly executed by a small inner circle that includes [founding Chief Executive Officer Maurice] Flanagan, Sheikh Ahmed [bin Saeed Al Maktoum], Sheikh Mohammed [bin Rashid Al Maktoum] in some cases, and a handful of others. [Says Flanagan] "We have the chemistry of a family business [which] works very well for us."⁷³⁵

Thus, while Emirates can claim to be operated on commercial business principles, its owners consider it a tool of economic transition from oil dependency to tourism and intercontinental air transportation. Therefore, direct UAE-government intervention in the market in support of this objective cannot be discounted. Indeed, Emirates owes much of its spectacular expansion to a single man, His Highness Sheikh Ahmed bin Saeed Al Maktoum, who is concurrently the

Airbus A340-500s, 5 267-seat Airbus A340-300s, and 23 Airbus A330-200 with an average capacity of 257 seats See Emirates Group, "It takes a World: The Emirates Group Annual Report 2012-13", at 65, online: The Emirates Group <www.theemiratesgroup.com/english/facts-figures/annual-report.aspx>.

⁷³⁰ As of mid-year 2010, the number of Emiratis estimated to be living in Dubai was 168,029. See online: Population Estimates 2006-2010, National Bureau of Statistics, United Arab Emirates

<www.uaestatistics.gov.ae/ReportPDF/Population%20Estimates%202006%20-%202010.pdf> .

⁷³¹ In 2011, the airline's order book stood at 230 aircraft. See Emirates, "The Emirates Story", online:

<www.emirates.com/ca/English/about/the_emirates_story.aspx> (visited May 15, 2014). On 17 November, 2013 Emirates announced an order for 150 Boeing 777Xs aircraft and 50 Airbus A380s. The order, worth US\$ 99 billion, was witnessed by Dubai's ruler, Sheikh Mohammed bin Rashid Al-Maktoum. See Emirates, News, "Emirates announces largest-ever aircraft order" (17 November 2013), online: Emirates <www.emirates.com/english/about/news/news_detail.aspx?article=1443077>.

⁷³² In 2006, Dubai's oil reserves were predicted to run dry by 2016. See Deborah Stokes, "Chaotic Dubai builds up ... as oil dries up", *National Post [Toronto Edition]* (8 July 2006), FP1 (ProQuest).

⁷³³ See John F. O'Connell, "The rise of the Arabian Gulf carriers: An insight into the business model of Emirates Airline" (2011) 17 *Journal of Air Transport Management* 339 (ScienceDirect). See "Dubai Airports: Fuelling a Nation's Development", *Industry – ME* (May/June 2013) 78 at 82, online: Industry–Me <industry-me.com/features/transport/dubai-airports-fuelling-nations-development/>.

⁷³⁴ *Ibid.*

⁷³⁵ University of Pennsylvania, Knowledge @ Wharton, "Maurice Flanagan's Emirates Airline: Flying High and Treating Customers like Sheikhs" (12 December 2007), online: University of Pennsylvania <knowledge.wharton.upenn.edu/article/maurice-flanagans-emirates-airline-flying-high-and-treating-customers-like-sheikhs/> (visited May 13, 2014).

airline's chairman, President of the Dubai Civil Aviation Authority (DCAA), and Chairman of Dubai Airports. He is also the uncle of Dubai's Ruler, His Highness Sheikh Mohammed bin Rashid al-Maktoum.⁷³⁶ The confluence of decision making power over airline, regulatory and airport policy in the hands of a single individual enables very powerful and uncommon policy leverage.

When Emirates made its first flight to Toronto, many influential politicians met with the Sheikh in Ottawa.⁷³⁷ Similarly, when Canada subsequently denied the United Arab Emirates' request for an open skies agreement, the UAE responded by imposing costly visas on Canadians,⁷³⁸ lobbying Canadian politicians,⁷³⁹ rerouting an aircraft carrying Canada's Minister of Defense,⁷⁴⁰ campaigning against Canada's bid for a United Nations Security Council seat⁷⁴¹ and evicting Canada's military from Camp Mirage, a base near Dubai that the Canadian armed forces had been using to fly troops and supplies in and out of Afghanistan.⁷⁴² Indeed, had Canada not withdrawn from the International Air Services Transit Agreement⁷⁴³ in 1988,⁷⁴⁴ and thus been in

⁷³⁶ See Greg Lindsay, "Cities of the Sky: From Dubai to Chongqing to Honduras, the Silk Road of the future is taking shape in urban developments based on airport hubs. Welcome to the world of the 'aerotropolis.'", *The Wall Street Journal* (26 February 2011), online: The Wall Street Journal <online.wsj.com/news/articles/SB10001424052748703408604576164703521850100?mg=reno64-wsj&url=http%3A%2F%2Fonline.wsj.com%2Farticle%2FSB10001424052748703408604576164703521850100.html> See also The Emirates Group, "His Highness Sheikh Ahmed bin Saeed Al Maktoum", online: The Emirates Group <www.theemiratesgroup.com/english/our-company/leadership/hh-sheikh-ahmed-bin-saeed-al-maktoum.aspx>.

⁷³⁷ Senator Colin Kenny writes of having attended a reception on October 31st, 2007 at Ottawa's Chateau Laurier Hotel, hosted by Sheikh Ahmed bin Saeed Al Maktoum in honour of Emirates inaugural flight to Canada. See online: Archived News 2007, Senator Colin Kenny <colinkenny.ca/en/Archived-News-2007>.

⁷³⁸ See Laura Payton, "UAE landing rights in Canada still at issue: United Arab Emirates delegation includes aviation officials", *CBC News* (5 March 2012) online: CBC News <www.cbc.ca/news/politics/story/2012/03/05/pol-baird-uae-landing-rights.html> (visited April 15, 2014).

⁷³⁹ See Yael Berger, "Emirates Airline steps up lobbying for landing rights", *The Lobby Monitor* (19 April 2012).

⁷⁴⁰ See Hannah Thibedeau, "Tories saw UAE airline demands as 'blackmail': Base access lost after more UAE flights to Canada denied", *CBC News* (12 October 2010) online: CBC news <www.cbc.ca/news/politics/tories-saw-u-a-e-airline-demands-as-blackmail-1.900748#socialcomments>.

⁷⁴¹ See "UAE lobbied against Canada's UN bid", *The Associated Press* (14 October 2010) online: CBC News <www.cbc.ca/news/politics/u-a-e-lobbied-against-canada-s-un-bid-1.915941> (visited May 15, 2014).

⁷⁴² Payton, *supra* note 738.

⁷⁴³ *International Air Services Transit Agreement*, 7 December 1944, 84 UNTS 389 (entered into force 30 January 1945). Parties to Transit Agreement grant foreign airlines the right to overfly their territory or to make landings for non-traffic purposes. Canada's withdrawal from this Agreement allows it to deny overflight permission to airlines based in States that do not have a BASA with Canada.

⁷⁴⁴ See ratifications of International Air Services Transit Agreement Signed at Chicago on 7 December 1944, online: ICAO <[www.icao.int/secretariat/legal/List of Parties/Transit_EN.pdf](http://www.icao.int/secretariat/legal/List%20of%20Parties/Transit_EN.pdf)> (visited May 15, 2014).

a position to deny UAE carriers access to Canadian airspace on routes serving the US, the UAE might not have been willing to end its feud with Canada.⁷⁴⁵

The UAE has had a similar conflictual relationship with Germany, which has long denied the carrier access to both Berlin and Stuttgart.⁷⁴⁶ Given the unique alignment of the UAE's aviation policy and the commercial interests of Emirates, the UAE is able to link its demand for greater traffic rights from Germany with future Airbus A-380 orders from Emirates.⁷⁴⁷

Given Sheikh Ahmed's control over virtually every entity in Dubai's aviation sector, his position within Dubai's royal family, and his many government roles, it is not surprising that the government's aviation policy serves Emirates' commercial interests.⁷⁴⁸

In most other countries such direct links would be impossible as the airlines, government negotiators and national leaders are rarely in such direct contact.

The Sheikh's influence exceeds aggressively pushing for increased market access for Dubai's flag carrier. He is also, as Chairman of Dubai Airports, able to ensure that the airline always has the requisite infrastructure at home, such as 20-gate concourse built for the airline's fleet of Airbus A380s⁷⁴⁹ or a brand-new airport anticipating the airline's future expansion:

With a 33 billion USD investment, the new Dubai World Central airport and integrated free-zone logistics city will be [a huge project]. This new airport at Jebel Ali, about 60 km from the current airport, will comprise a . . . logistics hub and an international airport with six runways and a capacity for 120 million passengers and 12 million tonnes of cargo per annum. Once finished, this capacity will equal [that] of London Heathrow and Frankfurt Rhein-Main airport combined.⁷⁵⁰

In contrast, British authorities first identified capacity restrictions at Heathrow in 1978⁷⁵¹ and as a result the building of a third runway at Heathrow was proposed a quarter century later.⁷⁵²

⁷⁴⁵ See Awad Mustafa, "UAE to drop visa demand for Canadian citizens", *The National* (April 2, 2013), online: The National < www.thenational.ae/news/uae-news/politics/uae-to-drop-visa-demand-for-canadian-citizens >.

⁷⁴⁶ See Emirates, "Tearing Down the Other Wall", online: Emirates < content.emirates.com/downloads/ek/pdfs/int_gov_affairs/Tearing-down-to-the-other-wall.pdf >.

⁷⁴⁷ See *supra* note 8.

⁷⁴⁸ See *White Paper*, *supra* note 3 at 7-8.

⁷⁴⁹ Leon Watson, "Super-sized for a super-jumbo: Dubai opens new airport concourse specially designed for the Airbus A380", *Daily Mail* (11 February 2013).

⁷⁵⁰ Jan Vespermann, Andreas Wald & Ronald Gleich, "Aviation growth in the Middle East – impacts on incumbent players and potential strategic reactions" (2008) 16 *Journal of Transport Geography* 388 at 389 (ScienceDirect). See also: Dubai World Central, "About DWC", online: Dubai World Central < www.dwc.ae/about-dwc/ >.

⁷⁵¹ UK, H C, *Expansion of Heathrow Airport* (Commons Library Research Paper 09/11) by Elena Ares, Christopher Barclay, Louise Butcher & Adam Mellows-Facer (London: Commons Library, 4 February 2009) at 12, online: Publications, Parliament < www.parliament.uk/briefing-papers/RP09-11/expansion-of-heathrow-airport >.

⁷⁵² See UK, Department for Transport, *The Future of Air Transport* (Cm 6046 White Paper) (London: Department for Transport, 2003) at c 11, online: Publications, Government of UK < www.gov.uk/government/uploads/system/uploads/attachment_data/file/272086/6046.pdf > .

However, informed observers have concluded that Heathrow's third runway is unlikely to be built in the near future.⁷⁵³ Thus while politics, environmental impact assessments and public finances condemn British Airways to operate from an increasingly congested hub, a brand-new airport in Dubai anticipates the needs of one of the world's fastest growing airlines.

The Sheikh's impact is not limited to routes and infrastructure issues. As President of the Dubai Civil Aviation Authority he can quickly accredit the foreign pilots, mechanics and flight attendants that the airline wishes to recruit. He can also ensure that liquids and gels sold aboard an Emirates flight to Dubai are not confiscated by Dubai airport security screeners from passengers who are connecting to their final destination on another Emirates flight. His influence has undoubtedly shaped UAE immigration policy so that no visas are required of passengers connecting at Dubai between two flights operated by Emirates. Indeed, at the height of the Canada–UAE dispute, when the UAE imposed visas requirement on Canadians, those visas cost less to passengers travelling on Emirates.⁷⁵⁴

By combining the roles of airline chairman, airport operator and chief regulator, the Sheikh can:

- negotiate the routes which the airline may serve;
- guarantee that gates and terminals are always ready to accommodate any growth of the airline;
- ensure that passengers connecting at Dubai between two flights operated by Emirates airlines are not subjected to undue airport security or immigration procedures; and
- arrange for the aircraft, pilots, mechanics and flight attendants required to operate the routes.

The fusion of such roles gives Emirates a tremendous competitive advantage over non-government-owned competitors.⁷⁵⁵ British Airways does not have similar influence over regulatory matters in the United Kingdom and is a mere tenant at Heathrow where its repeated cries for a third runway have fallen on deaf ears. Air Canada, Air France, Lufthansa and Qantas have argued that Emirates' unique situation gives it competitive advantages that they cannot match. These arguments raise the question as to whether direct competition between these government-backed airlines and their private sector homologues can ever occur on a level playing field.

⁷⁵³ The observer was Willie Walsh, CEO of British Airways' parent corporation. See "No Heathrow third runway in 50 years, says Walsh", *Travel Weekly* (11 April 2013) online: [Travel Weekly <www.travelweekly.co.uk/articles/2013/04/11/43705/no-heathrow-third-runway-in-50-years-says-walsh.html>](http://www.travelweekly.co.uk/articles/2013/04/11/43705/no-heathrow-third-runway-in-50-years-says-walsh.html).

⁷⁵⁴ The 30 day VISA cost was CA\$ 250 and had to be solicited by mail, but Emirates' passengers could get it online for CA\$ 83. Etihad's passengers had similar rights. See Fitzgerald, "The Pros", *supra* note 720 at slide 41.

⁷⁵⁵ See *White Paper*, *supra* note 3 at 7.

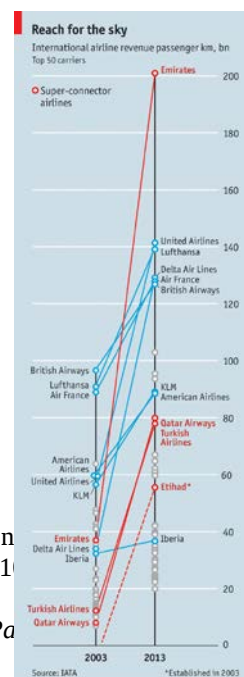
In the case of Emirates, the fusion of roles, when combined with the strategic geographic location of Dubai between India and Europe and between Europe and Australia, allows for aggressive airline expansion. Each new route inevitably requires new aircraft and staff and a gate from which to feed its passengers to connecting flights. Those flights in turn feed other flights, fueling Emirates 600% traffic growth since 2000 and increasing its rank among international carriers from number 24 in 2000 to number 1 in 2010 displacing Lufthansa.⁷⁵⁶ Thus Emirates can leverage its growth at a speed and in a manner which few others can match and those that would try, in particular Etihad and Qatar Airways, operate under similarly advantageous circumstances.

C) Are the GBMCs Subsidized?

There are three significant GBMCs: Abu-Dhabi-based Etihad, Doha-based Qatar Airways, and Dubai-based Emirates. These three airlines have comparable State support, positive relations with government, and an explosive growth rate.⁷⁵⁷ Each is based at an airport which did not have dedicated daily service to a single point in Europe or South Asia in 1992⁷⁵⁸ but which today offers non-stop flights to points on every inhabited continent.⁷⁵⁹ While a disproportionate share of the examples in this thesis features Emirates, this is only because this airline is the highest profile of the three.⁷⁶⁰

There have been very serious allegations of government subsidization made against all three GBMCs:

[N]ewly discovered evidence – including Etihad's and Qatar's non-public financial Statements – shows that in spite of their repeated and vehement public denials, Etihad, Emirates and Qatar have collectively received over \$39 billion in subsidies in the last decade alone. This massive government support has enabled the three airlines to expand their capacity and operations at a pace that would have been impossible otherwise, and, in the case of Etihad and Qatar, has kept them in business in spite of their enormous losses. According to their own



⁷⁵⁶ Laurence Frost & Andrea Rothman, "Air France CEO Calls for EU Curbs on Expansion" *Bloomberg* (11 October 2010), online: Bloomberg <www.bloomberg.com/news/2010-10-11-air-france-ceo-calls-for-eu-curbs-on-expansion-by-gulf-carriers.html> (visited May 14, 2014).

⁷⁵⁷ Emirates, Etihad and Qatar are among the world's fastest growing airlines. See *White Pa*

⁷⁵⁸ See *supra* notes 585 to 594.

⁷⁵⁹ Each of Abu Dhabi, Doha and Dubai are now linked non-stop to major cities in North and South America, Europe, Africa, Asia and Australia.

⁷⁶⁰ Emirates offers 36% more transatlantic flights than either Etihad or Qatar Airways. See *White Paper*, *supra* note 3 at 5. See also Graph at left of this page, from *Economist*, *supra* note 7 at 2-3.

financial Statements, if not for the subsidies, Etihad and Qatar would not be commercially viable.⁷⁶¹

In his first public appearance since the allegations were made, Etihad CEO James Hogan, told the London Aviation Club that investing in success should never be a crime.⁷⁶²

To have any chance of success, Etihad Airways had to get to a size and scale that could compete against the networks of airlines that had not only been operating for years, but had benefited from decades of government investment and infrastructure support themselves. To become a serious competitor in long haul hub-and-spoke air travel, there is a very, very high cost of entry. Our shareholder set clear parameters for that investment. The airline had to get to profitability within a decade. And in the long term, we have to deliver a return. Because we have satisfied those conditions, because we have grown more quickly and more successfully than our initial targets, our shareholder has invested further. It has invested in success. Just like any other rational investor.⁷⁶³

Unfortunately, both those making the allegations⁷⁶⁴ and those opposing the allegations⁷⁶⁵ are financially connected to the parties to the dispute. Thus the White Paper which provoked American authorities to seriously consider the allegations of subsidy was written by Dr. Rob Britton for a coalition funded by American, Delta and United Continental.⁷⁶⁶ Similarly, Frontier Economics' analysis of the positive economic impact of Emirates Airlines in Europe was paid for by that carrier.⁷⁶⁷

One of the very few articles written by non-related parties did not examine the subsidy issue *per se*, but did explore the economic impact of GBMCs on US carriers and found a small but statistically significant effect:

⁷⁶¹ See "Restoring Open Skies: The Need to Address Subsidized Competition From State-Owned Airlines in the Qatar and the UAE" *supra* note 3 at 12.

⁷⁶² See *supra* note 4.

⁷⁶³ See *ibid.*

⁷⁶⁴ See Fred Lazar, "Multilateral Trade Agreement for Civil Aviation" (2011) 36 Air & Space L 379-400 (Kluwer Law Online). Dr. Lazar has worked with Air Canada. See further, Fred Lazar, "A Tale of Four Cities: Canada and the UAE" (March 2011) online <www.aircanada.com/en/about/media/facts/documents/canada_uae_en.pdf> esp at 62 (visited May 14, 2014).

⁷⁶⁵ See Tim Clark, Address (Speech by the President of Emirates airlines delivered at the European Aviation Club on 12 November 2009) at 5 [unpublished]. See also Andrew Parker, "Emirates: A Perspective on Issues in Canadian Aviation" (2012) 37 Air & Space L 419-430 (Kluwer Law Online). Mr. Parker is employed by Emirates.

⁷⁶⁶ See "Restoring Open Skies: The Need to Address Subsidized Competition From State-Owned Airlines in the Qatar and the UAE" *supra* note 3.

⁷⁶⁷ Frontier Economics, *Emirates Economic Impact in Europe*, online: Emirates <content.emirates.com/downloads/ek/pdfs/int_gov_affairs/Emirates_Economic_Impact_in_Europe_Final_Report.pdf> (visited April 13, 2015).

A 1% growth in total Gulf carrier traffic to or from the US is associated with a less than 0.1% drop in US carriers' international passenger traffic and a less than 0.1% decrease in air fares. From a consumer perspective, the latter is, of course, a desirable outcome of increased competition in international aviation markets. US carriers, however, are likely worse off following Gulf carrier entry.⁷⁶⁸

The allegations will be very hotly contested and already Emirates has requested the release of the non-public financial statements on which the allegations are based.⁷⁶⁹ However, given that the subsidy allegations are only at the very earliest stages of being considered by competition authorities in both the United States⁷⁷⁰ and in the EU,⁷⁷¹ it is not possible to reach a conclusion here with respect to whether the allegations will be sustained.

D) Trade Remedies are Unavailable.

International aviation is largely excluded from the jurisdiction of the World Trade Organization (WTO):

Agencies such as the World Trade Organisation have played a minimal role in changing the way international air services are provided. Air transportation services are, for example, governed by a specific annex of the General Agreement on Trade in Services (GATS). The annex excludes from the agreement the largest part of air transport services: traffic rights and services directly related to traffic, and relate to minor, technical "doing business" activities.⁷⁷²

The settlement of disputes in aviation matters instead takes place under the BASAs concluded pursuant to the Chicago Convention regime.⁷⁷³

In the pre-1992 deregulated environment, airlines were seen as instruments of international trade and state policy⁷⁷⁴ and acute trade conflicts inevitably arose.⁷⁷⁵

⁷⁶⁸See Martin Dresner, Cuneyt Eroglu, Christian Hofer, Fabio Mendez, Kerry Tan, "The impact of Gulf carrier competition on US airlines" (2015) 77 Transportation Research Part A: Policy and Practice (Science Direct).

⁷⁶⁹ See US, Office of the Secretary of Transportation, Department of Transportation, DOT-OST-2015-0082-0020 (16 April 2015) (*Emirates - Requesting Public Release of Documents*).

⁷⁷⁰ See *supra* note 2.

⁷⁷¹ See *supra* note 1.

⁷⁷² See Kenneth Button, "Air Transportation Services: Both a Traded Commodity and a Transactional Cost in International Trade" (2010) 1:1 Journal of International Commerce, Economics and Policy, 105-120, at 113. online: <www.oecd.org/tad/services-trade/46265734.pdf> (visited May 7, 2015).

⁷⁷³ See Veron Nase, "ADR and international aviation disputes between state – Part 1" (2003) 6:1 ADR Bulletin, 1-7, at 1, online: Bond University <publications.bond.edu.au/cgi/viewcontent.cgi?article=1253&context=adr>.

⁷⁷⁴ See *supra* Chapter 1 III C) Are Airlines a public good?

⁷⁷⁵ An example of this is the dispute between the UK and the US over the Bermuda Agreement of 1946. See *supra* Chapter 2 III) A) Negotiating Bilateral Air Service Agreements esp. at notes 415 to 421 and associated text.

Wherever a framework for trade exists, the potential for conflict arises. In no other industry is this assertion more obvious than that of international transport by air, where government regulation has traditionally been severe and all encompassing and trade relations are based on a web of bilateral agreements rather than one homogenous multilateral treaty.⁷⁷⁶

It is not therefore surprising that the General Agreement on Trade and Services (GATS), in its Annex on Air Transport Service,⁷⁷⁷ specifically excluded air transport services from its scope:

2. The Agreement, including its dispute settlement procedures, shall not apply to measures affecting:
 - (a) traffic rights, however granted; or
 - (b) services directly related to the exercise of traffic rights⁷⁷⁸

In its broad definition of "traffic rights" excluded from GATS, Article 6(d) of the Annex includes "tariffs to be charged and their conditions, and criteria for designation of airlines, including such criteria as number, ownership, and control."⁷⁷⁹ Article 4 further precludes the use of WTO dispute settlement procedures until the "dispute settlement procedures in bilateral and other multilateral agreements or arrangements have been exhausted."⁷⁸⁰ The fact that international trade law does not apply to the vast majority of the international aviation industry was underscored by the US-EU dispute over the application of the European Emission Trading Scheme (EU ETS)⁷⁸¹ to international aviation.⁷⁸²

In a comprehensive analysis of whether the EU ETS complied with the General Agreement on Trade and Tariffs (GATT)⁷⁸³ and the GATS, Dr. Lorand Bartels wrote:

It is possible that a WTO Panel would lack jurisdiction to determine whether there is a GATS violation until ICAO remedies have been exhausted. However, this does not mean that the WTO member would be complying with its WTO obligations. It just means that dispute settlement is not available.⁷⁸⁴

⁷⁷⁶ See Dimitri Maniatis, "Conflict in the Skies: The Settlement of International Aviation Disputes" (1995) 20:2 Ann Air & Sp L 167 at 168.

⁷⁷⁷ *Annex on Air Transport Services: General Agreement on Trade in Services*, 15 April 1994, 1869 UNTS 183, 33 ILM 1167 at 1188.

⁷⁷⁸ *Ibid*, art 2.

⁷⁷⁹ *Ibid*, art 6 (d).

⁷⁸⁰ *Ibid*, art 4.

⁷⁸¹ *Ibid*, art 6 (d).

⁷⁸² See *supra* note 65.

⁷⁸³ General Agreement on Tariffs and Trade, 15 April 1994, 1867 UNTS 187, 33 ILM 1153.

⁷⁸⁴ Lorand Bartels, "The Inclusion of Aviation in the EU ETS: WTO Law Concerns" (2012) International Centre for Trade and Sustainable Development, (Issue Paper no. 6) at 24.

Thus, even if trade rules could potentially apply to an aviation-focused dispute, the WTO dispute mechanism would not apply until the dispute settlement process in the BASA has been exhausted and until the ICAO Council has dealt with the matter or refused to hear it.⁷⁸⁵

There does not appear to be an easy solution to this matter. A 2007 doctoral thesis concluded that international aviation and international trade have evolved separately on parallel tracks and the prospect of including air transport services in the GATS is low.⁷⁸⁶

E) Reacting to the Government-Backed Mega Carriers

In the absence of trade remedies, airlines alleging competitive distortion are seeking solutions through the provisions in the applicable BASA. In October 2010, the President of Air France reacted to the spectacular expansion of Emirates by calling on the European Union to slow down the "encroachment of Emirates and other Gulf carriers" and defend the EU's status as an air-travel hub.⁷⁸⁷ Indeed, as early as 2008, European business analysts had argued:

On the Europe to Asia market, Middle Eastern carriers are particularly competitive on routes to the southern parts of Asia... . The most affected carriers will be those who are operating big long-haul fleets and are heavily relying on routes that are potentially endangered by the new players from the Gulf region. In Europe, Air France/KLM, British Airways, Lufthansa German Airlines, and Virgin Atlantic will be among the most affected.⁷⁸⁸

American and European carriers⁷⁸⁹ complain of an uneven playing field with respect to competition against GBMCs based in the Gulf. Lufthansa noted in its 2011 Annual Report "Emirates, Qatar Airways and Etihad Airways are increasingly moving into the centre of competitive focus."⁷⁹⁰ As a result, Lufthansa is actively campaigning to deny Emirates landing rights at Berlin new airport⁷⁹¹ as well as at Stuttgart.⁷⁹²

⁷⁸⁵ The ICAO Council rarely makes a decision with respect to a dispute. See Michael Milde, *International Law and ICAO* (The Hague: Eleven International Publishing, 2008) at 154.

⁷⁸⁶ See, Cecilia Geneviève Decurtins, *The Air Transport Review at the WTO: Bilateralism versus Multilateralism* (Thesis, Institut Universitaire de Hautes Études Internationales, Université de Genève, Genève, 2007) [unpublished].

⁷⁸⁷ Frost & Rothman, *supra* note 756.

⁷⁸⁸ Vespermann, Wald & Gleich, *supra* note 750 at 391.

⁷⁸⁹ Frost & Rothman, *supra* note 756. Aircraft finance is a huge topic that will not be addressed in this paper. In June 2014, Delta's CEO told Congress that Ex-Im Bank transactions were saving Emirates US\$ 188 million/year. See Testimony of Richard H. Anderson, Chief Executive Officer, Delta Airlines, before the House Financial Services Committee, June 25, 2014, online: US House of Representatives <financialservices.house.gov/uploadedfiles/hhrg-113-ba00-wstate-randerson-20140625.pdf>.

⁷⁹⁰ Lufthansa, "For a safe journey: AR-2011", *Annual Report for 2011* at 65, online: Lufthansa Group <investor-relations.lufthansagroup.com/fileadmin/downloads/en/financial-reports/annual-reports/LH-AR-2011-e.pdf> [AR-2011].

⁷⁹¹ Rory Jones, "Lufthansa steps up fight to bar Emirates from Berlin", *The National [Abu Dhabi]* (17 January 2011) online: The National <www.thenational.ae/business/aviation/lufthansa-steps-up-fight-to-bar-emirates-from-berlin>.

Air Canada's opposition to Emirates⁷⁹³ is well known as is its successful lobbying of the federal government.⁷⁹⁴ Given that Air Canada does not serve any point between Tel Aviv and Shanghai,⁷⁹⁵ the motivation of its campaign was not apparent. Matters have since been clarified by Air Canada's A++ MNJV partner Lufthansa, which observed: "Gulf Carriers are geographically well positioned to serve the South Asian-North American growth market, but competition is still restricted on some primary ... destinations".⁷⁹⁶ Predictably, Lufthansa was accused by Emirates of trying to block it from expanded access to the Canadian market.⁷⁹⁷ In addition to seeking support from policy-makers and regulators,⁷⁹⁸ Lufthansa prepared for more robust competition by forging "joint venture" agreements with some of its Star Alliance partners.

[Lufthansa's] market position, product and service portfolio, worldwide network and the combined strengths of its joint ventures such as Atlantic++ mean, however, that the Passenger Airline Group is well prepared for global competition.⁷⁹⁹

IV) METAL NEUTRALITY

The Atlantic++ joint venture mentioned by Lufthansa debuted on July 23, 2008 when Air Canada, Continental, Lufthansa and United sought the blessing of the US Department of Transportation (DOT) for a highly confidential proposed 4-way metal neutral joint venture

⁷⁹² See Emirates, "Tearing Down the Other Wall", online: Emirates

<content.emirates.com/downloads/ek/pdfs/int_gov_affairs/Tearing-down-to-the-other-wall.pdf>.

⁷⁹³ See Scott Deveau, "Air Canada, Emirates war of words escalates", *Financial Post* (9 March 2010) online:

National Post <www.nationalpost.com/related/topics/Canada+Emirates+words+escalates/2663385/story.html>.

⁷⁹⁴ See "Duncan Dee" in Bea Vongdouangchanh, "The Top 100 Lobbyists 2011", *The Hill Times* (14 February 2011) online: Hill Times <www.hilltimes.com/feature/2011/02/14/the-top-100-lobbyists-2011/25485?page_requested=3>.

⁷⁹⁵ In this region Air Canada has only ever served Delhi, Bombay and Singapore. It started service from London to Singapore via Bombay on January 15, 1985. See Ashok Chandwani, "Air Canada aims at business traveller with Singapore route", *The [Montreal] Gazette* (12 January 1985) E3 (ProQuest) [emphasis added]. Air Canada later switched Bombay for Delhi and dropped the service to Singapore in 1991. The London-Delhi route was dropped in 1999. A Toronto-Delhi route was also operated from 2003 to 2005. See UK Civil Aviation Authority, *Case Study 6 – UK-India Rights for a Canadian Airline: A Toronto-Birmingham-Mumbai service by Air Canada*, online: UK Civil Aviation Authority <www.caa.co.uk/docs/589/Regionalfifths_casestudy6.pdf> (visited May 14, 2014); and Steven Lott, "Air Canada To End Nonstop New Delhi Service, Add Zurich", *Aviation Week* (11 July 2005). Air Canada's interest in blocking Emirates seems to be connected to its desire to strengthen Star Alliance, and in particular the A++ Metal Neutral Joint Venture of which Air Canada, Lufthansa and United are members.

⁷⁹⁶ Christoph Franz, "Lufthansa Passenger Airlines" (delivered at Lufthansa Investor Day 2010, Frankfurt, 28 June 2010) at 12, online: Lufthansa Group <investor-relations.lufthansa.com/fileadmin/downloads/en/charts-speeches/LH-Passage_Online-2010-06-28-e.pdf>. Underlining is author's emphasis.

⁷⁹⁷ Shane McGinley, "Lufthansa encouraging Canada to block Emirates expansion, claims Flanagan", *Arabian Business* (6 December 2010), online: Arabian Business <www.arabianbusiness.com/lufthansa-encouraging-canada-block-emirates-expansion-claims-flanagan-365633.html> (visited May 14, 2014).

⁷⁹⁸ Vespermann, Wald & Gleich, *supra* note 750 at 392.

⁷⁹⁹ Lufthansa, "AR-2011", *supra* note 790 at 65.

(MNJV) called Atlantic Plus-Plus (A++).⁸⁰⁰ The MNJV would "permit coordinated pricing, revenue management, sales, marketing, frequent flyers programs, airport operations, and joint planning and scheduling of transatlantic routes."⁸⁰¹ The DOT explained it thus:

A++ aims to foster "metal neutrality" – a commercial environment in which joint venture partners share common economic incentives to promote the success of the alliance over their individual corporate interests. By pooling resources to improve the overall service offering, and by sharing gains and losses, the partners are able to harmonize the global network and become indifferent as to which of them collects the revenue and operates the aircraft on a given itinerary. They are then able to focus on gaining the customer's business by providing the best available fare and routing between two cities."⁸⁰²

Initially one can see how such a joint venture could be a clear competitive response to Emirates. By combining their route systems, the A++ partners can provide seamless service over a much larger route network than Emirates could ever hope to serve. This is because Emirates' flights operate from its hub in Dubai whereas the A++ partners have many hubs in Canada, Europe, Japan and the United States⁸⁰³ and this allows them to serve many secondary destinations that cannot profitably be served on a direct flight from Dubai. Thus the A++ joint venture can reach passengers that Emirates cannot. For example, while Emirates can provide a one-stop itinerary between Los Angeles and Lahore, the A++ MNJV can also provide itineraries originating in Lansing, Leipzig/Halle, Leon/Guanajuato, Lethbridge, Lexington, Lima, Little Rock, or Linz and each of these airports is unlikely to ever see non-stop flights to Dubai.

A) Are MNJVs monopolistic?

Chapter 5 argues for limited inter-carrier cooperation in order to reduce greenhouse gases (GHG) and air traffic congestion and argues that this objective should be included in any future granting of antitrust immunity (ATI) to an MNJV. The type of inter-carrier cooperation that Chapter 5 envisages would have a minimal impact on competition while delivering heretofore unattainable environmental benefits. To the extent however that MNJVs are to be granted ATI protection, environmental objectives must be included in the decision.

⁸⁰⁰ See US, Department of Transportation, *Joint Application of Air Canada, Austrian, bmi, LOT, Lufthansa, SAS, Swiss, TAP, and United to Amend Order 2007-2-16 under 49 USC. §§ 41308 and 41309 so as to Approve and Confer Antitrust Immunity*, Docket OST-2008-0234 (23 July 2008).

⁸⁰¹ See US, Department of Transportation, *Answer of Delta Airlines*, Docket OST-2008-0234 (26 November 2008).

⁸⁰² US, Department of Transportation, *Show Cause Order 2009-4-5*, Docket OST-2008-0234 (7 April 2009) at 4 [emphasis added].

⁸⁰³ The major hubs of the A++ joint venture are Chicago, Denver, Frankfurt, Houston, Los Angeles, Montreal, Munich, Newark, San Francisco, Tokyo Narita, Toronto, Vancouver and Washington Dulles.

Absent such potential environmental benefits, ATI protection of MNJVs should only be granted sparingly, because MNJVs are arguably incompatible with the idea of inter-carrier competition. For example, prior to the formation of the Star Alliance in 1997,⁸⁰⁴ Air Canada and Lufthansa had competed on the Toronto-Frankfurt routes for over 20 years.⁸⁰⁵ Today the A++ MNJV operates all of the scheduled flights on the route with the result that there may be no meaningful competition on non-stop routes between Canada and Germany.⁸⁰⁶ This is particularly concerning given that the number of Canada-Germany flights has increased.⁸⁰⁷ The same situation exists in the US. For at least six years, United and Lufthansa had competed between Frankfurt and both Chicago⁸⁰⁸ and Washington.⁸⁰⁹ In granting ATI to their alliance in 1996 the DOT carved out these two routes:

The harm as a result of antitrust immunity grants to international alliances is to customers in trans-Atlantic non-stop overlaps. To preserve competition in non-stop overlaps, DOT has at times carved them out (that is, excluded them) from immunity grants, meaning that the alliance carriers had to remain independent competitors in their non-stop overlaps. For example, when DOT granted immunity to the United-Lufthansa alliance in 1996,⁸¹⁰ it carved-out the two non-stop overlaps between their major hubs (Frankfurt-Chicago and Frankfurt-Washington).

If DOT grants antitrust immunity to the two airlines and carves out route H-K, then the carriers may not collude on fares to 'local' passengers in route H-K, who are passengers who have cities H and K for origin and destination and fly non-stop between H and K.⁸¹¹

Had this not occurred, today the A++ would have a monopoly on both routes.⁸¹² But when the EU approved the A++ MNJV, it required them to facilitate the entry of new competitors on the Frankfurt-New York route,⁸¹³ a route served by both Delta⁸¹⁴ and Singapore Airlines.⁸¹⁵

⁸⁰⁴ See *Star Alliance 10*, *supra* note 549.

⁸⁰⁵ Air Canada started flying non-stop from Toronto to Frankfurt on April 27, 1966. Lufthansa began flying from Frankfurt to Montreal in 1956 and began non-stop service to Toronto on April 29, 1973.

⁸⁰⁶ Air Transat does not serve Frankfurt from Toronto, but only from Calgary/Vancouver and only in the summer.

⁸⁰⁷ In the decade between 2002 and 2012 the number of Canada-Germany flights, seats and routes, increased, respectively, by 28.57%, 24.42% and 28.57%. See *ACT 902*, *supra* note 601. See *STAR 912*, *supra* note 602.

⁸⁰⁸ United started service on May 15, 1990. See "United, Globus-gateway Sign Tour Agreement", *Chicago Tribune [Business]* (27 February 1990), online: Chicago Tribune <articles.chicagotribune.com/1990-02-27/business/9001170106_1_united-airlines-frankfurt-service>. Lufthansa started service on May 14, 1960.

⁸⁰⁹ United started service on May 15, 1990. See *ibid.* Lufthansa started service on April 1, 1987.

⁸¹⁰ US, Department of Transportation, *Final Order 96-5-27*, Docket OST-96-1116 (20 May 1996) at 3.

⁸¹¹ William Gillespie & Oliver M. Richard, "Antitrust Immunity and International Airline Alliances", EAG 11-1, Economic Analysis Group Discussion Paper (Economic Analysis Group, Antitrust Division, US Department of Justice, February 2011) at 16, online: US Department of Justice <www.justice.gov/atr/public/eag/267513.pdf>. This only applies to tickets bought in the US.

⁸¹² Only United and Lufthansa serve the Washington-Frankfurt route. In addition, American served the Chicago-Frankfurt route from April 1985 to November 2010. See American Airlines, Press Release, "American Airlines celebrates 25 years of flights from Frankfurt" (12 April 2010), online: American Airlines <www.americanairlines.it/intl/de/newsAndPr_en/pr_25years.jsp>; Lewis Lazare, "American Airlines set to fly from

A grant of antitrust immunity to two airlines that offer non-stop flights in a route eliminates competition between these airlines in the route. Numerous economic studies of the domestic US airline industry since deregulation have shown that the number of competitors serving a route matters and reducing the number of non-stop competitors leads to significant fare increases.⁸¹⁶

Competition in the airline industry is supposed to be the norm and just as in any other market, competition results in various consumer benefits, such as lower prices, better service and perhaps a greater product offering. This has been the driving philosophy of deregulation in various markets and international open skies agreements. A contrast between two routes underscores the profound impact that competition has on service and prices. The New York–London route⁸¹⁷ is highly competitive;⁸¹⁸ six airlines offer non-stop flights⁸¹⁹ and fully 10 others offer 1-stop connections via their hubs.⁸²⁰ By contrast, the St. John's–London route⁸²¹ is essentially a monopoly; one airline offers non-stop service during the summer months⁸²² and connections

O'Hare to Dusseldorf", *Chicago Business Journal* (10 April 2013), online: Chicago Business Journal <www.bizjournals.com/chicago/news/2013/04/10/american-airlines-re-enters-germany.html>.

⁸¹³ *Decision Case AT.39595*, *supra* note 299.

⁸¹⁴ Delta has served the New York–Frankfurt route since it bought Pan Am's European routes in 1991. See Scot J Paltrow, "Delta Wins the Bidding to Buy Most of Pan Am Airlines: Purchaser to get prized Northeast shuttle. Federal bankruptcy court approves \$1.39-billion deal", *Los Angeles Times* (13 August 1991) online: Los Angeles Times <articles.latimes.com/1991-08-13/news/mn-855_1_pan-delta-airlines> (visited May 14, 2014).

⁸¹⁵ Singapore Airlines inaugurated the Singapore-Frankfurt-New York route on a daily basis with a Boeing 747-400 on July 2, 1992. They up-gauged to an Airbus A380 on January 15, 2012. See Singapore Airlines, News Release, "Singapore Airlines A380 to fly Singapore - Frankfurt - New York", (19 September 2011), online: Singapore Airlines <www.singaporeair.com/jsp/cms/en_UK/press_release_news/ne110919a.jsp> (visited May 14, 2014).

⁸¹⁶ Gillespie & Richard, *supra* note 811 at 7.

⁸¹⁷ The New York-London route is 3,440 miles. New York airports with non-stop transatlantic service are John F. Kennedy and Newark. London airports with non-stop transatlantic service are Heathrow and Gatwick.

⁸¹⁸ This route has seen the launch of transatlantic jet service (BOAC, Comet 4, October 1958); the commercial launch of the Boeing 747 (Pan Am, January 1970); supersonic service (Concorde for two decades starting in November 1977); and the first-ever transatlantic low cost non-stop service (Freddie Laker, Skytrain, September 1977). See Roger Eglin & Berry Ritchie, *Fly me, I'm Freddie!* (London: Weidenfeld and Nicolson, 1980) at 225. It has also seen niche all-business carriers such as Silverjet, EOS and Maxjet, as well a business-class-only British Airways flight from London City Airport to New York. See London City Airport, Press Release, "British Airways: Unique Plane Joins BA Fleet", (September 1, 2009) online: London City Airport <www.londoncityairport.com/News/ReadPressRelease/1150> .

⁸¹⁹ Five airlines, American, British Airways, Delta, Virgin Atlantic and United, all provide daily non-stop flights. In addition Kuwait Airways flies from New York to Kuwait via London thrice weekly.

⁸²⁰ The 10 airlines are Aer Lingus, via Dublin; Air Canada, via Montreal or Ottawa; Air France, via Paris; Icelandair, via Reykjavik; KLM, via Amsterdam; Lufthansa, via Dusseldorf or Frankfurt; SAS via Stockholm; Swiss via Zurich; TAP Portugal, via Lisbon; and US Airways via Philadelphia. The fastest connections are roughly 2 hours longer than the 7 hours scheduled for most non-stop flights on the route.

⁸²¹ St. John's (YYT) is 2,310 miles from London.

⁸²² Air Canada flies St. John's–London Heathrow daily with an Airbus A319 from mid-May to the end of September. See Air Canada, News Release, "Air Canada Re-Launches Daily Non-Stop Seasonal Flights between St. John's, NL and London Heathrow; Easy and Fast Connecting Flights Across Europe", (17 May 2012) online: Air Canada <aircanada.mediaroom.com/index.php?s=43&item=552>.

during the other seasons⁸²³ and only one other carrier could potentially offer same-airline connecting service.⁸²⁴ Due in large part to the difference in levels of competition the cost/mile of the St. John's–London route is more than twice that of the New York–London route.⁸²⁵ In addition, there is a significant difference in the in-flight services offered over the two routes. The business class service on the St. John's-London route is identical to Air Canada's domestic business product on single aisle aircraft,⁸²⁶ whereas the business class service on the New York-London route is extremely competitive with most airlines offering lay-flat beds.⁸²⁷ To further highlight the impact that competition has on a market, a First Class ticket on a New York–London flight costs roughly 14% less than the cost of a Business Class ticket on a St. John's – London flight.⁸²⁸ The contrast between the routes could not be starker, however the two routes may stand as a metaphor for two categories of non-stop routes; those which are served by two or more competing airlines or alliances, and those where a single airline or alliance dominates. Research has confirmed the impact of competition and fares:

[F]ares paid by passengers for travel in non-stop trans-Atlantic flights are significantly higher in routes with fewer independent non-stop competitors. The data show that, all else equal, average one-way fares in routes served by one non-stop carrier are \$31 higher than in routes served by 2

⁸²³ Air Canada also offers St. John's-X-London routings via Halifax, Montreal and Toronto. The fastest connection via Halifax results in a travel time of 8:45; nearly double the 5:00 duration of a non-stop flight.

⁸²⁴ United, Air Canada's partner in the A++ MNJV, is the only other airline that serves both St. John's and London. It offers a one-stop connection via Newark with a 14-hour travel time. The only alternative that does not involve Air Canada, is an interline arrangement, with a 17-hour travel time, between British Airway and Westjet to connect St. John's-London passengers through Toronto. For the summer of 2014, Westjet will fly non-stop between St. John's and Dublin, where connections to London are available. See Greg Keenan, "WestJet to test its luck in Ireland", *The Globe and Mail* (15 November 2013) online: The Globe and Mail <www.theglobeandmail.com/report-on-business/westjet-goes-trans-atlantic-with-new-dublin-flight/article15455464/> (visited April 30, 2014).

⁸²⁵ On December 28, 2013 at 12:05 A.M., this author booked fictitious itineraries over the New York-London and St. John's-London routes. The outbound date was Tuesday May 13, 2014 and the return date was Tuesday May 27, 2014. For New York-London, the lowest available non-refundable economy fare was CA\$ 891 or roughly CA\$ 0.13/mile, and a full fare economy ticket was CA\$ 2,841 or CA\$ 0.41/mile. For St. John's-London, the lowest available non-refundable fare was CA\$ 1,360, or roughly CA\$ 0.29/mile, and a full fare economy ticket was CA\$ 4,327.65 or CA\$ 0.91/mile. In both cases the St. John's–London fare is higher in absolute terms than the New York-London fare. Air Canada's CA\$ 1,360 discount fare was CA\$ 52 cheaper than the \$1,412 that United would charge for a connection via Newark and over CA\$ 200 cheaper than the CA\$ 1,574 that British Airways and Westjet would charge for an interline connection at Toronto.

⁸²⁶ See "Air Canada Re-Launches", *supra* note 822.

⁸²⁷ On the St. John's-London route a standard domestic business class seat and associated service standards can be had for CA\$ 5,794.50 or roughly CA\$ 1.25/mile. A lie-flat bed and associated internationally competitive business class services can be had on the New York-London route for CA\$ 3,462 or roughly CA\$ 0.50/mile.

⁸²⁸ A 6.5' flat First class seat on American costs CA\$ 4962, CA\$ 800 less than a Business class seat on Air Canada's Airbus A319. Here intercontinental first class service between New York and London is cheaper than domestic business class service between St. John's and London. Levels of competition have an impact on service levels and pricing.

competing non-stop carriers, \$62 higher than in routes served by 3 competing non-stop carriers, and \$88 higher than in routes served by 4 competing non-stop carriers.⁸²⁹

The dramatic fare difference between the St. John's–London and the New York–London routes is driven in part by St. John's geographic location and the fact that no competing carrier offers a year-round viable one-stop itinerary. However, to the extent that the effect of MNJVs would be to create a monopoly on shared routes, authorities should take action to preserve competition.

In the face of allegations that a reduction in competition will lead to higher fares, airlines seeking to create an MNJV will often argue that a grant of antitrust immunity will facilitate the launching of new routes.⁸³⁰ Thus in recent years, the current members of the A++ MNJV have inaugurated various new transatlantic routes; San Francisco-Munich,⁸³¹ Chicago-Dusseldorf,⁸³² Denver-Frankfurt,⁸³³ Montreal-Munich⁸³⁴ Denver-Munich,⁸³⁵ Toronto-Dusseldorf⁸³⁶ and Ottawa-Frankfurt.⁸³⁷ However, long before MNJVs were created, simple limited inter-airline cooperation may have facilitated services that might not otherwise have existed. For example the 12,000 mile Australia-UK route was initially the result of a partnership between "the Lion and the Kangaroo"⁸³⁸ and many years later the successor carriers were maintaining "intimate cooperation in scheduling and operations"⁸³⁹ and even using "identical equipment [to simplify] maintenance at either end of the line."⁸⁴⁰ The UK-South Africa route followed a comparable strategy.⁸⁴¹ A

⁸²⁹ Gillespie & Richard, *supra* note 811 at 2.

⁸³⁰ The promise of the development of new routes is often central to the granting of ATI. See *ibid* at 12.

⁸³¹ Lufthansa launched San Francisco-Munich in cooperation with United in June 1996. See Lufthansa, Press Release, "Lufthansa increases service to Germany from U.S cities this spring and summer; first San Francisco-Munich non-stop flights Boston, Atlanta, Newark, and Los Angeles add service" (18 March 1996), online: The Free Library <www.thefreelibrary.com/Lufthansa+increases+service+to+Germany+from+US+cities+this+spring...a018100780>.

⁸³² United launched Chicago-Dusseldorf in cooperation with Lufthansa on June 1, 1996. See *ibid*.

⁸³³ Route inaugurated on March 25, 2001. See United Airlines, Press Release, "Lufthansa and United Announce Plans to Offer First Denver-Frankfurt Nonstop Service" (11 September 2000) (on file with author).

⁸³⁴ Lufthansa inaugurated the route on May 19, 2003 in cooperation with Air Canada. See Aeroports de Montreal, Press Release, "Aeroports de Montreal announces Lufthansa's return to Montreal" (2 April 2003) (on file with author).

⁸³⁵ See Lufthansa, Press Release, "Lufthansa Expands Denver Service; Launches Nonstop Flight to Munich" (20 November 2006), online: Lufthansa <www.lufthansa.com/cdautils/mediapool/pdf/09/media_422409.pdf>. United code-shared on all of the flights. Service started on March 31, 2007 and ended in October 2008.

⁸³⁶ Lufthansa launched Toronto-Dusseldorf service in cooperation with its Star Alliance partner Air Canada on May 1, 2008. See Air Canada, News Release, "Air Canada expands Canada-Germany services with Lufthansa; Introduces Ottawa-Frankfurt non-stop service year-round" (5 November 2007), online: Air Canada <aircanada.mediaroom.com/index.php?s=43&item=199> (visited May 14, 2014).

⁸³⁷ Air Canada launched Ottawa-Frankfurt service in cooperation with Lufthansa on June 1, 2008. See *ibid*.

⁸³⁸ This 9.5 day service began in 1938. See Sampson, *supra* note 57 at 52.

⁸³⁹ See ICAO Doc 4954, AT/633-Ireland, at 5–6, cited in Wager, "International – Part II", *supra* note 383 at 302.

⁸⁴⁰ *Ibid*.

⁸⁴¹ See Walter H Wager, "International Airline Collaboration in Traffic Pools, Rate-Fixing and Joint Management

similar philosophy applied to Britain's connection with Commonwealth countries in the Caribbean; Air Jamaica was set up in 1963 by BOAC⁸⁴² and 30 years later its London services were still operated through a code share with British Airways.⁸⁴³

In addition, airlines have cooperated to operate otherwise unfeasible services that offered passengers dramatically reduced travel time. Examples of such services are Johannesburg–Rio de Janeiro⁸⁴⁴ and Buenos Aires–Auckland–Sydney.⁸⁴⁵ Similarly, carriers in distant lands have been known to cooperate to offer direct service that would otherwise have transited through a third country.⁸⁴⁶ Cooperation is not a pre-condition to such services. Several long-haul services were offered by a single carrier and these included the Abidjan-New York,⁸⁴⁷ Athens-Sydney,⁸⁴⁸ Johannesburg-Sydney,⁸⁴⁹ and Lagos-Rio de Janeiro⁸⁵⁰ routes. Even in 1992, fierce competition existed on routes such as London-Hong Kong⁸⁵¹ Los Angeles-Tokyo,⁸⁵² Miami-Rio de Janeiro,⁸⁵³ and Singapore-Sydney.⁸⁵⁴

One would assume that if long-haul routes could sustain competition in 1992, the case for competition would be even stronger in 2015. Yet in many cases, the effect of MNJVs is to create

Agreements" (1951) 18:2 J Air L & Com 192 at 195 (HeinOnline).

⁸⁴² See Burton A Landy, "Cooperative Agreements Involving Foreign Airlines: A Review of the Policy of the United States Civil Aeronautics Board" (1969) 35 J Air L & Com 575 at 583 (HeinOnline).

⁸⁴³ See *OAG Desktop*, *supra* note 32 at 624, 691, 695, 832.

⁸⁴⁴ In 1992, Varig and South African Airways offered direct service over the route on Thursdays and Sundays respectively. The service was 27 hours faster eastbound and 32 hours faster westbound than making connections in Europe. It is likely the two carriers were cooperating on the route. See *ibid* at 606, 1054.

⁸⁴⁵ AR/QF 880/881 was a weekly service operated by Aerolíneas Argentinas and code-share partner Qantas that was at least 20 hours faster than connections in the US. It flew west on Tuesday and returned on Wednesdays.

⁸⁴⁶ Thus in 1990, Canadian Airlines and Air New Zealand concluded an agreement to transfer passengers at Honolulu to each other's flights. As of December 2, 1990 each carrier could "list" 4 flights weekly on the route, instead of the two that it would have operated on its own. The practice enabled each to offer higher frequency to business travelers, who might otherwise have flown via the US. See *The Globe and Mail*, (8 September 1990) B 10.

⁸⁴⁷ This was a weekly service operated by Air Afrique. See *OAG Desktop*, *supra* note 32 at 69, 892.

⁸⁴⁸ Olympic Airways was the only carrier offering direct service over this route. See *ibid* at 133, 1212.

⁸⁴⁹ The fact that South African Airlines was alone on this route is due in part to Australia's refusal to allow Qantas to serve South Africa as a result of the latter's Apartheid policies. See GH Pirie, "Aviation, apartheid and sanctions: Air transport to and from South Africa, 1945-1989" (1990) 22 *GeoJournal* 231 at 235 (Springer Link).

⁸⁵⁰ In 1992 this was a weekly service operated by Varig. See *OAG Desktop*, *supra* note 32 at 647, 1054.

⁸⁵¹ In mid-1980, Hong Kong authorized Laker, British Caledonian and Cathay Pacific to compete with British Airways on the route. Ultimately Laker was denied permission by the British authorities but the other two airlines started service that Summer. See Denis Bray, "Hong Kong: Its economic structure and relationship with China" (1980) 11 *Asian Affairs* 293 at 296 (Taylor & Francis Online). See also Davies, *Rebels*, *supra* note 57 at 253, 275.

⁸⁵² In 1992, eight carriers, All Nippon, Delta, Japan Airlines, MAS, Northwest, Singapore Airlines, Thai Airways and Varig, provided non-stop service over this route. See *OAG Desktop*, *supra* note 32 at 723, 1275.

⁸⁵³ In 1992, five carriers, American, Aerolíneas Argentinas, TransBrasil, Varig and United, provided non-stop service over this route. See *ibid* at 809, 1054.

⁸⁵⁴ In 1992, six carriers, British Airways, Gulf Air, Lufthansa, Qantas, Singapore Airlines and Union de Transports Aériens (UTA), provided non-stop service over this route. See *ibid* at 1180, 1219.

increased concentration of service on routes where competition previously existed. For this reason, the approval of MNJVs requires deeper public policy scrutiny.

B) MNJV structures raise legal concerns

The structure of the A++ MNJV and similarly conceived joint ventures raises legal concerns. If the four airlines in the A++ MNJV truly are indifferent as to which of them operates the aircraft, their joint venture is essentially a new *de facto* legal person, in which each of the participants has a financial interest. Indeed the MNJV establishes a common bottom line where each partner has the same incentive to maximize the MNJV's profits.⁸⁵⁵ If the joint venture is unincorporated, the normal ownership and control issues do not apply and this allows the participating airlines to avoid potentially significant legal obstacles,⁸⁵⁶ such as those which KLM faced in trying to invest in Northwest in 1989.⁸⁵⁷ In order to win DOT approval for its transaction, KLM was allowed to hold only 49% of the equity and less than 5% of the voting stock of Wings Holdings, Inc., a holding company established for the purpose of purchasing Northwest. KLM could appoint 3 directors of Wings' 15-member Board of Directors, 11 would have to be US citizens, and KLM's directors were required to recuse themselves when necessary.⁸⁵⁸

In addition to avoiding these ownership and control issues, the MNJVs avoid almost all public scrutiny; their founding documents are secret and their financial details are unknown. The degree of secrecy surrounding the A++ joint venture is highlighted by the fact that the European Union press release announcing the Commission's blessing of the joint venture noted that due to the need to preserve business confidentiality, no public version of the decision was available.⁸⁵⁹

The US DOT has publicly confirmed that an MNJV may operate by "pooling resources to improve the overall service offering, and by sharing gains and losses."⁸⁶⁰ Indeed, it has been recognized that the partners may "operate virtually as a single entity ... including by sharing net revenues and/or costs ... free from any incentive to compete with one another."⁸⁶¹

⁸⁵⁵ See US, Department of Transportation, *Show Cause Order 2008-4-17*, Docket OST-2007-28644 (9 April 2008).

⁸⁵⁶ See generally Chia-Jui Hsu & Yu-Chun Chang, "The Influences of Airline Ownership Rules on Aviation Policies and Carriers' Strategies", online: (2005) 5 Proceedings of the Eastern Asia Society for Transportation Studies 557, <www.easts.info/on-line/proceedings_05/557.pdf> (visited May 14, 2014).

⁸⁵⁷ See US, Department of Transportation, *Acquisition of Northwest Airlines Inc*, Order 89-9-51 (1989).

⁸⁵⁸ See *Wings Holdings*, *supra* note 538.

⁸⁵⁹ *Decision Case AT.39595*, *supra* note 299.

⁸⁶⁰ *Show Cause Order 2009-4-5*, *supra* note 802.

⁸⁶¹ See *Comm of Competition v Air Canada*, *supra* note 301 at 9 (Affidavit of Hugh Dunleavy, 24 August 2011).

C) The creation of MNJVs is contrary to long-standing American opposition to pooling arrangements.

At its core, metal neutrality is a pooling arrangement as it involves the sharing of profits between the airlines at both ends of the route and allows them to work out a sensible schedule and avoid competing for time slots at peak times.⁸⁶² It guarantees market share to the weaker of the two carriers⁸⁶³ and increases load factors by decreasing flight frequency.⁸⁶⁴ Unless a pooling arrangement would reduce airport and air traffic congestion and reduce greenhouse gas emission from aviation⁸⁶⁵ it should be rejected as being incompatible with long-standing American opposition to pooling as anti-competitive. Indeed, so rigid was the policy that for many years it could only be considered on international routes serving the United States where such use was in the "national interest."⁸⁶⁶

What constituted the "national interest" in this context was never clearly defined. In 1987, as Soviet-American relations improved, Pan Am and Aeroflot were authorized to conclude a joint venture with respect to the operation of a non-stop flight between New York and Moscow.⁸⁶⁷ However, prior to the consideration of the first MNJV in 2008⁸⁶⁸ there is no proof that any other pooling arrangement was ever approved by US authorities. Direct services between the US and countries such as the United Arab Emirates or Sub-Saharan Africa were facilitated by complex aircraft inter-change arrangements⁸⁶⁹ or the weekly operation of multi-state-owned foreign carriers,⁸⁷⁰ pooling was not used to facilitate such services.

⁸⁶² This describes inter-airline cooperation of the 1960s within Europe. See Sampson, *supra* note 57 at 92–93.

⁸⁶³ Rigas Doganis, *Flying off course: the economics of international airlines*, 3d ed (New York: Routledge, 2002) at 36.

⁸⁶⁴ *Ibid.*

⁸⁶⁵ See *below*, Chapter 5 – *Achieving Global Environmental Harmony*, for a discussion of pooling exceptions.

⁸⁶⁶ The US International Air Transport Policy of April 1963, paragraph 4, cited in Landy, *supra* note 842 at 577.

⁸⁶⁷ In 1987, given that none of Aeroflot's planes could fly New York-Moscow non-stop, and that Pan Am could not fill a Boeing 747 by itself, the two airlines formed a joint venture to operate a Pan Am Boeing 747 thrice weekly with flight attendants from both airlines beginning May 15, 1988. See "Company News; Pan Am", *supra* note 130.

⁸⁶⁸ See *supra* note 855

⁸⁶⁹ In the early 1990s, a Gulf Air Lockheed Tristar flew from Abu Dhabi to London with an Arab crew using British CAA flight rules and from London to New York the flight was operated as a TWA service flown by US pilots to FAA standards. TWA got the inexpensive use of an otherwise idle aircraft and Gulf Air managed to avoid, the effects of time zones on international airlines. Two aircraft were used daily from an eight aircraft pool. Bob Wassman, TWA, in conversation with the author in October 1990.

⁸⁷⁰ The weekly Abidjan–New York flight was operated by Air Afrique. See *OAG Desktop*, *supra* note 32 at 69, 892. Air Afrique was a transnational airline, whose shares were owned by the governments of 22 French-speaking African countries. See "Air Afrique loses half its fleet", *BBC News* (15 October 2001), online: BBC News <news.bbc.co.uk/2/hi/business/1600995.stm> (visited May 14, 2014).

The prohibition against pooling is consistent with anti-combines and anti-monopoly legislation. It is hard to imagine how the definition of pooling could be construed so as not to involve concerted practices,⁸⁷¹ an arrangement to prevent or lessen competition⁸⁷² or a contract in restraint of trade.⁸⁷³ Pooling is so obviously incompatible with these principles that anti-trust immunity must be sought any time it is considered. Thus anti-trust immunity is a pre-condition to the creation of an MNJV.

D) The Authorities of the other partners to the MNJV also need to approve it. The US-EU Open Skies Agreement states that the European Commission and the US DOT must cooperate in order to be more "consistent with their respective functions in addressing competition issues."⁸⁷⁴ The two regulatory entities are encouraged to "consult on specific cases"⁸⁷⁵ and are required to give each other notice of "proceedings or matters, which in the judgment of the notifying Participant may have significant implications for the competition interests of the other Participant."⁸⁷⁶ Thus, it is of some concern that European competition authorities announced they would initiate formal antitrust proceedings to examine "both existing and planned cooperation between four current or prospective members of the Star Alliance – Air Canada, Continental, Lufthansa and United"⁸⁷⁷ in April 2009, just slightly before the US Department of Transport's July 2009 final approval of the same MNJV.⁸⁷⁸ There is reason to hope that future considerations of ATI for transatlantic joint ventures will be considered at roughly the same time by regulators on both sides of the Atlantic. In July 2010, when the EU commented on its examination of the American/British Airways/Iberia joint venture, it noted that it had been working in close cooperation with American authorities.⁸⁷⁹ Without such cooperation, there can be a significant inconsistency in timing. For example there was a 47-month gap between A++ MNJV's approval by the US in June 2009 and approval by the EU in

⁸⁷¹ See *TFEU*, *supra* note 271, art 101.

⁸⁷² See *Competition Act*, *supra* note 294, s 90.1(1).

⁸⁷³ See 15 USC § 1 (2012).

⁸⁷⁴ *US-EU Open Skies Agreement*, *supra* note 528, Annex 2, arts 1, 2(3).

⁸⁷⁵ *Ibid*, Annex 2, art 4(2).

⁸⁷⁶ *Ibid*, Annex 2, art 4(4).

⁸⁷⁷ European Commission, Press Release, Memo/09/168, "Antitrust: Commission opens formal proceedings against certain members of Star and oneworld airline alliances" (20 April 2009), online: European Commission <europa.eu/rapid/press-release_MEMO-09-168_en.htm?locale=en> (visited May 14, 2014).

⁸⁷⁸ See US, Department of Transportation, Order 2009-7-10 (2009).

⁸⁷⁹ European Commission, Press Release, IP/10/936, "Antitrust: British Airways, American Airlines and Iberia commitments to ensure competition on transatlantic passenger air transport markets made legally binding" (14 July 2010), online: European Commission <europa.eu/rapid/press-release_IP-10-936_en.htm>.

May 2013.⁸⁸⁰ Moreover, the EU approval was subject to the MNJV's facilitation of the entry of new competitors on the Frankfurt-New York route.⁸⁸¹

Even though a MNJV might be seen as a potentially competitive response to a GBMC, it must also be seen as potentially reducing competition on routes where service from the GBMC carriers is minimal or non-existent. In order for Air Canada, Lufthansa and United to compete effectively against airlines such as Emirates, they are asking regulators to excuse them from the obligation to compete against each other on transatlantic routes. The A++ joint venture will compete against Emirates on routes between North America and South Asia and between Europe and South Asia. But Lufthansa does not need the MNJV to compete against Emirates on routes between Europe and East Asia⁸⁸² and Air Canada and United do not face meaningful competition from Emirates on routes from North America to Europe, East Asia or Oceania.⁸⁸³ In its analysis of the A++ proposal, European authorities recognized that the MNJV would limit competition in the transatlantic market.⁸⁸⁴ In addition, in the absence of ATI, United and Lufthansa would be actual non-stop competitors on the Frankfurt-San Francisco route⁸⁸⁵ and Air Canada and Lufthansa would be actual non-stop competitors on the Toronto-Frankfurt route.⁸⁸⁶ Indeed, only on the New York-Frankfurt route, which was the focus of EU authorities,⁸⁸⁷ does the A++ MNJV face daily year-round competition.⁸⁸⁸

E) Betraying the Potential of Open Skies Agreements

After Canada's first open skies BASA with the US in 1995,⁸⁸⁹ the authors of an economical and statistical study that looked at the early outcomes of the BASA reported that the transborder market had grown and that the revenue share of Canadian carriers had increased from 40% in

⁸⁸⁰ *Decision Case AT.39595*, *supra* note 299.

⁸⁸¹ *Ibid* at 21–25.

⁸⁸² Vespermann, Wald & Gleich, *supra* note 750 at 391.

⁸⁸³ *Ibid*.

⁸⁸⁴ EC, *Communication of the Commission published pursuant to Article 27(4) of Council Regulation (EC) No 1/2003 in Case COMP/39.595 — Continental/United/Lufthansa/Air Canada*, [2012] OJ, C 396/21.

⁸⁸⁵ In 2007, both Lufthansa and United operated their own flights on this route. See Star Alliance, *Star Alliance Timetable: July 1st 2007 – September 16th 2007*, at 77–80 [STAR 707]. This practice continues today. See STAR 713, *supra* note 614 at 216, 219, 220. They compete on routes to Chicago and Washington, see *supra* note 811.

⁸⁸⁶ In the August of 2004, on the Toronto-Frankfurt route Air Canada offered two daily flights and Lufthansa offered one. See Air Canada, *Air Canada Timetable: Effective Date August 6, 2004*, at 15, 32; Lufthansa, *Lufthansa Timetable: 1 August 2004*, at 12, 29. The two airlines code-shared all flights.

⁸⁸⁷ *Decision Case AT.39595*, *supra* note 299.

⁸⁸⁸ Delta has served the route since 1991. See Paltrow, *supra* note 814. Singapore Airlines has served the route since 1992. See "Singapore Airlines A380 to fly", *supra* note 815.

⁸⁸⁹ *Canada-US Air Transport Agreement 1995*, *supra* note 524.

1993 to 44% in 1997 due to their ability to attract a greater percentage of business travellers.⁸⁹⁰ In marking the BASA's 10th anniversary, US Transportation Secretary Norman Mineta noted that under it, the number of transborder flights had doubled, the number of transborder passengers had increased by 50%, and, taking inflation into account, fares had fallen by 33%.⁸⁹¹ The number of trans-border routes tripled from 58 in 1994 to 148 in 2005 and the number of US cities with service to Canada and the number of Canadian cities with service to the United States increased respectively by 116% and 133%.⁸⁹² These numbers told a story of competition; the expansion did not reflect the growth of a single carrier or a single hub but of the entire North American airline industry. Trans-border service expanded to all regions of Canada and the United States as six distinct carriers inaugurated service over new routes. A sample of these routes includes: Edmonton-Chicago,⁸⁹³ Halifax-New York JFK,⁸⁹⁴ Kelowna-Seattle,⁸⁹⁵ Montreal-Atlanta,⁸⁹⁶ Ottawa-Philadelphia⁸⁹⁷ Regina-Minneapolis,⁸⁹⁸ Toronto-Houston,⁸⁹⁹ Winnipeg-Denver⁹⁰⁰ and Whitehorse-Anchorage.⁹⁰¹ Some existing routes also saw competition for the first time.⁹⁰² Open skies agreements gave airlines an unprecedented ability to compete with each other and this was ultimately good for tourism and for consumers. This was consistent with results in the European Union, where in the eight years following the 1992 creation of the EU Single Aviation Market⁹⁰³ the number of intra-EU routes served by more than two carriers had increased by 256%, discount economy fares had declined by 34% and the total number of intra-EU city-pairs had increased by 74%.⁹⁰⁴

⁸⁹⁰ Dubey & Gendron, *supra* note 524.

⁸⁹¹ Remarks for the Honorable Norman Y Mineta, Secretary Of Transportation, Canadian Open Skies Forum, Ottawa, Canada, 24 February 2005.

⁸⁹² The number of US cities with transborder service increased from 24 to 52 and the number of Canadian cities with transborder service increased from 6 to 14. See generally Kaduck & Fitzgerald, *supra* note 35.

⁸⁹³ This was inaugurated by Canadian Airlines in April 1999.

⁸⁹⁴ This was inaugurated by American Eagle in 2004.

⁸⁹⁵ This was inaugurated by Horizon Air, a sister company of Alaska Airlines in 1998.

⁸⁹⁶ This was inaugurated by Delta in 1995.

⁸⁹⁷ This was inaugurated by US Airways in 1997.

⁸⁹⁸ This was inaugurated by Northwest Airlines in 1995.

⁸⁹⁹ This was inaugurated by Continental in 1997.

⁹⁰⁰ This was inaugurated by Air BC, an Air Canada commuter partner on July 5, 1999

⁹⁰¹ This was inaugurated by Alaska Airlines in 1997.

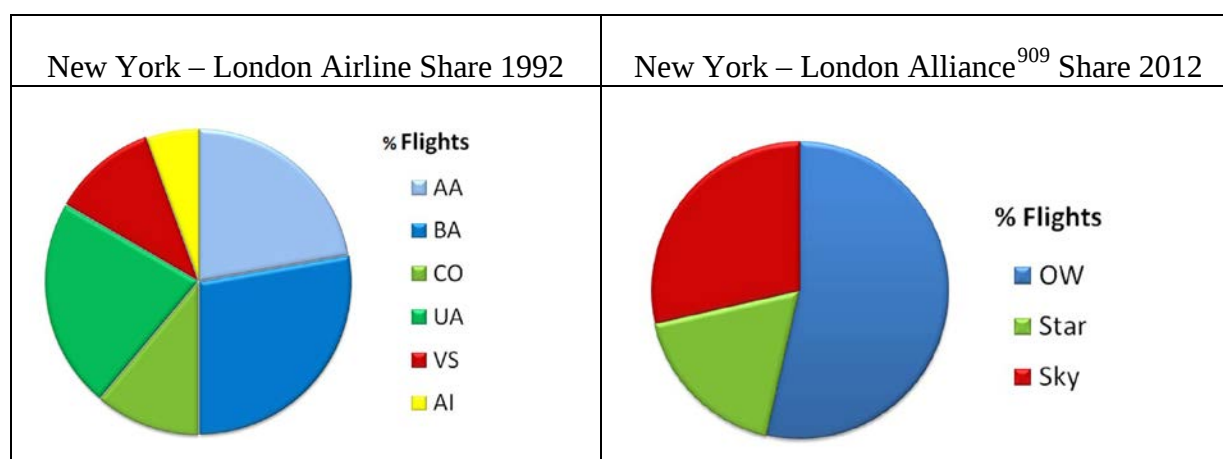
⁹⁰² In 1997, Canadian began competing on Air Canada's Toronto-Dallas route; Delta began competing on Air Canada's Halifax-Boston route and Air Canada began to compete on Delta's Toronto-Pittsburgh route.

⁹⁰³ Regulation 2408/92, *supra* note 121.

⁹⁰⁴ European Union and the European Civil Aviation Conference, "European Experience of Air Transport Liberalisation" (Delivered at the 5th Worldwide Air Transport Conference (ICAO), 24–29 March 2003) (unpublished).

In the lead-up to US-EU Open Skies negotiations, many experts were making similar predictions of new routes, low fares and increased trans-Atlantic traffic.⁹⁰⁵ However, just as the Open Skies agreements between the EU and North America were promoting enhanced competition, the blessing by regulators of joint ventures such as A++ served to reduce competition. As illustrated in Chart 1 below, in 1992, before any open skies agreement had been implemented, six competing carriers operated 18 flights a day between New York and London.⁹⁰⁶ Twenty years later, five carriers were operating 28 flights a day.⁹⁰⁷ A joint venture involving American and British Airways accounts for 15 of the 28 and after Delta's recent purchase of 49% of Virgin Atlantic in the Virgin/Delta alliance⁹⁰⁸ will account for a further 8 flights. Fully 23 of the 28 flights will be controlled by two groups of airlines. Thus, a former competitive situation between six rival airlines has yielded to a new competitive situation between three rival alliances.

Chart 1 Competition on New York – London Route, 1992 and 2012



Even if one is willing to consider competition at the "network" level and view competition as being between rival MNJVs rather than individual airlines, the New York-London route is one of the very few with daily non-stop competition from each of the three major alliances. There are

⁹⁰⁵ See generally, The Brattle Group, "The Economic Impact of an EU-US Open Aviation Area" (December 2002) and InterVistas-ga2 "The Economic Impact of Air Service Liberalization" (June 2006).

⁹⁰⁶ The carriers and the number of daily NY-London flights offered were American (4); Air India (1); British Airways (5); Continental (2); Virgin Atlantic (2); and United (4). Carriers without daily flights are not included.

⁹⁰⁷ The carriers and the number of daily flights they offered were American (5); British Airways (10); Delta (3); Virgin Atlantic (5); and United (3). Carriers that operated fewer than 7 weekly flights are not included.

⁹⁰⁸ Virgin Atlantic, "New strategic alliance with Delta Air Lines" (11 December 2012), online: Virgin Atlantic < www.virgin-atlantic.com/ae/en/travel-information/customer-service/latest-news/strategic-alliance-with-delta-airlines.html >.

⁹⁰⁹ The SkyTeam number includes flights of Virgin Atlantic and Delta.

roughly half a dozen other significant international⁹¹⁰ routes: Mexico-Chicago,⁹¹¹ Tokyo-New York,⁹¹² Tokyo-Los Angeles,⁹¹³ Los Angeles-London,⁹¹⁴ Los Angeles-Sydney,⁹¹⁵ Seoul-Hong Kong,⁹¹⁶ Seoul-Tokyo,⁹¹⁷ Seoul-Osaka,⁹¹⁸ and Seoul-London.⁹¹⁹ On virtually all of these other international routes, there are only two competing alliances offering non-stop flights and thus the option of travel via a third alliance necessitates *en route* connections.

V) THE NEED FOR A LEVEL PLAYING FIELD

That there may be serious competitive distortions in the international air travel market is becoming increasingly obvious. Decreasing competition on trans-oceanic routes as a result of MNJVs and the explosive growth of GBMCs based in the Middle East relying on 6th Freedom traffic suggest that greater regulatory scrutiny is needed. Already major established carriers have been forced to sign agreements with the GBMCs whose expansion they have fought: Qantas is

⁹¹⁰ There is a competition on domestic routes between Chicago O'Hare (base for both American (oneworld) and United (Star Alliance)) and Delta's (SkyTeam) hubs of Atlanta, Detroit, Memphis, Minneapolis and Salt Lake City. See Delta Airlines, *Delta Schedule: November 2013*; OWT 713, *supra* note 645 and STAR 713, *supra* note 614.

⁹¹¹ oneworld (American), SkyTeam (AeroMéxico) and Star Alliance (United) all serve this route. See *ibid*.

⁹¹² oneworld (Japan Airlines), SkyTeam (Delta) and Star Alliance (United) all serve this route. See *ibid*.

⁹¹³ oneworld (American and Japan Airlines), SkyTeam (Delta) and Star Alliance (United and All Nippon Airways) all serve this route. See *ibid*.

⁹¹⁴ oneworld (American and British Airways), SkyTeam (Delta flown by Virgin Atlantic), and Star Alliance (United) all serve this route. See *ibid*.

⁹¹⁵ oneworld (as long as Qantas remains a member) SkyTeam (Delta flown by Virgin Australia) and Star Alliance (United) all serve this route. See *ibid*.

⁹¹⁶ oneworld (Cathay Pacific), SkyTeam (Korean Airlines) and Star Alliance (Asiana) all serve this route. See Korean Airlines, *Korean Airlines International Passenger Timetable: June 1, 2013*; OWT 713, *supra* note 645; STAR 713, *supra* note 614.

⁹¹⁷ oneworld (Japan Airlines), SkyTeam (Korean Airlines) and Star Alliance (Asiana) all serve this route. See *ibid*.

⁹¹⁸ *Ibid*.

⁹¹⁹ oneworld (British Airways) SkyTeam (Korean Airlines) and Star Alliance (Asiana) all serve this route. See *ibid*.

allied⁹²⁰ with former arch-enemy⁹²¹ Emirates, and Air Canada has signed a codeshare with Etihad.⁹²² The Centre for Aviation argues:

As European, Australian and African based airlines have learned ... "if you can't beat them join them". Air France ... had been so sternly opposed to the expansion of the Gulf carriers that, when the carrier last year agreed to codeshare with Etihad, IAG CEO Willie Walsh described the about-face as being the equivalent to Air France "talking to the devil." Mr. Walsh had meanwhile persuaded Qatar Airways to join oneworld and Emirates was dealing with Qantas⁹²³

The Centre for Aviation concludes that the impact of Gulf airlines (particularly Emirates) has been significant on major EU airlines and may affect US carriers⁹²⁴ and even global alliances.⁹²⁵

If the newly emerging *status quo* continues, a growing percentage of intercontinental traffic with the exception of Europe-North America voyages⁹²⁶ will be routed through the new GBMC hubs in the Greater Middle East. If national regulators wish that traffic be carried by airlines unrelated either to the countries of the traveler's point of origin or destination, a regulatory response is unnecessary. However, if regulators think that the carriers based in the traveler's country of

⁹²⁰ See Australian Competition & Consumer Commission, *Determination: Applications for authorisation lodged by Qantas Airways Limited and Emirates in respect of a Master Coordination Agreement to coordinate air passenger and cargo transport operations and other related services*, A91332 & A91333, (27 March 2013), online: Australian Competition & Consumer Commission

<registers.accc.gov.au/content/index.phtml/itemId/1078153/fromItemId/278039/display/acccDecision>.

⁹²¹ See Scott Rochfort, "Emirates steps up its attack", *The Sydney Morning Herald* (28 June 2005), online: The Sydney Morning Herald <www.smh.com.au/news/business/emirates-steps-up-its-attack/2005/06/27/1119724580223.html> (visited May 14, 2014); Geoff Hiscock, "Qantas attacks Emirates 'fiction'", *CNN [International]* (4 November 2005), online: CNN International <edition.cnn.com/2005/BUSINESS/11/03/qantas.emirates/> (visited May 14, 2014). See also Qantas' 188 page submission to the Australian government, "Towards a National Aviation Policy Statement; Submission by Qantas Airways Limited" (July 2008). ["Towards a National: Qantas"].

⁹²² See Air Canada, New Release, "Etihad Airways and Air Canada to Introduce Codeshare Services" (25 April 2013), online: Air Canada <aircanada.mediaroom.com/index.php?s=43&item=639> (visited May 14, 2014). It must be noted that Air Canada's opposition to expanding the number non-stop flights between Canada and the United Arab Emirates remains in place. As of August 2013, Air Canada's code was on Etihad flights from Abu Dhabi to London and Toronto and Etihad's codes were on Air Canada flights from Toronto to Fort McMurray, Halifax, Montreal, Regina, Saskatoon, St. John's and Winnipeg. See "Air Canada / ETIHAD to Start Codeshare Operation from August 2013" (29 July, 2013), online: Airline Routes <airlineroute.net/2013/07/29/acey-codeshare-aug13/> (visited May 14, 2014).

⁹²³ CAPA-Centre for Aviation, "Why Emirates and friends will soon reshape American aviation" (11 May 2013) online: CAPA-Centre for Aviation <centreforaviation.com/analysis/why-emirates-and-friends-will-soon-reshape-american-aviation-109135> (visited May 14, 2014).

⁹²⁴ Between 2009 and 2014, GBMCs made an aggressive expansion into North America. In 2012, Emirates inaugurated service to three US cities; Dallas, Seattle and Washington; Boston and Chicago were added in 2014. In 2011, Qatar Airways inaugurated the Doha–Montreal route and in 2009, Etihad started service to Chicago.

⁹²⁵ CAPA-Centre for Aviation, "Middle East airlines will expand into the US in 2013, further shaking up alliance structures" (23 November, 2012), online: CAPA-Centre for Aviation <centreforaviation.com/analysis/middle-east-airlines-will-expand-into-the-us-in-2013-further-shaking-up-alliance-structures-89453>, (visited May 14, 2014).

⁹²⁶ A routing via the Middle East would add several hours to any North America–EU itinerary.

origin or destination should be entitled to share in the profits to be derived from fares, the time for concerted action is now.

VI) THE NEED FOR INTERNATIONAL CONSENSUS

During the 2008 development of Australia's National Aviation Policy Statement, Qantas submitted a comprehensive report noting that two-thirds of Qantas' competitors were owned or supported by national governments who sought to increase passenger traffic in their airports to the detriment of Qantas. The airline further noted the UAE-based GBMCs were then serving Australia with nearly 100 weekly flights, a number far in excess of Australia-UAE origin and destination traffic and that such practices constituted a distortion of competition which was threatening Qantas' ongoing commercial viability.⁹²⁷

By the summer of 2012, Qantas' worst fears had been realized; Emirates was serving Australia 70 times a week with two flights a day from Dubai to each of Brisbane and Perth, and three daily flights to both Melbourne and Sydney.⁹²⁸ If Melbournians had no urge to visit Dubai, Emirates ensured that they knew that a connection in Dubai meant that Madrid, Malta, Manchester, Milan and Moscow were now closer in travel time than ever before.⁹²⁹ Within three months, Qantas, fully cognizant of the impact that Emirates schedule would have on the viability of its Australia-Europe routes,⁹³⁰ had signed an agreement to feed Emirates' European network at Dubai.⁹³¹

A) Australia: the Canary in the Mine Shaft?

Australia's geographic location makes it a prime target for 6th Freedom-based carriers in places like South East Asia and the Middle East. This is because the two prime routes, London-Sydney and London-Melbourne are 10,600 miles (17,100 km) and 10,500 miles (16,900 km) respectively and cannot be flown non-stop by existing aircraft with a commercially viable payload.⁹³² Thus,

⁹²⁷ See "Towards a National: Qantas", *supra* note 921 at 5.

⁹²⁸ See Emirates, *Emirates Worldwide Timetable: July 2012*. Some flights are operated by Airbus A380s.

⁹²⁹ *Ibid.* From Melbourne, Emirates offers connections via Dubai to virtually every city in its route system.

⁹³⁰ Even by the summer of 2005, Qantas' European routes were in decline; it had daily service from Sydney to Frankfurt, 16 weekly Sydney-London services and a daily Melbourne-London service. Due to the fact that non-stop flights between Eastern Australia and Western Europe are not feasible at the current time, all Qantas service made an *en route* stop, usually in Singapore. See oneworld, *oneworld Timetable: August 19 – September 16, 2005*.

⁹³¹ See *supra* note 920.

⁹³² The longest non-stop route was New York–Singapore at 9,000 miles (16,600 km). The 313-seat Airbus A340-500, was reconfigured to carry only 181 passengers and their bags. In October 2012, the airline, facing rising fuel prices, cancelled its long-haul non-stop flights between Singapore and each of New York and Los Angeles. See Michael Meier, "Singapore Airlines beats its own long-haul record", *Airsider* (29 June 2004) online: [Airsider <www.airways.ch/files/2004/0604/010/sia345.htm>](http://www.airways.ch/files/2004/0604/010/sia345.htm).

all of the British Airways and Qantas flights providing service between Australia and the United Kingdom would have to make an *en route* stop, often in Singapore,⁹³³ for fueling purposes. Given that all services between Australia and the United Kingdom were of the one-stop variety, passengers, facing an *en route* stop in any case, were amenable to making a single *en route* connection, especially if the experience was pleasant. Thus Singapore Airlines marketed a Sydney-Singapore-London itinerary with a 95 minute connection in Singapore and Boeing 747-400s on all segments of the itinerary.⁹³⁴ Both Malaysia Airlines and Thai Airways offered one-stop itineraries via their respective hubs in Kuala Lumpur and Bangkok. However, in each case there was also significant bilateral traffic between Australia and the South Asian country involved.

Given that a stop is inevitable on the Australia-UK route, it was only a matter of time before one of the countries on the Silk Road became involved. Airlines like EgyptAir, Kuwait Airways, Pakistan International Airlines, and Saudi Arabian Airlines had never participated in the market because the distance between the closest of their hubs, Karachi, Pakistan and Sydney, Australia is 6,840 miles (11,000 km) and there were few direct commercial ties between these countries and Australia. Therefore these carriers, all of whom thought in terms of origin and destination traffic, would never have given serious consideration to serving Australia.⁹³⁵

It is precisely for these reasons that the participation of GBMCs on this route is so extraordinary. Dubai is as distant from Sydney as Chicago is from Hong Kong,⁹³⁶ and therefore one would normally expect carriers to focus on routes where there are significant quantities of passengers at each end wishing to visit the other city. However, in 2007 Emirates President Tim Clark stated that Emirates could offer one-way Australia-UK fares of under £500 using an Airbus A380 in an 800-seat all-economy configuration and on-board self-help food and refreshment stations.⁹³⁷

⁹³³ *En route* stops were also made in Bangkok or Hong Kong. The two carriers had full traffic rights between Australia and the U.K via these points. See oneworld: *oneworld Timetable: July 21, 2006 – August 18, 2006*.

⁹³⁴ It offered a similar itinerary for Melbourne–London passengers. See *STAR 707*, *supra* note 885.

⁹³⁵ See Syed Zafar Hussain, "PIA decided to close office in Sydney from Middle of September 2013", online: Sada-e-Watan Sydney, <www.sadaewatansydney.com/piasydneyfooclosed.htm>. He notes that the carrier's management never agreed with feasibility report of a Pakistan-Australia route, due to potentially high expenses.

⁹³⁶ Dubai-Sydney is 7,480 miles (12,000 km). Chicago-Hong Kong is 7,770 miles (12,500 km).

⁹³⁷ Randall David Whyte, *Strategic windows: Australia-European Union "Open Skies" Agreement creates new entrant opportunity for longhaul low cost airline model* (PhD Thesis, James Cook University, 2011) at 4 [unpublished].

By concentrating on 6th Freedom traffic, the GBMCs can offer previously unimaginable non-stop routes between their hubs and all major cities in Australia. Moreover, given that the GBMCs hubs are fed not only from various cities in Australia but also from points all over Asia, non-stop service from the hub to various secondary European destinations is commercially viable. This strategy enables innovative one-stop services between Australia and points in Portugal, Ireland and Scandinavia, in addition to major cities in the UK, France and Germany. Qantas cannot provide one-stop service from as many points in Australia to as many points in Europe as can the GBMCs.⁹³⁸

Qantas' 2013 partnership with Emirates confirms that it was unable to sustain competition against a GBMC on the Australia–Europe route. The partnership shatters Qantas' long-standing alliance with British Airways and questions its ongoing membership in oneworld. If Qantas is the canary in the mine shaft,⁹³⁹ it does not bode well for other carriers.

B) The Impact on Indian carriers

Qantas was in the unenviable position of being unable to fly non-stop to its most important markets and therefore was more prone having its market targeted by 6th Freedom carriers. However, the example of Air India shows that even carriers located in jurisdictions capable of offering non-stop flights to their destinations are not immune. Presumably, the flag carrier of the world's second most populous country could justify a non-stop flight to almost any city on the planet. However, many Indians do not live in Delhi or Mumbai and are not enthusiastic at the prospect of changing planes at Air India's hub airports in these cities in view of criticisms as to their efficiency.⁹⁴⁰ Moreover, airports at big cities like Chennai (Madras), Kolkata (Calcutta) Bangalore, Hyderabad and Ahmadabad, did not have non-stop service to Europe and thus they were eager to welcome the Middle Eastern carriers that would provide one-stop service to Europe with a connecting flight at a brand new terminal. Such were the advantages of having passengers in regional Indian cities connect to their European destinations via a point in the

⁹³⁸ Emirates has certain advantages that may result in competitive distortions. See above Part III) GOVERNMENT-BACKED MEGA CARRIERS. See especially above sub-parts III) B) and C.

⁹³⁹ The impact of the uneven playing field on Qantas is difficult to under-estimate. See Australia: Senate Rural and Regional Affairs and Transport References Committee, 14 March 2014, "Qantas's future as a strong national carrier supporting jobs in Australia" at 12:28 (Statement of Alan Joyce), online: Parliament of Australia <parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22committees%2Fcommsen%2F292f5b43-e430-4edb-bcd4-2bad09b57a04%2F0005%22>.

⁹⁴⁰ See "Chaos at New Delhi airport highlights India's infrastructure woes", *USA Today* (4 January 2007), online: USA Today <usatoday30.usatoday.com/travel/flights/2007-01-04-delhi-airport_x.htm>.

Middle East as opposed to within India that Air India seriously considered establishing a hub in Dubai.⁹⁴¹ Despite being the flag carrier of a nation of 1.27 billion people, it only flies non-stop daily from India to three European cities, two in the US⁹⁴² and two in Asia.⁹⁴³ In 1999, analysts questioned the carrier's viability⁹⁴⁴ and its long-term stability remains elusive.⁹⁴⁵ So serious are the concerns that India is reconsidering its aviation relationship with the UAE.⁹⁴⁶

Imagine if Emirates could be replicated in India with the same conditions and purpose built airports it has in the UAE.⁹⁴⁷ Imagine further if India was as aggressive in promoting open skies BASAs as the United Arab Emirates is. In such a situation, the India-based Emirates replicate would soon find itself flying to virtually every country on Earth. It is, after all, mainly South Asians who are filling the passenger cabin of many of Emirates' transatlantic flights.⁹⁴⁸

C) The Impact on Other Carriers

Emirates could even undermine some of Lufthansa's most profitable routes. The German carrier earns 25% and 50% of its global profits on routes respectively to India and Asia. Emirates undercuts Lufthansa's fares by roughly 12% on routes to South East Asia (i.e. to Kuala Lumpur and Singapore), and on routes between the EU and both South Asia and South East Asia the additional stop-over in Dubai would only lead to a minor increase in travel time.⁹⁴⁹

⁹⁴¹ PTI, "Air India plans hub in Dubai", The Hindu Business Line (25 April 2011) online: The Hindu Business Line <www.thehindubusinessline.com/industry-and-economy/logistics/air-india-plans-hub-in-dubai/article1767040.ece>. The hub idea was never implemented. However, given the precedent of United's Asian hub at Tokyo, (see *supra* "The case of 5th Freedom rights at Tokyo.") such a concept could have been implemented pursuant to negotiations between India and the UAE.

⁹⁴² The former Delhi-Toronto non-stop route was one of Air India's least profitable in 2012. See Sindhu Bhattacharya, "AI may resume Delhi-Toronto, its biggest loss making flight till FY12", *First Biz* (16 October 2013), online: First Biz <www.firstbiz.com/corporate/ai-may-resume-delhi-toronto-its-biggest-loss-making-flight-till-fy12-46080.html>.

⁹⁴³ It offers two daily flights from Delhi to London, a daily flight from Delhi to each of Chicago, Frankfurt, Hong Kong, New York, Paris and Singapore, and a daily flight from Bombay to each of London, New York and Singapore. The Bombay-Singapore service has an *en route* stop in Chennai. Air India also serves Shanghai and Tokyo from Delhi, but neither route is served daily. Similarly, service to Osaka and Seoul are extensions of the Delhi-Hong Kong service. See Air India, *Air India Timetable: May 2013*.

⁹⁴⁴ See Kamlakar Mhatre, "Can Air-India survive?", (April 1999) 36:4 Air Transport World 47 (ProQuest).

⁹⁴⁵ See "Air India needs to perform to get bailout package: Ajit Singh", *CNN-IBN* (15 May 2012), online: IBN Live <ibnlive.in.com/news/ai-needs-to-perform-to-get-bailout-package-ajit/258166-3.html> (visited May 14, 2014).

⁹⁴⁶ See Sharmistha Mukherjee "Govt may review global airline bilateral agreement method" *Business Standard* (30 July 2014) online: Business Standard <www.business-standard.com/article/economy-policy/govt-may-review-global-airline-bilateral-agreement-method-114073000227_1.html> (visited May 14, 2015).

⁹⁴⁷ See above Part III) B) Emirates: an Instrument of State Intervention in the Marketplace and Part III C) Are the GBMCs Subsidized?

⁹⁴⁸ See above Part III A) 2) Access to India is Essential for GBMC Success.

⁹⁴⁹ See Vespermann, Wald & Gleich, *supra* note 750 at 392.

North American and EU carriers, who think that GBMCs are unlikely to compete on trans-Atlantic routes, should worry. Qatar Airways and Emirates have announced service over the Athens–New York⁹⁵⁰ and Milan–New York⁹⁵¹ routes respectively, in both cases targeting underserved routes.⁹⁵² Their activities may discourage the launch of new service over these routes by either European or US carriers. Of additional concern is the fact that these routes are unlikely to be the last transatlantic routes targeted by Middle Eastern carriers:

Operating a trans-Atlantic route has been on our agenda for some time. Having carefully monitored traffic flows we have identified strong demand for both a direct connection and, importantly, for the Emirates product."⁹⁵³

It may be time to question whether it is in the public interest of the states where carriers are based for intercontinental passengers to be carried by airlines with no link to either that state or the state of destination. In a July 2008 submission to the Australian government Qantas denounced aggressive 6th Freedom-focused "national agenda" carriers based in States with small home markets and argued that BASAs should be negotiated based on a strong bilateral demand of origin and destination passengers.⁹⁵⁴ Qantas argued that a BASA should, first and foremost, be based on bilateral traffic demands between the two States and that further growth opportunities should be conservatively measured and gradually implemented. Further, any use of 6th Freedom by a foreign carriers should be explicitly based on additional 5th Freedom rights for Australian carriers.⁹⁵⁵ Thus a BASA is to focus on the bilateral market and any rights beyond the bilateral market are to be granted to both carriers. Such a strategy preserves the level playing field concept which is at the heart of all BASAs.

⁹⁵⁰ Qatar Airways, Press Release, "Qatar Airways to Begin Flights Between Athens and New York from Mid-2013" (1 December 2012), online: Qatar Airways <www.qatarairways.com/global/en/press-release.page?pr_id=pressrelease_pressrelease_20121201&locale_id=en_gl> (visited May 16, 2014). The airline ultimately cancelled the service before its inauguration due to low demand. See "Qatar Airways Abandons Athens-New York Route", *The National Herald* (18 April 2013) online: Greek Herald <www.greekherald.com/index.php/sid/213923049/scat/48158b5a5afd369b> (visited May 16, 2014).

⁹⁵¹ Emirates, News, "Emirates set to launch Trans-Atlantic flight from Europe" (8 April 2013), online: Emirates <www.emirates.com/ca/English/about/news/news_detail.aspx?article=1185653&offset=2>. As of November 3, 2013 Emirates Flight 205 was flying daily from Dubai via Milan to New York. See further the comments of Delta's CEO *supra* note 789 at 7.

⁹⁵² In the summer of 2012, Delta flew New York-Athens daily. Delta and its SkyTeam partner Alitalia offered 13 weekly Milan-New York JFK flights and United operated a daily flight from Newark to Milan.

⁹⁵³ "Emirates set to launch", *supra* note 951.

⁹⁵⁴ See "Towards a National: Qantas", *supra* note 921 at 6.

⁹⁵⁵ *Ibid.*

Had Australia's government paid attention to Qantas' recommendations, the latter's partnership with Emirates might not have happened. However, Qantas' concerns were not unique. The need for a level-playing field has been raised by many carriers in Canada, the Antipodes and the European Union. All are essentially making the same allegation: the aggressive use of 6th Freedom rights by state-backed carriers in small home markets⁹⁵⁶ distorts competition within the international airline market. Instead of Europeans flying to Australia via carriers based in Australia or Europe, those passengers are flying with airlines based in airports of which many of the passengers were unaware before starting to plan their trip. While the idea of travelling with an airline that has virtually unlimited access to new planes, that is backed by a government which advances the airline's interest at every opportunity and that is based at a hub that requires no visas is appealing to passengers, it is not necessarily good public policy for the overall aviation market in the state in which the airline is based.

As explained in Chapter 2, most international flights traditionally have been operated by network carriers with some sort of service obligation to regional centers in the country where the network carrier is based. Thus, Air Canada connects Rome with Regina and Rouyn/Noranda; Delta connects Milan with Mobile and Missoula; Lufthansa connects Boston with Bergen and Bremen, and Qantas connects Los Angeles with Longreach and Lord Howe's Island. If this model is to be replaced with a model in which international travel is primarily provided by foreign GBMCs with no nexus to either the traveller's point of origin or destination, it should not be the result of haphazard evolution but of conscious regulatory decisions made by the responsible authorities in the countries concerned.

VII) CONCLUSION

The evolution of the airline industry over the past two decades has been profound and the emergence and dominance of both GBMCs and MNJVs has fundamentally reshaped competition

⁹⁵⁶ The 'national' population of the United Arab Emirates, where both Abu Dhabi-based Etihad Airways and Dubai-based Emirates Airlines have their global hubs was roughly a million (947,997) in 2010. The population increases to 8,264,070 if the non-Emirati foreign workers are counted. See Population Estimates 2006-2010, *supra* note 730. Even if all the foreign workers are counted, the UAE's population is slightly greater than that of Honduras (8,045,990) and slightly smaller than that of Austria (8,489,482), neither of which are bases for large intercontinental airlines. See also online: Statistics Austria, "Population forecast for Austria 2012-2075 (main scenario)", online: Statistics Austria <www.statistik.at/web_en/statistics/population/demographic_forecasts/population_forecasts/029024.html>; online: Instituto Nacional de Estadística de Honduras <www.ine.gob.hn/index.php/datos-y-estadisticas/estadisticas-sociales-y-demograficas/indicadores-demograficos-3> (visited May 1, 2014).

on international routes. As has been demonstrated, the GBMCs depend very heavily on 6th Freedom traffic and a degree of at least implicit government-backing which would be unthinkable in most market-based economies. Similarly, the MNJVs are based on the repudiation of a long-standing opposition to pooling and the elimination of inter-carrier competition on many international routes. When one considers that prior to 1992 Pan Am⁹⁵⁷ and TWA were the dominant players in the transatlantic market,⁹⁵⁸ it seems unlikely that observers at the time would have predicted that the global airline industry today would be shaped by either or both of GBMCs or MMJVs. It would therefore follow that there was little if any regulatory anticipation of such developments, and therefore it must be assumed that the possible competitive distortions and public policy implications caused both by GBMCs and MNJVs have yet to be addressed by either national or multilateral policies.

The depth and breadth of the global airline industry's evolution requires regulatory attention. Both the global nature of the GBMCs and the multi-national composition of the MNJVs require that any regulatory response must be multilateral. A comprehensive regulatory response to the competitive and public policy issues raised by the emergence of the GBMCs and MNJVs is beyond the legal authority of any single State.

⁹⁵⁷ Pan Am's last flight was on December 4, 1991.

⁹⁵⁸ TWA claims to have carried more than 50% of all US-Europe passengers in the summer of 1988. See online: "Trans World Airlines (TWA) Records (KC0453) [TWA]", PRuNe: Professional Pilots Rumour Network <www.pprune.org/archive/index.php/t-446841.html> (visited May 16, 2014).

CHAPTER 4 – RETHINKING AVIATION SECURITY

I) INTRODUCTION

Around the world, submission to the procedures of aviation security is a ubiquitous experience that is an ever-present reminder of the ongoing war on terrorism. While the world of aviation *safety* benefits from global standards spearheaded by the International Civil Aviation Organization (ICAO)⁹⁵⁹ that allow Australian and Uruguayan pilots to fly for Emirates, the world of aviation *security* is plagued by competing visions and a passenger-disliked patchwork system desperately in need of an overhaul. The existence of incompatible standards and practices impede metal neutral joint ventures (MNJVs) from harvesting the opportunities envisaged by regulators. Moreover, government-back mega carriers (GBMCs) find themselves in an enviable position. They can often escape the impact of disharmonious regulation, and also profit from the fact that other carriers are bound by it.

Therefore, as has been suggested in previous chapters, Australia, Canada, the European Union, New Zealand and the United States should collectively engage in the regulation of aviation security. They need to update the aviation security regime that governs flights among them and also ensure that their airlines are able to participate fully in the carriage of global air traffic while competing on a level playing field with GBMCs. As has been demonstrated in previous chapters, the GBMCs have grown very dramatically in recent years. However, this growth is fueled in part by the fact that their hubs allow intercontinental travelers to bypass many aviation security measures of the European Union (EU) and United States (US). The growth of GBMCs at the expense of EU and North American carriers suggests that the security-trade balance may not be as absolute as some might wish, and that it may be time for a reconsideration of aviation security strategy and tactics.

The reach of many aviation security initiatives is international, and therefore they should be considered collectively, ideally in a multi-State forum. Given that regulators in the EU, the US, Canada, Australia and New Zealand are largely those who supported the implementation of metal neutrality, it is essential that regulators from those same countries work together to avoid the impact of disharmonious aviation security regulation.

⁹⁵⁹ See P Paul Fitzgerald, "Questioning the Regulation of Aviation Safety", *supra* note 41.

For example a person travelling from Dallas to New Delhi via a GBMC's hub will be screened only at the point of departure, whereas a person travelling from Central America to Canada via an MNJV's hub could be screened up to three times, at the point of departure and also at *en route* connection points.⁹⁶⁰ By cooperating and agreeing on the implementation of harmonious standards and policies for aviation security, the above-mentioned countries could create a sterile network that would keep travelers safe, not only from the terrorists of the past, but also from those to come. That same sterile network would ensure that airlines based in the above-mentioned countries would not be at a competitive disadvantage, from an aviation security point of view, with respect to the GBMCs with whom they compete on intercontinental itineraries.

A) Dueling notions of Public Good

Many nations see aviation as 'infrastructure' as part of the global supply chain that whisks people and goods from one market to another.⁹⁶¹ Similarly, aviation security as an essential element of commercial air service is also a public good, and this is evidenced by international conventions such as the Tokyo Convention⁹⁶² and subsequent international agreements.

Even for people on the ground, the notion of freedom from the impact of falling objects is considered to be a sufficiently important public good that it was enshrined in an international convention.⁹⁶³ In the years since, if one excludes the event of September 11,⁹⁶⁴ fewer than 40 people have been killed on the ground by aircraft that crashed as a result of the explosion of an onboard bomb.⁹⁶⁵ Nonetheless, this very low number is not just due to regulatory intervention. It also results from strategic choices made by criminals wishing to avoid prosecution.⁹⁶⁶ Thus both

⁹⁶⁰ This writer, traveling with an infant from San Salvador to Ottawa via Houston and Washington on United was subject to security checks in San Salvador, Houston and Washington.

⁹⁶¹ See above Chapter 1) III) C) 1) Airlines as Infrastructure.

⁹⁶² *Tokyo Convention*, *supra* note 70. It has been ratified by 185 countries and entered force on December 4, 1969.

⁹⁶³ *Convention on Damage Caused by Foreign Aircraft to Third Parties on the Surface*, 7 October 1952, 310 UNTS 181, ICAO Doc 7364 [Rome Convention 1952]. See also *Protocol to Amend the Convention on Damage Caused by Foreign Aircraft to Third Parties on the Surface*, 23 September 1978, 2195 UNTS 370, ICAO Doc 9257 [1978 *Montreal Protocol*].

⁹⁶⁴ 2,625 people on the ground were killed by the 4 US jetliners that were hijacked on September 11, 2001.

⁹⁶⁵ The crash of a bomb-damaged Air Vietnam flight killed 24 people at on the ground at Nha Trang, Viet Nam on December 22, 1969; the debris of Pan Am Flight 103 killed 11 people at Lockerbie, Scotland on December 21, 1988; and 3 people in Soacha, Colombia were killed by the crash of Avianca Flight 203, which was destroyed by a bomb on November 27, 1989.

⁹⁶⁶ In each of the cases in the preceding footnote it must be remembered that the bomber was hoping that the bomb would explode in a remote area in order to make successful prosecution virtually impossible. Four further examples of this strategy are the crashes of Gulf Air Flight 771 (1983); Air India Flight 182 (1985); Korean Air Flight 858 (1987); and UTA Flight 772 (1989). In each case the remote location in a desert or ocean impeded the gathering of evidence.

aviation itself, and aviation security as a means of safeguarding persons on the ground and in the air, are public goods. In this world of potentially competing public goods, the statement, "security trumps trade" confirms their relative ranking and the fact that security, in whatever guise and in whatever form, must prevail over other aspects of commercial air transport.

II) Setting the Aviation Security Agenda

Recognizing that the presence of a regime of aviation security is essential "in order that international civil aviation may be developed in a safe and orderly manner,"⁹⁶⁷ ICAO has led the development of current worldwide aviation security standards. Its Annex 17 on Safeguarding International Civil Aviation Against Acts of Unlawful Interference,⁹⁶⁸ sets the standard for aviation security around the world. Two other Annexes, Annex 9 on Facilitation⁹⁶⁹ and Annex 14 on Aerodromes,⁹⁷⁰ also contain clauses relevant to aviation security. Indeed, it is argued that to the extent that these Annexes have been approved by the ICAO General Assembly and have thus been incorporated into the Chicago Convention,⁹⁷¹ they can be considered customary international law.⁹⁷²

In order to facilitate State compliance with ICAO's Standards and Recommended Practices (SARPs) in aviation security, ICAO has prepared a 5-volume (restricted circulation⁹⁷³) Security Manual (Doc 8973).⁹⁷⁴ It "gives an in-depth guidance for recommended practices and procedures that may be implemented by an Aviation Security Service Organization."⁹⁷⁵ ICAO has also developed techniques to ensure that its SARPs are followed around the world. Its Universal

⁹⁶⁷ *Chicago Convention*, *supra* note 14, Preamble

⁹⁶⁸ ICAO, (2011) 9 *International Standards and Recommended Practices: Annex 17 to the Convention on International Civil Aviation: Security* [Annex 17].

⁹⁶⁹ ICAO, (2011) 13 *International Standards and Recommended Practices: Annex 9 to the Convention on International Civil Aviation: Facilitation* [Annex 9].

⁹⁷⁰ ICAO, (2004) 5 *International Standards and Recommended Practices: Annex 14 to the Convention on International Civil Aviation: Volume I, Aerodrome Design and Operations* [Annex 14, Vol I].

⁹⁷¹ See *Chicago Convention*, *supra* note 14, arts 54(l), 90.

⁹⁷² See RIR Abeyratne, "Some Recommendations for a New Legal and Regulatory Structure for the Management of the Offense of Unlawful Interference with Civil Aviation" (1997) 25:2 *Transp LJ* 115 at 141–142 (HeinOnline).

⁹⁷³ Copies of certain volumes of ICAO Doc 8973 can only be purchased by authorized aviation security agencies of the various ICAO Member States. See online: ICAO <www2.icao.int/EN/AVSEC/SFP/Pages/SecurityManual.aspx> (visited May 15, 2014).

⁹⁷⁴ ICAO, *Security Manual for Safeguarding Civil Aviation Against Acts of Unlawful Interference*, ICAO Doc 8973 – Restricted, 7th ed (Montreal: ICAO, 2010) [ICAO, *Security Manual*].

⁹⁷⁵ NZ, Civil Aviation Authority of New Zealand, *Advisory Circular: Aviation Security Service Organisations - Certification*, AC140-1 (12 January 1999) (Robert Adams), online: Civil Aviation Authority of New Zealand <www.caa.govt.nz/rules/ACs.htm> (visited May 15, 2014).

Security Audit Programme (USAP)⁹⁷⁶ is designed to "assess State compliance with Annex 17"⁹⁷⁷ and it offers considerable technical assistance to States.⁹⁷⁸

A) Israeli Security Leadership

Israel is the undisputed leader in aviation security; no aircraft departing Tel Aviv has ever been successfully⁹⁷⁹ hijacked⁹⁸⁰ and the last time an El Al aircraft was successfully hijacked to an unintended destination was on July 22, 1968.⁹⁸¹ Almost immediately thereafter the country started using armed personnel,⁹⁸² or air marshals, to protect its flights. In addition, all prospective passengers are 'interviewed' before being allowed to board.

[El Al's] security system emphasizes the identification of people who could be a threat, rather than the detection of objects that could be used to hijack or destroy an airplane [It] identifies five types of people who could pose a threat to an airplane. Ranging from *naive terrorists*, passengers who are unaware that they are carrying dangerous objects, to *suicide terrorists* who intentionally carry dangerous objects to destroy the airplane and kill everyone on board, including themselves. El Al has also developed psychological profiles of these individuals and a passenger-interrogation technique designed to identify them during check-in....⁹⁸³

This system works very well for El Al and thus the airline does its own security screening at most of the foreign airports it serves. As Israel's Transport Minister, Ephraim Sneh, said in 2002, "The basic rule is simple. If a destination cannot be made secure for our passengers, we do not

⁹⁷⁶ See ICAO, *The Universal Security Audit Programme (USAP)*, online: ICAO <www2.icao.int/en/AVSEC/USAP/Documents/USAP_Overview.pdf> (visited May 15, 2014).

⁹⁷⁷ Paul Stephen Dempsey, "Compliance & Enforcement in International Law: Achieving Global Uniformity in Aviation Safety" (2004) 30:1 NCJ Int'l L & Com Reg 1 at 38 (HeinOnline).

⁹⁷⁸ See ICAO, "Implementation Support and Development (ISD)", online: ICAO <www.icao.int/Security/isd/Pages/default.aspx>. See also ICAO, Eleventh Meeting of Civil Aviation Authorities of the SAM Region, RAAC/11, online: ICAO <www.icao.int/SAM/Pages/MeetingsDocumentation.aspx?m=RAAC11> (visited May 15, 2014).

⁹⁷⁹ This record was threatened on November 17, 2002 when an Israeli Arab tried to hijack a Tel Aviv-Istanbul flight with a pen-knife before being subdued by Israeli air marshals. See "Hijack suspect: Target was Tel Aviv", *The Seattle Times* (19 November 2002), online: Seattle Times <community.seattletimes.nwsources.com/archive/?date=20021119&slug=hijack19>.

⁹⁸⁰ This chapter makes many references to the Aviation Safety Network website. Throughout, the phrase "online: Hijacking description, Database, Aviation Safety Network" will be replaced by "online: HdDASN"

⁹⁸¹ Jonathan Adelman, *The Rise of Israel: A history of a revolutionary state* (London: Routledge, 2008) at 162. See also Arnold Sherman, *To the Skies: the El Al Story* (New York: Bantam Books, 1972) at 139–155.

⁹⁸² As early as February 18, 1969, armed Israeli personnel were traveling aboard El Al passenger jets to protect the aircraft and its occupants from terrorists. See Sherman, *supra* note 981 at 158–159.

⁹⁸³ US, Committee on Commercial Aviation Security, Panel on Passenger Screening, Commission on Engineering and Technical Systems, National Research Council, *Airline Passenger Security Screening: New Technologies and Implementation Issues* (Washington, DC: National Academies Press, 1996) at 13–14 [*Airline Passenger Security*].

go."⁹⁸⁴ However Israel does not impose its standards outside Israel; it implements its standards through agreements and hires its own personnel as necessary.⁹⁸⁵

B) AMERICAN SECURITY LEADERSHIP

The United States is widely seen as a leader in aviation security.⁹⁸⁶ It began using air marshals in the early 1960s,⁹⁸⁷ started screening all domestic passengers in January 1973⁹⁸⁸ and has been exploring both Computer Assisted Passenger Profile systems⁹⁸⁹ and Advance Imaging Technology⁹⁹⁰ (body scanners) since the 1990s. In 2001, the United States was the first country to develop a No-Fly list. As with Israel, aviation security initiatives in the United States were an attempt to solve a problem; between 1960 and 1973, over 150 American aircraft were hijacked,⁹⁹¹ although the vast majority of these were hijacked to Cuba.⁹⁹² It was not until 1969 that an American aircraft was hijacked by a terrorist.⁹⁹³ Although two other US aircraft were hijacked by terrorists the next year,⁹⁹⁴ no deaths resulted and neither event occurred on American

⁹⁸⁴ See "Military Operations El Al's Formidable Security Precautions", *The Scotsman* (6 July 2002) online: HighBeam Research <www.highbeam.com/doc/1P2-12996302.html> (visited May 15, 2014).

⁹⁸⁵ At some airports El Al's aircraft are escorted on the taxiway by military or armored vehicles.

⁹⁸⁶ See Jim Marriott, Chief, Aviation Security Branch International Civil Aviation Organization, testimony before US, Committee on Homeland Security, Subcommittee on Transportation Security, "Strengthening International Cooperation on Aviation Security" (7 April 2011) at 4, online: US House of Representatives <homeland.house.gov/sites/homeland.house.gov/files/Testimony%20Marriott.pdf>.

⁹⁸⁷ The US Federal Air Marshal Service (FAMS) informally began in the early 1960s. See Jeffrey C Price & Jeffrey S Forrest, *Practical Aviation Security: Predicting and Preventing Future Threats* (Amsterdam: Butterworth-Heinemann, 2009) at 138.

⁹⁸⁸ Bartholomew Elias, *Airport and Aviation Security: US Policy and Strategy in the Age of Global Terrorism* (Boca Raton, Fla: Auerbach Publications, 2010) at 11.

⁹⁸⁹ Northwest Airlines and the Federal Aviation Administration (FAA) started working on this ancestor of the no-fly list in 1995. See Bill Dedman, "FAA Looking To Expand System", *Boston Globe* (12 October 2001) A27. The US Congress wanted to support this initiative. See also *Federal Aviation Reauthorization Act of 1996*, Pub L No 104–264, § 307, 110 Stat 3213 at 3253.

⁹⁹⁰ See John Rogers, "Bombs, Borders, and Boarding: Combatting International Terrorism at United States Airports and the Fourth Amendment" (1997) 20:2 *Suffolk Transnat'l L Rev* 501 at 510 (HeinOnline). See also *Airline Passenger Security*, *supra* note 983 at 14–20. See also *Federal Aviation Authorization Act*, *supra* note 989 § 303.

⁹⁹¹ Rogers, *supra* note 990 at 504 – 505.

⁹⁹² See Karen Feste, "Reducing International Terrorism: Negotiation Dynamics in the US Cuba Skyjack Crisis" (Paper delivered at the 19th Annual Conference of the International Association for Conflict Management, Quebec, Canada, 25-28 June, 2006), at 6 online: Social Science Research Network <papers.ssrn.com/sol3/papers.cfm?abstract_id=913734> (visited May 15, 2014).

⁹⁹³ On August 29, 1969, TWA Flight 840 was hijacked to Damascus by the Popular Front for the Liberation of Palestine (PFLP). See online: HdDASN <aviation-safety.net/database/record.php?id=19690829-1>.

⁹⁹⁴ See *The Dawson's Field Hijackings*, below.

soil. This changed in 1985 when TWA Flight 847⁹⁹⁵ was hijacked to Beirut,⁹⁹⁶ where an American passenger, US Navy Diver, Robert Stethem was killed.⁹⁹⁷

1) America the Enforcer?

Congress quickly reacted to the TWA Flight 847 incident by passing legislation⁹⁹⁸ giving American authorities the power to:

- Conduct their own audits of foreign airports to ensure compliance with Annex 17 standards,⁹⁹⁹ publish the names of airports who fail to comply,¹⁰⁰⁰ and even ban flights between the US and non-complying airports.¹⁰⁰¹
- Demand that foreign air carriers serving the US meet US security standards;¹⁰⁰² and
- Ban airlines from countries that cooperate with terrorists from serving the US¹⁰⁰³

Further, in reaction to the events of September 11, 2001 American authorities have:

- Demanded that foreign airlines send them passenger information with respect to any flight serving the United States¹⁰⁰⁴ or overflying the United States;¹⁰⁰⁵
- Required air marshals on foreign flights serving the United States.¹⁰⁰⁶

⁹⁹⁵ TWA Flight 847 was hijacked to Beirut on June 14, 1985. Passengers were held hostage for 17 days. See online: HdDASN <aviation-safety.net/database/record.php?id=19850614-0>. See also Bruce Hoffman, *Inside Terrorism* (New York: Columbia University Press, 1998) at 132 – 135.

⁹⁹⁶ Beirut was in a state of near-anarchy at the time, and the Lebanese government had neither control of the airport nor of the various areas of Beirut where the hostages were held. See Grant Wardlaw, *Political Terrorism: Theory, Tactics, and Counter-measures*, 2nd ed (Cambridge: Cambridge University Press, 1990) at 151–152.

⁹⁹⁷ For an overview of this hijacking, see Bradley L Bowman, "US Grand Strategy for Countering Islamist Terrorism and Insurgency in the 21st Century" in James JF Forest, ed, *Countering Terrorism and Insurgency in the 21st Century: International Perspectives* (Westport, Conn: Praeger Security International, 2007) 29 at 38-48.

⁹⁹⁸ *International Security and Development Cooperation Act of 1985*, Pub L No 99-83, 99 Stat 190 at 222 [International Security Act].

⁹⁹⁹ See *ibid* at 222 – 227, §§ 551 – 559 (codified at 49 USC § 44907).

¹⁰⁰⁰ See *Security of Aircraft and Safety of Passengers Transiting Denpasar, Bali, Indonesia*, 71 Fed Reg 3107 (2006). The US has issued various similar orders since 1990. See US, Department of Transportation, Order 90-12-55 (Lima Peru) (1990); US, Department of Transportation, Order 92-3-30 (Buenos Aires, Argentina) (1992); US, Department of Transportation, Order 92-10-17 (Lagos, Nigeria) (1992); US, Department of Transportation, Order 95-8-12 (Manila, Philippines) (1995); US, Department of Transportation, Order 95-9-15 (Bogotá, Colombia) (1995); US, Office of the Secretary of Transportation, Order 98-1-24 (Port-au-Prince, Haiti) (1998); *Security of Aircraft and Safety of Passengers Transiting Port-au-Prince, Haiti*, 70 Fed Reg 3378 (2005).

¹⁰⁰¹ US, Department of Transportation, *Determining that Murtala Muhammad International Airport does not Maintain and carry out effective security measures and discontinuing the authority of any air carrier to operate between the US and this airport*, Order (3) 93-8-15 (1993).

¹⁰⁰² Richard W Boyd & Martha Crenshaw, *The 99th [ninety-ninth] Congress and the Response to International Terrorism* (Washington, DC: United States Government Printing Office, 1987) at 176, 183.

¹⁰⁰³ The United States banned Lebanon's Middle East Airlines from serving American airports in 1985. See *Presidential Determination 85-14*, 50 Fed Reg 31835 (1985).

¹⁰⁰⁴ *Aviation and Transportation Security Act*, *supra* note 81, § 115.

¹⁰⁰⁵ *Electronic Transmission of Passenger and Crew Manifests for Vessels and Aircraft*, 70 Fed Reg 17820 (2005) [Electronic Transmission].

¹⁰⁰⁶ See *Law Enforcement Officers on Flights*, *supra* note 84.

While one may be sympathetic to American concerns following the world's most deadly terrorist incident involving civil aviation, the imposition of American standards on the international community may not be the solution. In the quest for improved aviation security on a global scale, higher global standards are needed.

C) Achieving a Consensus

At present, with respect to the most important aspects of aviation security, it is clear that different States have very different positions and have adopted different policies and practices. What follows are illustrative examples of the more significant differences.

Although Israel's El Al has an air marshal on every flight, the US and like-minded States use air marshals only as needed while New Zealand forbids the presence of armed person aboard its aircraft.¹⁰⁰⁷ America's No-fly policy requires airlines to send the relevant passenger information to the government, but Canada sends its No-Fly list to the airlines in order to better protect passenger privacy.

ICAO conducts security audits of airports and the results are confidential; when the United States conducts a similar audit a public notice may be issued. American authorities might identify a foreign airport as a haven for terrorists and ban all flights to it, but European carriers might accept that same airport. America faces court cases from innocent people who want to remove their names from the No-Fly list, Canada makes it easier for innocent people to distinguish themselves from the list's targeted persons and the United Nations publishes its No-Fly list on the internet. Australia has made the use of Advance Imaging Technology (body scanners) mandatory at all large airports,¹⁰⁰⁸ both the United States and Canada offer an alternative (usually a manual pat-down), and some members of the European Union have banned the technology.¹⁰⁰⁹ Last but not least, the different jurisdictions have incompatible policies with respect to whether or not to confiscate, at a security screening point, items such as a bottle of duty-free perfume purchased aboard an intercontinental aircraft.

¹⁰⁰⁷ See Fitzgerald, "Air Marshals", *supra* note 89.

¹⁰⁰⁸ Australia's plans were first reported in February 2012. See Linda Silmalis, "Full-body scans rolled out at all Australian international airports after trial", *The Sunday Mail (Qld)* (5 February 2012), online: News.com.au <www.news.com.au/travel/news/accept-airport-scan-or-drive/story-e6frfq80-1226262838340#ixzz1xQkx1xfp> (visited May 15, 2014). It will be mandatory for secondary screening.

¹⁰⁰⁹ See European Commission, Press release, IP/11/1343, "Aviation security: Commission adopts new rules on the use of security scanners at European airports", (14 November 2011) online: European Commission <europa.eu/rapid/press-release_IP-11-1343_en.htm?locale=en> (visited May 2014) ["Commission adopts"].

Each of these differences has an impact on travelers and consequently on airlines. Data indicates that additional security measures are discouraging travel, particularly on short trips:¹⁰¹⁰

A 2010 survey found that more than 60 percent of travelers would take two to three more trips a year if the hassles in screening could be reduced without compromising security.¹⁰¹¹

Passengers may choose a routing with a lighter aviation security burden. For example, Air New Zealand flies from Auckland to London via either Hong Kong or Los Angeles,¹⁰¹² and thus passengers wishing not to be checked against the US No-Fly list would travel via Hong Kong. A Canada-Ecuador traveler who does not wish to remove his/her shoes will change planes in Mexico rather than undergo transit security screening in the US. An Indian travelling to Texas with duty-free perfume can avoid security screening concerns by connecting at Doha rather than at Newark. A journalist heading to a hot-spot¹⁰¹³ will not fly with a US airline for fear of being refused transit as a potential terrorist.¹⁰¹⁴ An unintended consequence of the aviation security regulations designed to keep Americans safe may be that they encourage Americans and others to fly with foreign carriers to the detriment of US airlines.

The immediate cause of the harm is not the need for aviation security regulation itself, but the lack of consensus with respect to its importance and implementation and the resulting inevitable uneven playing field. Even though the lack of consensus was not planned, if ICAO can create a fairly uniform regime with respect to aviation safety, a multilateral consensus with respect to aviation security at the national level should also be possible. However, to this point, the distinct experiences of different States in the aviation security sphere appear to have resulted in often incompatible approaches.

¹⁰¹⁰ See Garrick Blalock, Vrinda Kadiyali & Daniel H Simon, "The Impact of Post-9/11 Airport Security Measures on the Demand for Air Travel" (2007) 50:4 JL & Econ 731 at 752–753 (HeinOnline). It estimates that in the 4th quarter of 2002, new baggage screening measures cost the US airline industry over US\$ 1 billion in lost revenue.

¹⁰¹¹ See US, *Securing Our Nation's Transportation System: Oversight of the Transportation Security Administration's Current Efforts: Hearing Before the Senate Committee On Commerce, Science, and Transportation*, 112th Cong (Washington, DC: United States Government Printing Office, 2012) at 4. (Hon. Barbara Boxer, US Senator from California) online: United States Government Printing Office <www.gpo.gov/fdsys/pkg/CHRG-112shrg73788/pdf/CHRG-112shrg73788.pdf> (visited May 16, 2014).

¹⁰¹² Air New Zealand flies two Boeing 777s daily between Auckland and London. Flights 2 and 1 operate via Los Angeles and Flights 38 and 39 operate via Hong Kong. For aviation buffs, and frequent flyers, from Auckland to London it is about 70 minutes faster to fly via LAX. Coming home, it is about 75 minutes faster to fly via HKG.

¹⁰¹³ This list includes Aden, Baghdad, Basra, Beirut, Damascus, Kabul, Karachi, Sana'a, Tehran, and Tripoli.

¹⁰¹⁴ However, carriers such as Austrian Airlines, Royal Jordanian, Turkish Airlines and the MEB3 (Middle East Big 3: Emirates, Etihad and Qatar) provide one-stop service between these points and major cities in Europe and North America.

III) HISTORICAL UNDERPINNINGS OF AVIATION SECURITY

Although for many persons the horrific events of September 11, 2001 mark the beginning of the current aviation security regime, both the individual events (using aircraft as weapons of mass destruction) and the collective events (simultaneous hijacking of multiple aircraft) had happened previously. There have been numerous reputed attempts to fly aircraft into buildings,¹⁰¹⁵ twice in 1972,¹⁰¹⁶ once in each of 1974,¹⁰¹⁷ 1977,¹⁰¹⁸ and 1988,¹⁰¹⁹ and twice in 1994.¹⁰²⁰ Similarly, the concept of multiple hijackings was not new; on August 16, 1980, three US jetliners were hijacked on the same day,¹⁰²¹ and nearly 10 years earlier two jets were hijacked on the same day from O'Hare and nearly met on the tarmac in Havana.¹⁰²²

¹⁰¹⁵ Jeffrey C Price, *Introduction to Aviation Security: Airport Certified Employee (ACE) Security: The History of Aviation Security International Civil Aviation Organization (ICAO) Aviation Security Policy Development Roles and Responsibilities* (Alexandria, Va: American Association of Airport Executives, 2008) online: American Association of Airport Executives <events.aaae.org/sites/212/assets/images/Module%201%20-%20Intro%20to%20Aviation%20March%202008.pdf> (visited May 16, 2014).

¹⁰¹⁶ On January 29, 1972, Garrett B Trapnell hijacked a TWA Boeing 707 at Los Angeles and threatened to ram it into TWA's terminal at JFK unless his ransom of US\$ 306,800 was paid and black militant Angela Davis freed. See Andreas Killen, "The First Hijackers", *The New York Times* (16 January 2005), online: The New York Times <www.nytimes.com/2005/01/16/magazine/16HIJACKERS.html?pagewanted=print&position=&_r=0> (visited May 16, 2014). On November 10, 1972, 3 people hijacked Southern Airways Flight 49 on take-off from Birmingham, Alabama, and threatened to fly it into the Oak Ridge nuclear facility if they did not receive a ransom of US\$ 10 million. See Anthony Welsch, "Convicted hijacker shares story, details 1972 threat to Oak Ridge", *WBIR.COM* (25 May 2011) online: WBIR.COM <archive.wbir.com/news/local/story.aspx?storyid=170845>.

¹⁰¹⁷ See Price & Forrest, *supra* note 987 at 48.

¹⁰¹⁸ On December 4, 1977, the pilots of Malaysian Airline System Boeing 737 were killed, the autopilot was disconnected and the aircraft was aimed at Singapore. See Brian Michael Jenkins, "The Terrorist Threat to Commercial Aviation", P-7540 (March 1989) issued by The RAND Corporation (Santa Monica, Cal: The RAND Corporation) at 10, online: RAND Corporation <130.154.3.14/content/dam/rand/pubs/papers/2008/P7540.pdf>; See online: HdDASN <aviation-safety.net/database/record.php?id=19771204-0> ; US, Department of Transportation, Federal Aviation Administration, *US and Foreign Registered Aircraft Hijackings Statistics 1961 to Present*, updated 1 January 1986 (1986) at 60 [*US and Foreign Hijacking*].

¹⁰¹⁹ In April 1988, the hijackers of a Kuwait Airways Boeing 747 threatened to fly it into the Kuwaiti Royal Palace. See Ahmad Al-Khaled, "Hezbollah leader Mugniyah killed", *Kuwait Times* (14 February 2008).

¹⁰²⁰ In April 1994, a disgruntled FedEx pilot hijacked a DC-10 and may have wanted to crash it into the FedEx headquarters in Memphis. See Price & Forrest, *supra* note 987 at 67. On December 24, 1994, Air France Flight 8969 was hijacked at Algiers; plans included crashing the plane into the Eiffel tower. See Brynjar Lia, *Architect of Global Jihad: The Life of Al-Qaida Strategist Abu Mus'ab Al-Suri* (New York: Columbia University Press, 2008) at 155.

¹⁰²¹ All three US airliners were hijacked to Cuba. These were: Delta Flight 1065, San Juan-Miami; Republic Flight 227, Miami-Orlando and Eastern Flight 90, Miami-Orlando. See *US and Foreign Hijackings*, *supra* note 1018 at 82 – 83. In 1995, intelligence officials became aware of the "Bojinka" plot to simultaneously destroy 11 US passenger jets over the Pacific. See Simon Reeve, *The New Jackals: Ramzi Yousef, Osama Bin Laden and the Future of Terrorism* (Boston: Northeastern University Press, 1999) at 90–91.

¹⁰²² On May 25, 1970, an American Airlines Boeing 727 and a Delta Airlines CV-880 were both hijacked from Chicago O'Hare to Havana. See *US and Foreign Hijackings*, *supra* note 1018 at 21 – 22. See also RS Maurer, "Skyjacking and Airport Security" (1973) 39:3 J Air L & Com 361 at 362 – 363 (HeinOnline).

A) The Dawson's Field Hijackings

The Dawson's Field Hijackings happened over 40 years ago, but they had as much of an impact on aviation security at that time as did the events of September 11, 2001. On September 6, 1970 the Popular Front for the Liberation of Palestine (PFLP) tried to simultaneously hijack three New York bound jets: an EL Al Tel Aviv-Amsterdam-New York Boeing 707 service, a TWA Frankfurt-New York Boeing 707 flight, and a Swissair Zurich-New York DC-8 flight.¹⁰²³ After the attempted hijacking of the El Al jet was foiled by an air marshal,¹⁰²⁴ terrorists hijacked the jet at the next gate; a Pan Am Boeing 747 flying from Brussels to New York via Amsterdam. Later, in an attempt to free the hijacker detained in the foiled attempt on the El Al jet, a BOAC Bombay-Bahrain-Beirut-London VC 10 was hijacked at Bahrain on September 9, 1970.¹⁰²⁵ The Boeing 747 was flown to Cairo, while the three single-aisle aircraft were flown to Dawson's Field, a former RAF station at Zerqa, Jordan. All of the captured aircraft were destroyed and the nearly 600 hostages¹⁰²⁶ were used by the PFLP to negotiate the release of prisoners held in Europe.¹⁰²⁷

B) International reaction to the Dawson's Field Hijackings

Perhaps the fact that the hijackers had interfered with the flag carriers¹⁰²⁸ of two members of the United Nations Security Council (UNSC), and had impacted commercial aviation in Belgium, Germany, the Netherlands, Israel, Jordan, Switzerland, the UK and the US, caused international reaction to be unusually swift. Even while the events were still ongoing, the United States, with UK support, had convinced the UNSC to call on States to "take all possible legal steps to prevent

¹⁰²³ See *US and Foreign Hijackings*, *supra* note 1018 at 25.

¹⁰²⁴ Mark Ensalaco, *Middle Eastern Terrorism: From Black September to September 11* (Philadelphia: University of Pennsylvania Press, 2008) at 22.

¹⁰²⁵ See British Cabinet discussion of these events. Document "CAB 128/47," (9 September 1970), UK National Archives, online: UK National Archives < www.nationalarchives.gov.uk/documents/nyo_2001_pt2.pdf > (visited May 25, 2014). See also the United States' newly declassified documents on the same incident, online: US Department of State < 2001-2009.state.gov/documents/organization/113360.pdf > [US Black September Docs] (visited May 25, 2014).

¹⁰²⁶ There were 591 hostages: 421 in Jordan (TWA, Swissair and BOAC jet), and 170 in Cairo (Pan Am Boeing 747).

¹⁰²⁷ Three of these prisoners had been arrested by Swiss authorities after attacking El Al Flight 432 at Zurich in 1969.

¹⁰²⁸ Today's airlines are now commercial entities but in the 1960s and 1970s Pan Am and BOAC had semi-diplomatic status. See Sampson, *supra* note 57 at 84, 88.

further hijacking or any other interference with international civil air travel."¹⁰²⁹ Shortly thereafter, the UN General Assembly passed a motion condemning aircraft hijacking.¹⁰³⁰

C) Subsequent international developments in the wake of the Dawson's Field Hijackings

On December 16, 1970, an ICAO conference attended by 77 States¹⁰³¹ produced the Hague Convention for the Unlawful Seizure of Aircraft¹⁰³² calling for the State of Registration to "take such measure as may be necessary to establish its jurisdiction"¹⁰³³ over violent acts¹⁰³⁴ against passengers or crew "when the offence¹⁰³⁵ is committed on board an aircraft registered in that State."¹⁰³⁶ Concurrently, ICAO started to develop Annex 17 to the Chicago Convention to "Safeguard International Civil Aviation Against Acts of Unlawful Interference."¹⁰³⁷

As spectacular as the Dawson's field hijackings were, many analysts believe that the dawn of aircraft hijacking as terrorism occurred nearly two years earlier. In July, 1968, the PFLP hijacked an El Al Rome-Tel Aviv flight to Algiers and held the aircraft and its occupants for 40 days.¹⁰³⁸

¹⁰²⁹ Security Council resolution 286 (1970) of 9 September was adopted without vote. (Consensus 1552nd meeting of council). See Karel C Wellens, ed, *Resolutions and Statements of the United Nations Security Council (1946-1989): A Thematic Guide* (Norwell, Mass: Martinus Nijhoff Publishers, 1990) at 659. See further US Black September Docs, *supra* note 1025 at 7, 19, 34, 38.

¹⁰³⁰ *Aerial hijacking or interference with civil air travel*, GA Res 2645(XXV), UNGAOR, 25th Sess, Supp No 28, UN Doc A/8176, (1970) 126. See SK Verma, *An Introduction to Public International Law* (New Delhi: Prentice-Hall of India, 1998) at 168. See also John O'Brien, *International Law* (London: Cavendish Publishing, 2001) at 250. There were no votes against the motion.

¹⁰³¹ Tim Hillier, *Sourcebook on Public International Law* (London: Cavendish Publishing, 1998) at 491.

¹⁰³² *Convention for the Suppression of Unlawful Seizure of Aircraft*, 16 December 1970, 860 UNTS 105, 22 UST 1641, 10 ILM 133, ICAO Doc 8920 (entered into force 14 October 1977) [*Hague Convention*].

¹⁰³³ *Id.*, art 4(1).

¹⁰³⁴ Most nations have implemented this principle into their domestic laws. See 49 USC § 46506(2) (2011); *Criminal Act*, *supra* note 70, sch, c 2, part 2.7, division 14; *Civil Aviation Act*, *supra* note 70, s 108; *Criminal Code*, *supra* note 70, ss 7, 27.1(2).

¹⁰³⁵ By defining hijacking as an "offense", the *Hague Convention* exceeded the *Tokyo Convention*, *supra* note 70. The *Tokyo Convention* has been ratified by 182 countries and entered into force on 14 December 1969.

¹⁰³⁶ *Hague Convention*, *supra* note 1032, art 4(1)(a).

¹⁰³⁷ Annex 17 was adopted by the ICAO Council on March 22, 1974. See Sakeus Akweenda, "Prevention of Unlawful Interference with Aircraft: A Study of Standards and Recommended Practices" (1986) 35:2 ICLQ 436 at 436 (JSTOR). See also Maria Buzdugan, *Current and Emerging Air Cargo Security and Facilitation Issues* (LLM Thesis, McGill University Institute of Air and Space Law, 2005) at 23–25 [unpublished].

¹⁰³⁸ Tobias Feakin, *Insecure Skies?: Challenges and Options for Change in Civil Aviation Security* (London: Royal United Services Institute, 2011) at 2, online: Royal United Services Institute <www.rusi.org/downloads/assets/Insecure_Skies_29-03-11_web.pdf> (visited May 17, 2014). The flight was hijacked on July 23 and the incident ended peacefully on August 31. See online: HddASN <aviation-safety.net/database/record.php?id=19680723-0> (visited May 17, 2014).

Seven months later, the PFLP attacked an El Al Boeing 707 on the ground at Zurich,¹⁰³⁹ which resulted in the arrest of the three terrorists.¹⁰⁴⁰ Their detention in Switzerland, in turn, provoked the in-flight destruction of a Swissair jet¹⁰⁴¹ and the hijacking of a Swissair jet to Dawson's Field. When one considers the PFLP's 1968 and 1969 activities, one is reminded of the *post hoc ergo propter hoc* fallacy. Just because The Hague Convention and Annex 17 are subsequent to the Dawson's Field events does not make them the result of those events; it is also possible, and indeed probable, that the negotiations which created them were provoked by the earlier incidents. Indeed, given that ICAO had held from June 16-30, 1970 an extra-ordinary Assembly to deal with the "protection of air passengers, civil aviation personnel and civil aircraft,"¹⁰⁴² it is highly likely that the Dawson's Field event only served to accelerate an already existing process.

IV) EVOLUTION OF AIRPORT SECURITY 1970-2001

Today's airport security measures are rooted in the American response to the Dawson's Field hijackings. On September 11, 1970, President Nixon ordered air carriers to deploy "surveillance equipment and techniques to all appropriate airports in the United States".¹⁰⁴³ Thereafter, US security measures were formalized by the Air Transportation Security Act of 1974.¹⁰⁴⁴ ICAO's subsequent adoption of Annex 17¹⁰⁴⁵ and its recommendations on international security

¹⁰³⁹ The attack happened February 18, 1969. See Jack Lewis, Robert K Campbell & David Steele, *The Gun Digest Book of Assault Weapons*, 7th ed (Iola, Wis: Krause Publications, 2007) at 105. See also "Terror in Two Cities", *Time* 93:9 (28 February 1969) 34 (EBSCO HOST) [LY ZRH 1969].

¹⁰⁴⁰ See *supra* note 1027.

¹⁰⁴¹ On February 21, 1970 the PFLP blew up a Swissair Convair 990 operating as flight 330 from Zurich to Tel Aviv, killing all aboard. Online: Aviation Safety Network <aviation-safety.net/database/record.php?id=19700221-1> (visited May 17, 2014).

¹⁰⁴² Austria et al, *Provisional Agenda*, ICAO Assembly, 17th Sess (Extraordinary), Working Paper No 1, Doc A17-WP/1/P/1 (23 March 1970), online: ICAO <www.icao.int/Meetings/AMC/Pages/Archived-Assembly.aspx?Assembly=a17>.

¹⁰⁴³ *Airline Passenger Security*, *supra* note 983 at 6. Shortly after, in *United States v Lopez*, the Court examined whether an unsuitably calibrated magnetometer could result in unnecessary frisking and invasions of privacy. See 328 F Supp 1077 at 1086 (ED NY 1971) (available on QL). Three years later, Judge Oaks of the US 2nd circuit, was able to describe a "growing body of case law developing around 'airport searches.'" *United States v Albarado*, 495 F (2d) 799 at 800 (2d Cir 1974) (available on QL).

¹⁰⁴⁴ *Antihijacking Act of 1974*, Pub L No 93-366, 88 Stat 409.

¹⁰⁴⁵ The 1st edition was adopted in 1974 and became effective in 1975. *Annex 17* has been amended 12 times and is now in its 9th edition (2011). See *Annex 17*, *supra* note 968.

procedures¹⁰⁴⁶ initiated the regime of screening of passengers and cabin baggage for weapons, and the patrolling of (operational) security areas.¹⁰⁴⁷

For over a decade, this regime seemed to be adequate. Then on June 23, 1985, Air India Flight 182 was blown up by a bomb contained in the suitcase of a passenger who did not board the flight.¹⁰⁴⁸ An Indian investigation headed by the Hon. Justice B. N. Kirpal recommended that "IATA ... develop practical procedures for reconciliation of interlined passengers and their baggage at intermediate airports."¹⁰⁴⁹ ICAO implemented this standard in December 1987.¹⁰⁵⁰

The new recommendation was not embraced universally. Paragraphs (O) and (P) of the indictment of Abdelbaset Ali Mohamed Al Megrahi and Al Amin Khalifa Fhimah for the bombing of Pan Am Flight 103,¹⁰⁵¹ which exploded over Lockerbie, Scotland, *en route* from London to New York, allege that an unaccompanied¹⁰⁵² piece of luggage had been placed on a Pan Am flight from Frankfurt to London and then on to Pan Am Flight 103. Although this fact does not appear to have been widely reported,¹⁰⁵³ it shows that Pan Am was still allowing unaccompanied bags to travel on its transatlantic flights three and a half years after Air India Flight 182's destruction. If Pan Am had adhered to the passenger-baggage match¹⁰⁵⁴ standard that ICAO had adopted in December of 1987, the attack might well have been thwarted.¹⁰⁵⁵

¹⁰⁴⁶ Volume IV of ICAO, *Security Manual*, *supra* note 974, deals with security procedures for access control, and the screening of passengers and cabin baggage, hold baggage, cargo and mail.

¹⁰⁴⁷ Paul Stephen Dempsey, "Aviation Security: The Role of Law in the War Against Terrorism" (2003) 41:3 Colum J Transnat'l L 649 at 677 (HeinOnline).

¹⁰⁴⁸ Government of Canada, Public Safety Canada, *Lessons to be Learned: The Report of the Honourable Bob Rae, Independent Advisor to the Minister of Public Safety and Emergency Preparedness, on Outstanding Questions with respect to the Bombing of Air India Flight 182* (Ottawa: Air India Review Secretariat, 2005) at 8, online: Public Safety Canada <www.publicsafety.gc.ca/cnt/rsrscs/pblctns/lssns-lrnd/lssns-lrnd-eng.pdf> [*Lessons: Air India Flight 182*].

¹⁰⁴⁹ Government of India, *Report of the Court Investigating Accident to Air India Boeing 747 Aircraft VT-EFO, "Kanishka" on 23rd June 1985* (26 February 1986), Recommendation 5.3.

¹⁰⁵⁰ See *Lessons: Air India Flight 182*, *supra* note 1048 at 20.

¹⁰⁵¹ To view the indictment of Abdelbaset Ali Mohamed Al Megrahi and Al Amin Khalifa Fhimah of 29 October 1991 in *re the Bombing of Pan Am 103 on 21 December 1988*, see online: Internet Archive WayBack Machine <web.archive.org/web/20021204193404/www.thelockerbietrial.com/indictment.htm>.

¹⁰⁵² The language used in the indictment leads to the conclusion that the bag was unaccompanied.

¹⁰⁵³ Virtually all of the literature surrounding the Lockerbie disaster deals with Libya's involvement or the unique legal feature of a trial which saw Scottish Law applied by a court in The Netherlands.

¹⁰⁵⁴ One author states the FAA had passenger-baggage reconciliation regulations prior to Lockerbie but provides no support for this. See Peter Watson, "In Pursuit of Pan Am" (1995) 2:1 ILSA J Int'l & Comp L 203 at 207 – 210.

¹⁰⁵⁵ James Reason's "Swiss cheese" model of accident causation suggests that in a multi-factor situation, a disaster such as this could have been avoided if just one of the contributing factors – here the passenger-baggage reconciliation system— had not failed. For an overview of the application of the model to aviation and ICAO's use

Through the Aviation Security Improvement Act of 1990,¹⁰⁵⁶ which implemented Justice Kirpal's recommendations, the US adopted "measures to strengthen controls over checked baggage in air transportation, such as measures to ensure baggage reconciliation and inspection of items in baggage of passengers which could potentially contain explosive devices."¹⁰⁵⁷

The Air India Flight 185 and Pan Am Flight 103 bombings were not the only incidents where terrorists had used the strategy of boarding an aircraft with a bomb in a suitcase or carry-on bag and then disembarking from the aircraft at an *en route* stop preceding the leg of the flight where the bomb was to be detonated. This strategy was used to blow up Korean Airlines Flight 858 in November 1987¹⁰⁵⁸ and UTA Flight 772 in September 1989.¹⁰⁵⁹ These incidents helped to reinforce the importance of reconciling baggage with passengers on each sector of a multi-sector flight and ensuring that carry-on bags are removed at the same stop where a passenger disembarks.

A) The State of Airport Security September 10, 2001

Notwithstanding these tragedies in the international sector, America considered itself safe from terrorism on the domestic front as previous hijackings in that context had not been terrorist-related and none had involved fatalities.¹⁰⁶⁰ As a result, non-passengers who were willing to walk through a security checkpoint were given access to the post-security-screening or sterile area of American airports, a practice criticized by the US Government Accountability Office some 15 months prior to the events of 9/11:

At most US airports, nonpassengers as well as passengers are allowed [through] checkpoints and into the secure areas of airports. Officials from some other countries ... [argue that] ... limiting access to passengers reduces the number of people entering secure areas and consequently reduces the risk that a dangerous object will be brought onto an aircraft. Officials ... noted that limiting the number of people passing through the checkpoints reduces the burden on screeners, allowing them to be more thorough and minimizing screening costs.¹⁰⁶¹

of it, see Douglas A Wiegmann & Scott A Shappell, *A Human Error Approach to Aviation Accident Analysis: The Human Factors Analysis and Classification System* (Aldershot, England: Ashgate Publishing, 2003).

¹⁰⁵⁶ Aviation Security Improvement Act of 1990, Pub L No 101-604, 104 Stat 3066 (codified at scattered sections of 49 USC and 22 USC).

¹⁰⁵⁷ *Ibid*, § 318(d)(1).

¹⁰⁵⁸ See online: Criminal Occurrence description, Database, Aviation Safety Network <aviation-safety.net/database/record.php?id=19871129-0>. Bomb in bag left in overhead bin.

¹⁰⁵⁹ See Rodney Wallis, *Combating Air Terrorism* (Washington, DC: Brassey's, 1993), at 39 – 40. Bomb in baggage

¹⁰⁶⁰ US, Government Accountability Office, *Aviation Security: Additional Actions Needed to Meet Domestic and International Challenges* (GAO/RCED-94-38) (1994) at 11.

¹⁰⁶¹ US, Government Accountability Office, *Aviation Security: Long-Standing Problems Impair Screener Performance* (GAO/RCED-00-75) (2000) at 39.

The fact that non-passengers could access the airport's sterile area made it a fertile ground for retail opportunities and thus shopping centers, literally airmalls with up to a hundred stores, began to appear at American airports,¹⁰⁶² sometimes catering to the residents of nearby neighbourhoods.¹⁰⁶³ Isaac Yeffet, a former security director at El Al airlines, examined US aviation security after the Lockerbie tragedy and wrote:

There is no airline security in the United States. [...] From poorly phrased or non-existent pre-board questioning, ineffective use of X-ray machines and metal detectors to curbside check-in, there is nothing that Americans do well when it comes to airport security.¹⁰⁶⁴

With the exception of the United States, at most major airports around the world, sterile areas were reserved for ticketed passengers only. All passengers entering the sterile area were required to walk through a metal detector or magnetometer, and to submit any carry-on item to screening via X-ray machine. Checked luggage on most international flights was also subject to screening. The sterile area for international flights was restricted to passengers with passports.

B) September 11, 2001: the un-asked Question

The 9/11 Commission defined the people who perpetrated the events of September 11, 2001, on New York and Washington DC as "an enemy who is sophisticated, patient, disciplined and lethal"¹⁰⁶⁵ and whose "hostility toward us and our values is limitless."¹⁰⁶⁶ Assuming this is true, consider the following. The two hijacked aircraft that were flown into the World Trade Centre were both Boston-Los Angeles non-stop flights operated with Boeing 767 wide-body jets¹⁰⁶⁷

¹⁰⁶² Pittsburgh's airmall was over 100,000 square feet and included over 100 stores. See Ahron B Herring, *Current Approaches to the Development of Airport Retail: A Sales Performance Analysis and Case Study* (M Sc Thesis, MIT, 2002) at 11 [unpublished], online: MIT <dspace.mit.edu/bitstream/handle/1721.1/16882/5/1891037.pdf>.

¹⁰⁶³ Prior to September 11, 2001, the 100-store Airmall, located within the airside terminal at Pittsburgh International Airport served residents of Pittsburgh's western suburbs. A 2002 study listed Pittsburgh airport's Airmall as one the city's "Major Retail Malls". Online: City of Pittsburgh <www.city.pittsburgh.pa.us/planc/appendices.pdf>. So important were the non-passenger clients of the airmalls that even after September 11, lobbying continued for non-passengers to be able to maintain access to the airport shopping centers in the sterile areas. See Mark Belko, "Airport hotel guests to get Air Mall access", *Pittsburgh Post-Gazette* (13 April 2007), online: Pittsburgh Post-Gazette <www.post-gazette.com/stories/local/breaking/airport-hotel-guests-to-get-air-mall-access-480678/>.

¹⁰⁶⁴ Jin-Tai Choi, *Aviation Terrorism: Historical Survey, Perspectives and Responses* (New York: St Martin's Press, 1994) at 35.

¹⁰⁶⁵ US, National Commission on Terrorist Attacks Upon the United States, *The 9/11 Commission Report* (Washington, DC: United States Government Printing Office, 2004) at xvi, online: <www.9-11commission.gov/report/911Report.pdf> (visited May 17, 2014) [*The 9/11 Report*].

¹⁰⁶⁶ *Ibid.*

¹⁰⁶⁷ American Flight 11 (N334AA) was a Boeing 767-200ER with an operating empty weight (oew) of 84,415kg (186,100lb); United Flight 175 (N612UA) was also a Boeing 767-200 (although not the extended range model) and it had an oew of roughly 80,920kg (178,400lb). The remaining flights, American Flight 77 (N644AA) and United

from an airport whose security system had twice been described on TV as "lax."¹⁰⁶⁸ The terrorists identified the largest aircraft operating on scheduled domestic service in the US and picked the longest routes they were scheduled to fly (6 hours duration) to guarantee that the mass of the biggest available aircraft with the largest available fuel load would be directed at the target. The terrorists probably knew that a Boeing 777-200ER¹⁰⁶⁹ and two Boeing 747-400s¹⁰⁷⁰ would operate intercontinental flights from New York JFK prior to 9:10 A.M.¹⁰⁷¹ on September 11 and that at least one of the aircraft had been fueled for a 14-hour journey.¹⁰⁷² Any of these three aircraft, when loaded, would have had twice to four times the mass of the hijacked Boeing 767s, making them much more effective against the target. Thus it is curious that they were not chosen.

Perhaps political considerations played a role in that the two Boeing 747-400s belonged to foreign airlines. However, the Boeing 777-200ER belonged to the same US carrier whose jets were crashed into the World Trade Centre and the Pentagon and thus the fact that this aircraft was not hijacked deserves more analysis. While most¹⁰⁷³ US airports granted access to sterile areas to non-passengers who proceeded through a security checkpoint, New York JFK required both a passport and a ticket to access the international departure area. The fact that the jumbo jets at JFK were located at the one US terminal where both a ticket and passport were required to access the gates may well have been sufficient to deter even Al-Qaeda's most determined terrorists. After all, at least one of the hijackers of American Flight 77 boarded the aircraft at Washington Dulles without photo identification,¹⁰⁷⁴ and a second boarded the aircraft after having triggered two metal detector alarms and having been hand-wanded by security officer in a procedure later determined to be "marginal at best."¹⁰⁷⁵ Passenger screening at JFK tended to be

Flight 93 (N591UA), Boeing 757-200 aircraft with an oew of 57,840kg (127,520lb), or about 70% the size of the 767s.

¹⁰⁶⁸ Two local Fox TV reports in Boston in February and April of 2001 described the "lax security" at that city's airport. See *The 9/11 Report*, *supra* note 1065 at 451.

¹⁰⁶⁹ A Boeing 777-200ER has an oew of 143,015kg (315,300lb) or roughly 1.8 times that of a Boeing 767-200.

¹⁰⁷⁰ A Boeing 747-400 has an oew of 181,755kg (400,700lb) or more than 2.2 times that of a Boeing 767-200.

¹⁰⁷¹ American Airlines Flight 142 (Boeing 777-200ER) was to depart for London at 8:30, British Airways flight 178 (Boeing 747-400) was to depart for London at 8:55 and five minutes later Japan Airlines Flight 47 (Boeing 747-400) was to depart for Tokyo. See Port Authority of New York & New Jersey, *Airport Flight Guide, July 1, 2001 – Sept 1, 2001*.

¹⁰⁷² As it began its take-off run for Tokyo, the aircraft operating Japan Airlines Flight 47 would have weighed close to 362,875kg (800,000lb). The actual New York–Tokyo flying time is listed as 13 hours and 45 minutes. See *ibid*.

¹⁰⁷³ See text associated with notes 1061 to 1063.

¹⁰⁷⁴ *The 9/11 Report*, *supra* note 1065 at 3.

¹⁰⁷⁵ *Ibid*.

more thorough because the screeners were not screening all people who wanted to enter the terminal; only those international passengers with tickets and passports had a right to enter the sterile area.¹⁰⁷⁶ It follows that at least two of the five hijackers of American Flight 77 likely would have not been permitted to board at JFK. Thus, if airports throughout the United States had had in place, on September 10, 2001, security procedures of the same standard used at JFK for international departures, this may well have been enough to thwart the 9/11 terrorists.

V) The Reaction to September 11

Anyone familiar with the glacial pace of politics¹⁰⁷⁷ of Washington and the well-known congressional gridlock¹⁰⁷⁸ must be awed by the almost miraculous passage of the Aviation and Transportation Security Act of 2001 (ATSA).¹⁰⁷⁹ Senator Ernest Frederick "Fritz" Hollings was able to table S. 1447 "A bill to improve Aviation Security," then a 21-page bill, on September 21, 2001, 10 days after the attack. S. 1447 created the Transportation Security Administration (TSA) which federalized security functions and security personnel at US airports; required the strengthening of cockpit doors and the locking of them during flight; provided a legal basis for the operation of air marshals on randomly selected domestic and international flights operated by US carriers; and initiated the creation of No-Fly lists.¹⁰⁸⁰

In addition to drafting such a comprehensive bill in just 10 days, Senator Hollings worked hard to win an impressive level of bipartisan support for his initiative. The day Senator Hollings tabled the Bill, he had 30 co-sponsors including both Democrat Sen. Hillary Clinton and Republican Sen. John McCain. While it is true that the Bill had the immediate support of 30% of the Senate, the fact that it received the support of 100% of the Senate (all present, no abstentions, no nay votes) just 21 days later is remarkable, although perhaps less so when one considers that the vote took place on the one month anniversary of September 11, 2001.¹⁰⁸¹ On October 17,

¹⁰⁷⁶ See US, Government Accountability Office, *Aviation Security: Long-Standing Problems Impair Screener Performance* (GAO/RCED-00-75) (2000) at 39.

¹⁰⁷⁷ America's Presidents and Congress have grappled with healthcare for nearly a century. See Elisabeth Goodridge & Sarah Arnquist, "A History of Overhauling Health Care: Nearly 100 years of legislative milestones and defeats", online: <www.nytimes.com/interactive/2009/07/19/us/politics/20090717_HEALTH_TIMELINE.html>.

¹⁰⁷⁸ See the ongoing fights over the US federal budget. See online: US Federal Budget, The New York Times <topics.nytimes.com/top/reference/timestopics/subjects/f/federal_budget_us/index.html>.

¹⁰⁷⁹ *Aviation and Transportation Security Act*, *supra* note 81.

¹⁰⁸⁰ See Overview of US, Bill, S 1447, *Aviation and Transportation Security Act*, 107th Cong, 2001 (enacted), online: GovTrack <www.govtrack.us/congress/bills/107/s1447> (visited May 17, 2014).

¹⁰⁸¹ Senate Vote 295 on October 11, 2001, online: GovTrack <www.govtrack.us/congress/votes/107-2001/s295> .

2001,¹⁰⁸² in the House of Representatives, Representative Don Young, a Republican Congressman from Alaska, introduced the 71-page H.R. 3150 Airport Security Federalization Act of 2001¹⁰⁸³ and it passed the House 15 days later with a 2/3 majority vote.¹⁰⁸⁴ Five days later, the process of "conferencing" the House and Senate legislation began, and within 10 days, on November 16, the 81 page House Report No. 107-296, the Conference Report on S. 1447, was ready.¹⁰⁸⁵

During the "conferencing" process, the 21-page S. 1447 was combined with ideas from H.R. 3150 to become the basis of the 51-page bill that President George W. Bush signed into law¹⁰⁸⁶ on November 19, 2001, 8 days after the 2-month anniversary of the terrorist attack. The final law is impressive, not just for the remarkable speed with which it was adopted and the consensus support it attracted, but also for the specificity with which it tackles the issues.

Section 101 provided for the creation of the TSA, defined specific responsibilities, and set timelines. Sections 110-111 set up screening protocols along with a regime to hire and train staff and a plan to submit them to security background checks. Section 121 gave the TSA US\$ 1.5 billion to pay for airport screening, and s. 118 authorized the collection of a security fee, not to exceed US\$ 2.50 per enplanement or US\$ 5.00 per one-way trip.

A) The Fractured Global Response to Sept 11.

While Canada¹⁰⁸⁷ and the United Kingdom¹⁰⁸⁸ also rapidly implemented new legislation in response to 9/11,¹⁰⁸⁹ the specificity that was central to the aviation security regime enacted by

¹⁰⁸² This blistering pace was not slowed by an Anthrax attack on Capitol Hill. See online: "September 11, 2001: Attack on America: Facts About Anthrax Testing and On-going Investigations in Florida, Nevada, New York, and Washington, D.C.; October 16, 2001", online: The Avalon Project <avalon.law.yale.edu/sept11/cdc_002.asp>. That attack was on October 17 and its impact lasted several days.

¹⁰⁸³ See US, Bill, HR 3150, *Airport Security Federalization Act of 2001*, 107th Cong, 2001 (not enacted), online: GovTrack <www.govtrack.us/congress/bills/107/hr3150> (visited May 17, 2014).

¹⁰⁸⁴ House Vote 425 on November 1, 2001, online: GovTrack <www.govtrack.us/congress/votes/107-2001/h425>.

¹⁰⁸⁵ See House Vote 448 on November 16, 2001, online: < www.govtrack.us/congress/votes/107-2001/h448>. For an understanding of the Conferencing Procedure, see US, *Riddick's Senate Procedure: Precedents and Practices* (S Doc No 101-28) (Washington, DC: US Government Printing Office, 1992) at 449, online: US Government Printing Office <www.gpo.gov/fdsys/pkg/GPO-RIDDICK-1992/content-detail.html> [Riddick].

¹⁰⁸⁶ *Aviation and Transportation Security Act*, *supra* note 81.

¹⁰⁸⁷ Bill C-49, *An Act to implement certain provisions of the budget tabled in Parliament on December 10, 2001*, 1st Sess, 37th Parl, 2001-02 (49-50-51 Elizabeth II, Chapter 9, was first read in the House of Commons on February 5, 2002 and received Royal Assent on March 27). Section 2 created the Canadian Air Transport Security Authority (CATSA) and gave it the power to screen passengers and their bags. Section 5, implemented the Air Travellers Security Charge Act creating the ability as of April 1, 2002, to fund the air security enhancements.

¹⁰⁸⁸ *Anti-terrorism, Crime and Security Act 2001* (UK), c 24, was introduced in Parliament on November 15, 2001, and received Royal Assent and went into force on December 13, 2001, just under a month later.

the United States presupposed that major allies and trading partners were acting with the same speed and resolve. For example, section 115 of the ATSA not only required foreign airlines to provide the specified passenger name information to the US government prior to the arrival of a passenger in the United States, it set a deadline for compliance:

SEC. 115. PASSENGER MANIFESTS.

Section 44909 is amended by adding at the end the following:

"(c) FLIGHTS IN FOREIGN AIR TRANSPORTATION TO THE UNITED STATES.—

"(1) IN GENERAL.—Not later than 60 days after the date of enactment of [this Act], each air carrier and foreign air carrier operating a passenger flight in foreign air transportation to the United States shall provide to the Commissioner of Customs by electronic transmission a passenger and crew manifest containing the information specified in paragraph . . .

"(3) PASSENGER NAME RECORDS.—The carriers shall make passenger name record information available to the Customs Service upon request.

It gives a date, Friday, January 18, 2002,¹⁰⁹⁰ by which foreign carriers operating to the United States must provide the Advance Passenger Information System (APIS)¹⁰⁹¹ and passenger name record (PNR)¹⁰⁹² information to the Commissioner of Customs. This assumes that the countries whose airlines are to submit the information to the US Commissioner of Customs have the legal basis to collect the data and to share it with US officials. In 2001, Canada's airlines did not have such legal authority, but given that most US-bound Canadians proceed through US Customs and Border Control Preclearance¹⁰⁹³ in Canada before embarkation, the US Commissioner of Customs had a practical opportunity to collect their APIS information¹⁰⁹⁴ prior to their boarding a US bound aircraft. Nonetheless, it was clear that 49 USC § 44909(c) as modified by ATSA

¹⁰⁸⁹ Australia, by contrast, waited until March 27, 2003 to table its *Aviation Transport Security Act 2004* (Cth) and that Act only received Royal Assent on September 14, 2006.

¹⁰⁹⁰ This is 60 days after Nov 19, 2001, the date that President Bush signed the bill into law.

¹⁰⁹¹ Advance Passenger Information System (APIS) contains five fields of passport information: Passenger name; Date of Birth; Citizenship/Nationality/Document-issuing country; Gender; and Passport Number/Document Number.

¹⁰⁹² PNR or Passenger Name Record is comprised of the information which is normally part of the airline's computer reservation for the passenger and has 19 fields: (1) PNR record locator; (2) Date of reservation/issue of ticket; (3) Travel date(s); (4) Name(s); (5) Contact information; (6) Payment information; (7) All travel itinerary for specific PNR; (8) Frequent flyer data; (9) Travel agency; (10) Travel status of passenger including confirmations, check-in status, no show or go show information; (11) Split/Divided PNR information; (12) General remarks (excluding sensitive information); (13) Ticketing field information; (14) Seat number and other seat information; (15) Code share information; (16) All baggage information; (17) Number and other names of travelers on PNR; (18) Any collected API information; and (19) All historical changes to the PNR listed in numbers 1 to 18.

¹⁰⁹³ See *Agreement on Air Transport Preclearance between the Government of Canada and the Government of the United States of America*, 18 January 2001, Can TS 2003 No 7 (entered into force 2 May 2003). See also *Preclearance Act*, SC 1999, c 20

¹⁰⁹⁴ The vast majority of Canadians are pre-cleared as the US Customs and Border Patrol offers preclearance facilities at Calgary, Edmonton, Halifax, Montreal, Ottawa, Toronto, Vancouver, Victoria and Winnipeg.

applied to "carriers" and not "passengers" and therefore that Canadian air carriers needed to be in a legal position to collect and provide the required information.

Canadian authorities had been closely following developments in the US and had already drafted a new Section 4.83 of Canada's Aeronautics Act.¹⁰⁹⁵ They were also aware that the issue of the Government's right to share information was before the Supreme Court of Canada.¹⁰⁹⁶

Unfortunately, the newly drafted section had been included in Clause 5 of a 109-page omnibus public safety bill¹⁰⁹⁷ which the government had introduced on November 22, 2001,¹⁰⁹⁸ just 3 days after President Bush had signed the ATSA.

Two factors became obvious fairly quickly: the rapid passage of an omnibus bill on public safety, even in a majority Parliament, could not be guaranteed; and Canada's Parliament would rise for its 5-week Christmas Break in the third week of December. The reaction was almost unprecedented. Two days after introducing the omnibus bill, the Government negotiated with the opposition parties to delete the proposed Section 4.83 from Clause 5, and introduce it as a one-page bill entitled, Bill C-44 An Act to amend the Aeronautics Act, which received Royal Assent on December 18, 2001. Had this action not been taken, Canada's airlines might not have been able to comply with the US requirements until May 6, 2004, the date that Bill C-42, which provided the legal basis for Canada's No-Fly list,¹⁰⁹⁹ received Royal Assent.

B) The Impact of Discord

That Canadian authorities had to struggle to meet the US deadline is symptomatic of a bigger problem. For the most part, America's allies were not directly affected by the events of September 11, 2001. Further, many US allies had been more vigilant in their airport security

¹⁰⁹⁵ *Aeronautics Act*, RSC, 1985, c A-2.

¹⁰⁹⁶ *Smith v Canada (Attorney General)*, 2001 SCC 88 [2001] 3 SCR 902 (available on QL). The case was heard on November 7, 2001, and the decision in favour of the government's right to share was published a month later.

¹⁰⁹⁷ This bill is known as the *Public Safety Act 2001*.

¹⁰⁹⁸ See *House of Commons Debates*, 37th Parl, 1st Sess, No 117 (22 November 2001) (Hon David Collenette), online: Parliament of Canada

<www.parl.gc.ca/HousePublications/Publication.aspx?Language=E&Mode=1&Parl=37&Ses=1&DocId=1383226#Int-86196> (visited May 17, 2014).

¹⁰⁹⁹ Other sections in Clause 5 gave the Minister of Transport the authority to request data on specific passengers from air carriers and to issue emergency directions as outlined in the *Aeronautics Act*. This provided the legislative basis for Canada's Passenger Protect (No-Fly) regime.

safeguards than the US prior to September 11, and did not necessarily think that there was a need to enact additional measures.¹¹⁰⁰

America's allies had also very different histories with respect to terrorism. The British had experienced bombs at Heathrow,¹¹⁰¹ mortar attacks on its runways by the Irish Republican Army (IRA),¹¹⁰² hijacked British aircraft,¹¹⁰³ and the bombing of flights departing the UK.¹¹⁰⁴ Terrorists had attacked French airports,¹¹⁰⁵ hijacked French aircraft,¹¹⁰⁶ blown up French aircraft,¹¹⁰⁷ hijacked foreign airlines departing from French airports,¹¹⁰⁸ and plotted to fly wide-body aircraft into the Eiffel Tower.¹¹⁰⁹ The Germans had seen bomb attacks against airport

¹¹⁰⁰ Post-September 11, Canada's Minister of Transport stated that Canada had long been more demanding that the US with respect to the screening and monitoring of airline passengers. See Statement of Hon David Collenette (Minister of Transport) at House of Commons, Standing Committee on Transport and Government Operations, *Evidence*, 37th Parl, 1st Sess, Hansard (4 October 2001), online: Parliament of Canada <www.parl.gc.ca/HousePublications/Publication.aspx?DocId=1040972&Language=E&Mode=1&Parl=41&Ses=1> (visited May 17, 2014) [*Collenette testify*]. Comments are at 10:25.

¹¹⁰¹ On April 20, 1984, a bomb exploded in Heathrow's luggage collection hall, injuring 25 people. See UK, HC, *Parliamentary Debates*, vol 58, col 739 (25 April 1984) (Mr. Leon Brittan, The Secretary of State for the Home Department), online: Hansard <hansard.millbanksystems.com/commons/1984/apr/25/libyan-peoples-bureau-shooting-incident#S6CV0058P0_19840425_HOC_216> (visited May 17, 2014).

¹¹⁰² Closed-circuit television (CCTV) cameras recorded a mortar being fired from a nearby hotel parking lot. See David Connett & Martin Whitfield, "Heathrow Bombing: IRA exposes airport's vulnerability: Perimeter protection 'almost impossible' - Delay in closing runway defended", *The Independent [UK]* (11 March 1994), online: The Independent <www.independent.co.uk/news/uk/heathrow-bombing-ira-exposes-airports-vulnerability-perimeter-protection-almost-impossible--delay-in-closing-runway-defended-1428295.html> .

¹¹⁰³ On September 12, 1970, British Airways Flight 775 was hijacked on departure from Bahrain. Online: HdDASN <aviation-safety.net/database/record.php?id=19700912-0>. On November 22, 1974, a British Airways VC-10 flying from Dubai to Calcutta was hijacked to secure release of British-held prisoners. Online: HdDASN <aviation-safety.net/database/record.php?id=19741122-1>.

¹¹⁰⁴ This is Pan Am Flight 103 of December 21, 1988. See *supra* note 1051 and associated text.

¹¹⁰⁵ In May 1978, three Arab gunmen shot at passengers waiting to board an aircraft at Paris' Orly. See Flora Lewis, "3 Terrorists Killed in Attack in Paris on El Al Passengers; 3 French Tourists Bound for Israel are Injured and One Policemen is Killed in 25-Minute Fight", *The New York Times* (21 May 1978) 1. In July 1983, Armenian terrorists attacked the Turkish Airlines counter at Paris' Orly Airport killing 8. See "Around the World; French Hold Armenians in Orly Airport Bombing", *Associated Press* (9 October 1983), online: The New York Times <www.nytimes.com/1983/10/09/world/around-the-world-french-hold-armenians-in-orly-airport-bombing.html> (visited May 17, 2014).

¹¹⁰⁶ On June 27, 1976, Air France Flight 139 was hijacked to Entebbe. Online: HdDASN <aviation-safety.net/database/record.php?id=19760627-1>. On August 27, 1983, an Air France Vienna-Paris flight hijacked to Tehran. Online: HdDASN <aviation-safety.net/database/record.php?id=19830827-2>. On July 31, 1984, an Air France Frankfurt-Paris flight hijacked to Tehran. Online: HdDASN <aviation-safety.net/database/record.php?id=19840731-0>. On December 10, 1993, AF Flight 2306 was hijacked to Tripoli. Online: HdDASN <aviation-safety.net/database/record.php?id=19931210-1>. On Dec. 26, 1994, AF 8969 was hijacked. Online: HdDASN <aviation-safety.net/database/record.php?id=19941226-0>.

¹¹⁰⁷ In September 1989, UTA Flight 772 was blown up over Nigeria. See *supra* note 1059.

¹¹⁰⁸ On January 8, 1970, TWA Flight 802, a Paris-Rome flight was hijacked to Beirut. Online: HdDASN <aviation-safety.net/database/record.php?id=19700108-0> (visited May 17, 2014).

¹¹⁰⁹ Matthew L Wald, "A Nation Challenged: Warnings; Earlier Hijackings Offered Signals That Were Missed", *The New York Times* (3 October 2001) section B at 2.

infrastructure¹¹¹⁰ and civil aircraft,¹¹¹¹ the hijacking of aircraft leaving their airports,¹¹¹² and hijackings of German aircraft.¹¹¹³ Terrorists had attacked aircraft on the ground at a Swiss airport,¹¹¹⁴ hijacked an aircraft departing from a Swiss airport¹¹¹⁵ and both hijacked¹¹¹⁶ and blown up¹¹¹⁷ Swiss jetliners. The Greeks had undergone attacks against both passenger terminals¹¹¹⁸ and aircraft on the ground,¹¹¹⁹ and the hijacking of both foreign¹¹²⁰ and Greek aircraft.¹¹²¹ In Rome, departing aircraft had been hijacked¹¹²² and the terminal had been attacked¹¹²³ as had aircraft on the ground.¹¹²⁴

The aviation terrorism experienced by America's European allies on different occasions and in different forms over many years meant that many European airports had a more pervasive and

¹¹¹⁰ On June 6, 1985, a Red Army Faction act killed 3 people when a bomb exploded at Frankfurt Airport. See online: Global Terrorism Database <www.start.umd.edu/gtd/search/IncidentSummary.aspx?gtid=198506190002>

¹¹¹¹ On February 21, 1970, a bomb exploded on an Austrian Airlines flight departing Frankfurt for Vienna. Online: Aviation Safety Network <aviation-safety.net/database/record.php?id=19700221-0> (visited May 17, 2014).

¹¹¹² On February 10, 1970, terrorists tried to hijack a Munich-Tel Aviv flight. They did not succeed. See online: Global Terrorism Database <www.start.umd.edu/gtd/search/IncidentSummary.aspx?gtid=197002100001>. In July 1984, an Air France flight departing Frankfurt for Paris flight was hijacked to Tehran. See *supra* note 1106.

¹¹¹³ On October 13, 1977, Lufthansa flight 181 from Palma de Mallorca to Frankfurt was hijacked to Somalia. Online: HdDASN <aviation-safety.net/database/record.php?id=19771013-0>. On March 27, 1985, a hijacker demanded a Lufthansa Munich-Athens flight to divert to Tripoli. Online: HdDASN <aviation-safety.net/database/record.php?id=19850327-0>. On February 11, 1993, Lufthansa flight 592 from Frankfurt to Cairo was hijacked to N.Y. Online: HdDASN <aviation-safety.net/database/record.php?id=19930211-0>.

¹¹¹⁴ See *LY ZRH 1969*, *supra* note 1039.

¹¹¹⁵ Swissair Flight 100 from Zurich to New York was hijacked on Sept 6, 1970, as part of the Dawson's Field hijacking. See *US and Foreign Hijackings*, *supra* note 1018 at 25.

¹¹¹⁶ *Ibid.*

¹¹¹⁷ On February 21, 1970, the PFLP blew up a Swissair Convair Zurich-Tel Aviv flight. See *supra* note 1041.

¹¹¹⁸ On August 5, 1973, a Black September suicide squad attacked passenger terminals at Athens airport, Greece, killing three civilians and injuring 55. See online: Global Terrorism Database <www.start.umd.edu/gtd/search/IncidentSummary.aspx?gtid=197308050002> (visited May 17, 2014).

¹¹¹⁹ On December 27, 1968, Palestinian terrorists attacked El Al Flight 232, Tel Aviv-Athens-New York, while it taxied on the ground at Athens. See Skyjack, "Chronology of aviation terrorism: 1968-2004", online: Skyjack <www.skyjack.co.il/chronology.htm> (visited May 17, 2014).

¹¹²⁰ On June 27, 1976, Air France Flight 139 from Athens to Paris was hijacked to Entebbe, Uganda. Online: HdDASN <aviation-safety.net/database/record.php?id=19760627-1>. On June 6, 1985, a TWA Boeing 727 was hijacked enroute to Rome, Italy, from Athens, Greece. Online: HdDASN <aviation-safety.net/database/record.php?id=19850614-0>. On November 24, 1985, an Egyptair Boeing 737 from Athens to Cairo was hijacked to Malta. Online: HdDASN <aviation-safety.net/database/record.php?id=19851124-0>.

¹¹²¹ On July 22, 1970, Olympic Airways Flight 255 from Beirut to Athens was hijacked by six terrorists demanding the liberation of 7 Arab terrorists from Greek prisons. Their demands were met. Online: HdDASN <aviation-safety.net/database/record.php?id=19700722-1>.

¹¹²² On August 29, 1969, TWA Flight 840 from Rome to Athens was hijacked to Damascus. Online: Hijacking description, Database, Aviation Safety Network <aviation-safety.net/database/record.php?id=19690829-1>.

¹¹²³ On December 27, 1985, Abu Nidal attacked EL Al check-in facilities at Rome airport. See online: Global Terrorism Database <www.start.umd.edu/gtd/search/IncidentSummary.aspx?gtid=198512270002>.

¹¹²⁴ On December 17, 1973, Pan Am's lounge at Rome's airport was attacked and so was a nearby Boeing 707. See online: Global Terrorism Database <www.start.umd.edu/gtd/search/IncidentSummary.aspx?gtid=197312170002>.

visible security presence¹¹²⁵ than in the domestic context in the United States. Thus in the aftermath of September 11, while the Americans were clamoring for heightened levels of airport security, for many Europeans maintaining the *status quo* was considered sufficient.¹¹²⁶

C) Philosophical Differences

Between America and its allies there is not a consistent view as to the role of government in aviation security. In most cases passenger and baggage screening was conducted by agencies of the state, whereas in the United States and Canada¹¹²⁷ it was provided by airlines.¹¹²⁸ However state agencies were responsible for terminal and airfield security and also, where required, for the provision of on-board security personnel.¹¹²⁹ Nonetheless, after 9/11, Canada's government imposed most of the costs of aviation security upgrades on the Canadian traveling public, arguing "it should be borne by those who are the primary users of that service...."¹¹³⁰ The government's critics used a public good argument, in calling for the costs of aviation security to be more widely distributed:

[S]ecurity is a public benefit, not just for air carriers.... [O]n September 11 most of the people who died were not on airplanes. If you want to base it on a user's fee, you should now have a user fee at the doorway entrance of every tall building, because those are the people who benefit from aircraft security.¹¹³¹

This divergence of opinions is neither remarkable nor strange, but it is typical of the type of discourse that permeates every aspect of aviation security.

¹¹²⁵ Germany's *Bundespolizei* (Federal Police) are in charge of security at that country's airports and have a special unit based at Frankfurt. It is not unusual to see heavily armed police/military personnel at the major EU airports.

¹¹²⁶ See Hainmüller & Lemnitzer, *supra* note 185.

¹¹²⁷ In 2001, it cost US\$ 1.10 to screen a passenger at a Canadian airport. See Statement of Mr. Mark Hill (Vice-President, Strategic Planning, WestJet) at House of Commons, Standing Committee on Finance, *Evidence*, 37th Parl, 1st Sess, Hansard (20 February 2002), online: Parliament of Canada <www.parl.gc.ca/HousePublications/Publication.aspx?DocId=521263&Language=E&Mode=1&Parl=41&Ses=1> (visited May 17, 2014). Comments are at 17:10.

¹¹²⁸ See Paul R Verkuil, "The Publicization of Airport Security" (2006) 27:5 Cardozo L Rev 2243 (HeinOnline).

¹¹²⁹ After 9/11, Air France contracted with a private security company, Pretory SA, for the provision of up to 200 air marshals. See "Air France-KLM faces probe over Pretory deal", *The Toronto Star [Ontario Edition]* (21 July 2006) F04 (ProQuest). Air France is one of the few airlines to ever use private sector personnel as air marshals.

¹¹³⁰ The Hon. Paul Martin, Canada's Finance Minister, defending a CA\$ 24.00 aviation security ticket tax in January 2002, see *House of Commons Debates*, 37th Parl, 1st Sess, No 135 (30 January 2002) at 8485.

¹¹³¹ Ken Epp, MP, justified aviation security as a public good. See Statement of Mr. Ken Epp, MP, at House of Commons, Standing Committee on Finance, *Evidence*, 37th Parl, 1st Sess, Hansard (26 February 2002), online: Parliament of Canada <www.parl.gc.ca/HousePublications/Publication.aspx?DocId=524699&Language=E&Mode=1&Parl=37&Ses=1#In-t-144017> (visited May 17, 2014). Comments are at 12:30.

D) Experience-driven Differences

In contrast with its European allies, America's experiences with aviation terrorism have been few and far between and their practices reflect a less considered and more reactive approach. For example, American authorities authorized air marshals in the 1960s,¹¹³² the 1970s,¹¹³³ the 1980s,¹¹³⁴ and 2001,¹¹³⁵ and their ranks have fluctuated significantly¹¹³⁶ over this period. New legislation authorizing air marshals follows significant criminal activity affecting American air carriers, but their ranks dwindle as the public memory of the criminal incident fades.

1) *Dangerous Airports*

One of the most publicly visible signs of the philosophical differences between America's allies is in their reaction to the possibility of non-friendly¹¹³⁷ elements at a foreign airport. After the June 1985 hijacking of TWA Flight 847¹¹³⁸ to Beirut, the US Department of Transport deemed Beirut Airport to be unsafe and banned all flights¹¹³⁹ of Lebanon's flag carrier, Middle East Airlines, to the US.¹¹⁴⁰ Thirteen years later, the US government relented slightly, allowing the sale of tickets on interline service between the US and Lebanon,¹¹⁴¹ while maintaining the prohibition on non-stop or direct flights. Apparently encouraged by the American subtle policy shift, on April 10, 1999, Canada negotiated its first bilateral air service agreement with

¹¹³² Air marshals became formally organized in 1968. See Alexander T Wells & Clarence C Rodrigues, *Commercial Aviation Safety*, 4th ed (New York: McGraw-Hill, 2004) at 303.

¹¹³³ On April 12, 1975, to facilitate the use of air marshals on domestic flights of US carriers, the Federal Aviation Administration issued FAR Amendment 121-118 codified at 14 CFR Part 121. See US, FAA, *Advisory Circular; FAR Guidance Material; Security Rules-Carriage of Weapons and Escorted Persons*, FAA AC108-2, 3 (1981).

¹¹³⁴ *International Security and Development Cooperation Act of 1985*, Pub. L. No. 99-83 § 553(b), 99 Stat. 226 (codified at 49 USC. § 44903 (d) (1985)) provided a statutory authority for air marshals to carry weapons on board. See also Robert M. Kane, *Air Transportation* 222 (2003).

¹¹³⁵ ATSA, Section 105 (a) adds a new § 44917 (a) (1) to 49 USC. § 449.

¹¹³⁶ In 1985, US\$ 5 million was allocated for the Federal Air Marshal Program and research and development of airport security devices and explosives detection techniques. The number of air marshals was roughly 400 in 1985 but declined to fewer than 40 in 2001. See The 9/11 Report, *supra* note 1065 at 85.

¹¹³⁷ The term 'non-friendly' is deliberately chosen and should be distinguished from 'enemy'.

¹¹³⁸ For deeper insight into this hijacking, see Bowman, *supra* note 997 at 38 – 48.

¹¹³⁹ For an overview of America's reaction to Lebanon's refusal to arrest the hijackers, see Gary E Davidson, "United States' Use of Economic Sanctions, Treaty Bending, and Treaty Breaking in International Aviation" (1993-1994) 59:2 J Air L & Com 291 at 312–316 (HeinOnline).

¹¹⁴⁰ See US, Department of Transportation, Order 85-7-45 (1985). The order went further actually banning the sales of tickets by air to Lebanon from the US

¹¹⁴¹ See US, Department of Transportation, Order 98-6-25 (1998). Security of Aircraft and Safety of Passenger Transiting Lebanon, online; US Department of Transportation <docketsinfo.dot.gov/general/orders/19982qtr/jun98/98625.pdf> (visited May 25, 2014).

Lebanon.¹¹⁴² Pursuant to that agreement, in March 2003 Air Canada applied for and was granted a license¹¹⁴³ to offer thrice weekly non-stop service between Montreal and Beirut. Yet, on May 31, 2003, just days before the service was to start,¹¹⁴⁴ the Ministers of Transport and of Foreign Affairs issued a binding directive to the Canadian Transportation Agency, pursuant to Section 76(1)(e) of the Canada Transportation Act, to suspend the license immediately.¹¹⁴⁵

On the other side of the Atlantic, European state-linked carriers such as Air France,¹¹⁴⁶ as well as British Airways,¹¹⁴⁷ and Lufthansa, were offering daily flights from their hubs to Beirut¹¹⁴⁸ and assuring passengers, "We're not flying to any airport that is not secure."¹¹⁴⁹ On this issue, the contrast between the American position and that of France could not be starker; the US ban on direct and non-stop flights persists, and Air France offers up to 17 flights a week to Beirut¹¹⁵⁰ including a daily flight with the airline's second most capacious aircraft, the Boeing 777-300.¹¹⁵¹

The impact of this lack of consensus with respect to dangerous airports suggests than absent the type of control that America imposes on travel to Cuba,¹¹⁵² passengers will travel between the US and the banned airport via a third country.¹¹⁵³ They will use two separate tickets if

¹¹⁴² See *Agreement between the Government of Canada and the Government of the Lebanese Republic on Air Transport*, 18 May 2000, E103478 (entered into force 26 August 2002), online: Canada Treaty Information <www.treaty-accord.gc.ca/text-texte.aspx?id=103478>.

¹¹⁴³ Air Canada's application was dated March 3, 2003. The Canadian Transportation Agency granted permission in Licence No. 030037 on March 28, 2003. See *Application by Air Canada for authority, pursuant to subsection 78(2) of the Canada Transportation Act, S.C., 1996, c. 10, to operate a scheduled international service, large aircraft, limited to three (3) flights per week, on the route Montréal, Quebec, Canada - Beirut, Lebanon* (28 March 2003), 180-A-2003, online: Canadian Transportation Agency <www.otc-cta.gc.ca/eng/ruling/180-a-2003>.

¹¹⁴⁴ The service was to start on June 3, 2003. See "CTA disallows Montreal - Beirut Non-Stop Service by Air Canada", *Canadian Shipper* (5 June 2003) online: Canadian Shipper <www.canadianshipper.com/news/cta-disallows-montreal-beirut-non-stop-service-by-air-canada/1000028577/?> (visited May 18, 2014).

¹¹⁴⁵ Air Canada was compensated. See Nicolas Van Praet, "Ottawa pays Air Canada for killing Beirut flight", *The [Montreal] Gazette* (18 November 2003) B1 (ProQuest).

¹¹⁴⁶ Even as late as December 31, 2011, the French Republic still owned roughly 16% of Air France Stock. Air France-KLM, "Management Report 2011", at 31, online: Air France-KLM <www.airfranceklm-finance.com/en/content/download/6067/33288/file/Rapport_Gestion_2011_VA.pdf> (visited May 18, 2014).

¹¹⁴⁷ British Airways flights from London to Beirut were operated by an independent carrier.

¹¹⁴⁸ Colin Freeze & Jeff Sallot, "European airlines back Beirut flights", *The Globe and Mail* (5 June 2003) A8.

¹¹⁴⁹ *Ibid.*, quoting an un-named Lufthansa spokesperson.

¹¹⁵⁰ Three of these 17 flights are to Marseille, 14 are to Paris and all of the Paris flights are flown with wide-body aircraft. See Air France, *Air France Summer Timetable: 2012*.

¹¹⁵¹ On flights to Beirut the aircraft is configured in a two-class configuration to carry up to 472 passengers.

¹¹⁵² See 31 CFR § 515.420 (2013). It specifically prohibits air travel to Cuba via an airline based in a third country.

¹¹⁵³ Until recently, Cuba-bound Americans travelled via Canada, Jamaica or Mexico. US-Mexico and Mexico-Cuba round-trip tickets yielded a US-Mexico-Cuba trip on separate tickets. See online: USA Cuba Travel <www.usacubatravel.com/aironly.htm> (visited May 18, 2014).

required,¹¹⁵⁴ to the commercial benefit of non-US airlines. The ease with which these differences can be bypassed should provoke a discussion between America and its allies as to what constitutes a dangerous airport and an agreement that if an airport is found not to meet Chicago Convention Annex 17 standards that no airline should offer service to it. In the absence of such an agreement, European airlines serve destinations that American carriers cannot, such as Baghdad, Tehran and Tripoli, and American authorities have reacted in part by considering how they could assure regulatory compliance by airports not linked directly with the US or by airlines that did not fly to the United States.¹¹⁵⁵

This issue becomes more complex in an era of MNJVs in that the North American partner may not be allowed to sell tickets from North America to these destinations whereas their EU partners often do service these destinations non-stop from their hubs and may have the ability to sell tickets with respect to travel originating in North America. In the case of an MNJV, where "metal neutrality" is the founding principle, a distortion appears if one partner has intercontinental traffic rights denied to the other.¹¹⁵⁶ Thus Air Canada's MNJV partner Lufthansa can fly from Canada via Germany to Lebanon in its own name, but Air Canada needs permission to codeshare on a Lufthansa flight from Germany to Lebanon.¹¹⁵⁷ If the MNJV does not extend to Lebanon, this policy gives Lufthansa market opportunities that are denied to Air Canada.

2) Air marshals

If divergent views on dangerous airports have a negative impact on the balance sheets of US carriers, incompatible positions with respect to air marshals have the possibility of creating

¹¹⁵⁴ For a broad discussion of this issue, see Theodore Edward Rokita, "Why US-Enforced International Flight Suspension Due to Deficient Foreign Airport Security Should be a No-Go" (1994) 5:1 Ind Int'l & Comp L Rev 205.

¹¹⁵⁵ See US, Government Accountability Office, *Aviation Safety: Oversight of Foreign Code-Share Safety Program Should Be Strengthened* (GAO-05-930) (2005) at 42.

¹¹⁵⁶ In the summer of 2012, Lufthansa served Beirut 15 times a week but its A++ partner United did not list the destination in its schedule. However its other A++ partner Air Canada did list the destination and put its code on flights operated by Middle East Airlines between London and Beirut. See *STAR 712*, supra note 557; *UST 712*, supra note 583; Air Canada, *Air Canada Timetable: June 21st 2012 – August 2nd 2012*, [AC 712].

¹¹⁵⁷ See *Application by Air Canada also carrying on business as Air Canada rouge (Air Canada) on behalf of itself and Deutsche Lufthansa Aktiengesellschaft (Lufthansa German Airlines) pursuant to section 60 of the Canada Transportation Act, S.C., 1996 c-10, as amended, and section 8.2 of the Air Transportation Regulations, SOR/88-58, as amended*. (13 February 2015), 46-A-2015, online: Canadian Transportation Agency <www.otc-cta.gc.ca/eng/ruling/46-a-2015>. Indeed, this issue was so important that Lebanon's approval of this application was a precondition for Canada's approval of a code-share application by Air France and Middle East Airlines. See *Application by Société Air France carrying on business as Air France on behalf of itself and Middle East Airlines S.A.L., pursuant to section 60 of the Canada Transportation Act, S.C., 1996 c-10, as amended, and section 8.2 of the Air Transportation Regulations, SOR/88-58, as amended*. (13 February 2015), 47-A-2015, online: Canadian Transportation Agency <www.otc-cta.gc.ca/eng/ruling/47-a-2015>.

diplomatic tensions. As noted earlier,¹¹⁵⁸ in the aftermath of September 11 2001 the ATSA not only federalized airport screeners and created the TSA but it also re-authorized air marshals. The ATSA gives air marshals responsibility for inter-state and international air transportation and focuses their use on "nonstop, long distance flights, such as those targeted on September 11, 2001."¹¹⁵⁹ At the same time, aware that a terrorist interested in hijacking an intercontinental flight might not care if the airline is foreign or American, US officials began to take steps to ensure that US regulations would facilitate the deployment of air marshals on foreign carriers serving the United States.¹¹⁶⁰ In December 2003, the United States advanced this policy considerably further through the issuance of an Emergency Amendment which required foreign airlines to carry "armed, trained, government law enforcement officers on flights arriving into, departing from or overflying the United States, when directed by the TSA."¹¹⁶¹

Many European countries, convinced that the presence of onboard weapons would only increase the danger to passengers, strongly resisted the directive.¹¹⁶² New Zealand dismissed the idea of air marshals, placing its trust in 'ground-based security measures.'¹¹⁶³ This issue of air marshals is highly secret and as a result the exact status of these negotiations cannot be confirmed.¹¹⁶⁴

ICAO defined "In-Flight Security Officer" in 2002,¹¹⁶⁵ and this definition was added to Annex 17 in 2006:

¹¹⁵⁸ See *supra* notes 1079-1085.

¹¹⁵⁹ ATSA Section 105 (a) added a new § 44917 (a) (1) to 49 USC. § 449.

¹¹⁶⁰ 14 CFR Parts 91 – 109 (2014); 49 CFR Parts 1500 – 1580 (2013); *Civil Aviation Security Rules*, 67 Fed Reg 8340 (2002). See the changes to 49 CFR Part 1546 (2013). See 49 CFR §§ 1546.1(b), 1546.201(d) (2013).

¹¹⁶¹ See *Law Enforcement Officers on Flights*, *supra* note 84. It applied to all foreign carriers operating under 49 CFR § 1546.101 (2013).

¹¹⁶² See David Learmount, "Sky marshal plan riles governments", *Flight International* 165:4915 (6-12 January 2004) 5 (ProQuest). See also Pierre Sparaco & Douglas Barrie, "Marshal Law: Fault line widens between the US and Europe over commercial aviation security concerns", *Aviation Week & Space Technology* 160:2 (12 January 2004) 35 (EBSCO HOST). See also Monica G Renna, "Fire in the Sky: A Critical Look at Arming Pilots with Handguns" (2003) 68:4 J Air L & Com 859 at 871 (HeinOnline).

¹¹⁶³ See NZ, *Hansard*, Third Readings: Aviation Crimes Amendment Bill, Civil Aviation Amendment Bill (No 2), 18 September 2007, online: New Zealand Parliament <www.parliament.nz/en-nz/pb/debates/debates/48HansD_20070918_00001259/aviation-crimes-amendment-bill-civil-aviation-amendment> (visited May 18, 2014).

¹¹⁶⁴ The issue of air marshals is so secret that in the aftermath of September 11, the UK deployed air marshals on British scheduled flights before informing the airlines involved. See Rajeev Syal & David Harrison, "Leading airlines attack Labour's sky marshal plan", *The Telegraph* (22 December 2002), online: The Telegraph <www.telegraph.co.uk/news/uknews/1416805/Leading-airlines-attack-Labours-sky-marshal-plan.html>. The air marshal file is similar to No-Fly lists. See *below* Part V(D)4)c) Secrecy of List and inclusion criteria.

¹¹⁶⁵ See ICAO, (2002) 7 *International Standards and Recommended Practices: Annex 17 to the Convention on International Civil Aviation: Security*, Foreword. This was proposed Amendment 10 to Annex 17.

- 4.7.7 Each Contracting State that decides to deploy in-flight security officers shall ensure that they are government personnel who are specially selected and trained, taking into account the safety and security aspects on board an aircraft and deployed according to the threat assessment of the competent authority. The deployment of such officers shall be *coordinated with concerned States* and kept strictly confidential.¹¹⁶⁶

Clearly, this is an unsatisfactory solution; American carriers fly non-stop between the United States and Delhi, Dubai, Kuwait, Johannesburg, Lagos and Santiago and these flights overfly States with which American authorities might not want to coordinate the deployment of air marshals. Yet these ultra-long-haul flights are prime candidates to be protected by air marshals.

3) *Passenger Lists*

The requirement for foreign airlines to provide passenger information (APIS and PNR) to the US Commissioner of Customs and the creation of the No-Fly list were two separate events. As mentioned earlier,¹¹⁶⁷ the first was the result of Section 115 of ASTA in 2001, while the second occurred nearly three years later. Another distinction is that the first focused on US-destined passengers, whereas the second also encompassed passengers on any flight overflying US territory, an expansion in extraterritorial regulatory reach that has become a major source of tension between the US and its allies.

Legal authority for the first No-Fly list was granted on December 17, 2004, when President George W. Bush signed the Intelligence Reform and Terrorism Prevention Act of 2004¹¹⁶⁸ (IRTA).

In April 2005, the US Customs and Border Patrol *published a Final Rule* in support of the objective,¹¹⁶⁹ and American authorities began to solicit information on passengers on any flight

¹¹⁶⁶ This language became part of Annex 17 as of July 1, 2006 [emphasis added]. Prior to this amendment, concerned states would have had to be consulted. Rather than improving the situation, ICAO confirmed the *status quo*.

¹¹⁶⁷ See above, Chapter 4) V) A) The Fractured Global Response to Sept 11.

¹¹⁶⁸ IRTA, *supra* note 203. Secion 4012 (2) added a new section (6) to 49 USC § 44909 (c) to authorize a No-Fly list with respect to passengers on international flights servint the US

¹¹⁶⁹ *Electronic Transmission*, *supra* note 1005. In fact, this Final Rule did not make reference to the IRTA, *supra* note 203, but to Section 115 of the *Aviation and Transportation Security Act*, *supra* note 81. Later rules are based on IRTA, *supra* note 203. See *Passenger Manifests for Commercial Aircraft Arriving in and Departing From the United States; Passenger and Crew Manifests for Commercial Vessels Departing From the United States*, 71 Fed Reg 40035 (2006). See also *Advance Electronic Transmission of Passenger and Crew Member Manifests for Commercial Aircraft and Vessels*, 72 Fed Reg 48320 (2007).

that *overflowed* the United States without landing.¹¹⁷⁰ Canada¹¹⁷¹ and Mexico used diplomatic pressure to exempt "Flights that transit the airspace of the continental United States between two airports or locations in the same country, where that country is Canada or Mexico",¹¹⁷² such as flights from Ciudad Juárez to Matamoros¹¹⁷³ or from Toronto to Halifax.¹¹⁷⁴ Authorities planned to compare the passenger information with data on No-Fly lists¹¹⁷⁵ in order to ensure that no foreign terrorist entered American skies. If an aircraft carried a person on the US No-Fly list, either the person would have to be removed from the flight or it would have fly around the United States and avoid US airspace.¹¹⁷⁶

4) No-Fly Lists

While there is general agreement that known terrorists should not travel on commercial aircraft, the evolution of No-Fly lists demonstrates different solutions in different countries. In February 1997, a White House Commission report noted that the FAA and Northwest¹¹⁷⁷ were experimenting with Computer-Assisted Passenger Screening¹¹⁷⁸ and recommended:

[The] FBI, CIA, and BATF should evaluate and expand the research into known terrorists, hijackers, and bombers needed to develop the best possible profiling system. They should keep in

¹¹⁷⁰ Rumours of the plan were public in April 2005. See Chris Sorensen, "Milton backs checks against 'no-fly' lists: Anti-terror proposal", *National Post [National Edition]* (19 April 2005) FP6 (ProQuest). See also John Ibbitson, "US no-fly roster may swat Canadians", *The Globe and Mail* (3 June 2005) A4 (ProQuest). Indeed the proposal was launched after two persons on America's No-Fly list were found aboard on KLM fFlight 685 from Amsterdam to Mexico on April 8, 2005.

¹¹⁷¹ See pages 6-9 of Public Submission of Air Transport Association of Canada on US, Department of Homeland Security, Transportation Security Administration, *Secure Flight Program - Notice of Proposed Rulemaking* (TSA-2007-28572-0331) (2007).

¹¹⁷² See *Secure Flight Program*, 73 Fed Reg 64018 (2008) (amending 49 CFR § 1560.3) [*Secure Flight Program*].

¹¹⁷³ A non-stop flight between these points would overfly the southern part of Texas.

¹¹⁷⁴ A non-stop flight between these points would overfly Upper New York, Vermont, New Hampshire and Maine. Due to weather, winds and geography many US domestic flights overfly portions of Canada, and *vice versa*.

¹¹⁷⁵ In the US, the full text of a Security Directive, in this case requiring a passenger to provide identification to the airline, does not have to be made public, as long as published details allow enough information for the public to comply. See *Gilmore v Gonzales*, 435 F (3d) 1125 (9th Cir 2006) (available on QL). Sensitive Security Information (exempt from the *Freedom of Information Act*, 5 USC § 552) does not have to be disclosed.

¹¹⁷⁶ Sara Kehaulani Goo, "Passenger Lists Sought For Flights Over US", *The Washington Post* (21 April 2005) A1, online: The Washington Post <www.washingtonpost.com/wp-dyn/content/article/2005/04/20/AR2005042002952.html> (visited May 18, 2014).

¹¹⁷⁷ The CAPS system, devised by Northwest airlines, identified threats from information in Passenger Name Record (PNR) files in the same way that credit card companies use customer information and algorithms to prevent credit card fraud. See *Security of Checked Baggage on Flights Within the United States*, 64 Fed Reg 19220 (1999).

¹¹⁷⁸ For an overview of the development of this system, see Timothy M Ravich, "Is Airline Passenger Profiling Necessary?" (2007) 62:1 U Miami L Rev 1 at 11 – 16 (HeinOnline).

mind that such a profile would be most useful to the airlines if it could be matched against automated passenger information which the airlines maintain.¹¹⁷⁹

It was not until the passage of the ATSA in November 2001 that the No-Fly regime had legal status. Section 115 of that Act created 49 USC § 44909 (c) 5, which specifically authorized the sharing of passenger information with unspecified "Federal agencies for the purpose of protecting national security." Canada also has a No-Fly list, called Passenger Protect, which went into effect on June 18, 2007.¹¹⁸⁰ The United Kingdom is also believed to have a No-Fly list; in the aftermath of the 2009 Christmas Day Bomber incident, British Prime Minister Gordon Brown announced his government's intention to create a No-Fly list as a more serious subset of its terrorist watchlist.¹¹⁸¹

No-Fly lists have faced three major criticisms: risk of misuse of confidential information, secrecy as to the contents of the list and how it is created, and the use of profiling.

a) Violation of Privacy and misuse of confidential information

Many critics allege that the No-Fly list is a violation of privacy¹¹⁸² and is based on the misuse of confidential passenger information for a purpose other than the one the customer intended when the information was provided to the airline.¹¹⁸³ This is no minor matter as noted by the US General Accounting Office (GAO) in a February 2004 report to Congress:

In January 2003, TSA published a proposed rule to exempt the system from seven Privacy Act provisions but has not yet provided the reasons for these exemptions.... As a result, TSA's justification for these exemptions remains unclear. Until TSA finalizes its privacy plans for

¹¹⁷⁹ See US, White House Commission on Aviation Safety and Security, *Final Report to President Clinton* (12 February 1997), Recommendation 3.19 (Gore Commission), online: Federation of American Scientists <www.fas.org/irp/threat/212fin~1.html> (visited May 18, 2014) [Gore Commission, *Final*]. FBI stands for the Federal Bureau of Investigation, CIA stands for the Central Intelligence Agency, and BATF stands for the Bureau of Alcohol, Tobacco, Firearms and Explosives.

¹¹⁸⁰ The *Public Safety Act*, 2002, SC 2004, c 15, s 5, and regulations as updated, provide the basis for this scheme.

¹¹⁸¹ See Duncan Gardham, "British 'no fly list' as intelligence agencies fear second Detroit attack", *The Telegraph* (20 January 2010) online: The Telegraph <www.telegraph.co.uk/news/uknews/terrorism-in-the-uk/7037774/British-no-fly-list-as-intelligence-agencies-fear-second-Detroit-attack.html>. PM Gordon Brown, "Vigilance key to tackling terrorist threat – PM" (1 January 2010) online: The National Archives <webarchive.nationalarchives.gov.uk/20100104184113/www.number10.gov.uk/Page21950>.).

¹¹⁸² Indeed, the Department of Homeland Security has a Privacy Office, whose principle job is to defend the compatibility of No-Fly lists with US privacy law. See US, Department of Homeland Security, *Report on Effects on Privacy & Civil Liberties: DHS Privacy Office Report Assessing the Impact of the Automatic Selectee and No Fly Lists on Privacy and Civil Liberties as Required Under Section 4012(b) of the Intelligence Reform and Terrorism Prevention Act of 2004* (27 April 2006), online: US Department of Homeland Security <www.dhs.gov/xlibrary/assets/privacy/privacy_rpt_nofly.pdf> (visited May 18, 2014).

¹¹⁸³ Gregory T Nojeim, "Aviation Security Profiling and Passengers' Civil Liberties" (1998) 13:1 Air & Space Law 3 at 9 (HeinOnline).

CAPPS II and addresses such concerns, we lack assurance that the system will fully comply with the Privacy Act.¹¹⁸⁴

The report called for a total redesign of the program. False positives, resulting in the imposition of travel prohibitions on totally innocent parties, had begun to plague the system: persons deemed too dangerous to travel had included Senator Ted Kennedy,¹¹⁸⁵ Congressman John Lewis,¹¹⁸⁶ all persons named "David Nelson"¹¹⁸⁷ or "John Smith",¹¹⁸⁸ and former South African President Nelson Mandela.¹¹⁸⁹ Indeed, there were so many false positives that many innocent victims¹¹⁹⁰ of the No-Fly scheme brought suit, with the assistance of the American Civil Liberties Union (ACLU) in April 2003.¹¹⁹¹ In 2004, Air Canada began to apply the US No-Fly list to Canadian domestic flights and refused passage to Shahid Mahmood before Canada created its own No-Fly list, putting Mr. Mahmood in the curious position of being forced to remove his name from a list that legally did not apply to him.¹¹⁹²

Subsequent to the 2004 GAO report and the reporting of many of the above problems, the TSA redesigned the No-Fly program and re-branded it "Secure Flight." The TSA began the process in August 2007 with a Notice of Proposed Rulemaking¹¹⁹³ and provided justification.¹¹⁹⁴ It subsequently obtained the necessary exemptions from the Privacy Act.¹¹⁹⁵ Then, in October

¹¹⁸⁴ US, Government Accountability Office, *Aviation Security: Computer-Assisted Passenger Prescreening System Faces Significant Implementation Challenges* (GAO/04-385) (2004) at 23.

¹¹⁸⁵ Sara Kehaulani Goo, "Sen. Kennedy Flagged by No-Fly List", *The Washington Post* (20 August 2004) A01, online: The Washington Post <www.washingtonpost.com/wp-dyn/articles/A17073-2004Aug19.html> .

¹¹⁸⁶ "Kennedy has company on airline watch list", *CNN* (20 August 2004) online: CNN <articles.cnn.com/2004-08-20/politics/lewis.watchlist_1_airline-extra-security-extra-screening?_s=PM:ALLPOLITICS> (visited May 18, 2014).

¹¹⁸⁷ See "Statement of David C. Nelson", *American Civil Liberties Union* (6 April 2004) online: American Civil Liberties Union <www.aclu.org/national-security/statement-david-c-nelson> (visited May 18, 2014).

¹¹⁸⁸ A Irish Catholic Priest named John Smith was being denied boarding on domestic flight within Canada in 2005, before Canada had a No-Fly list! See Larissa Ardis, "Know it now" *Northword Magazine*, (December, 2005). See also "Flight hazard in the name of the father", *Sydney Morning Herald* (31 August 2005), online: Sydney Morning Herald <www.smh.com.au/news/world/flight-hazard-in-the-name-of-the-father/2005/08/30/1125302565987.html>.

¹¹⁸⁹ Mimi Hall, "US has Mandela on terrorist list", *USA Today* (30 April 2008) online: USA Today <www.usatoday.com/news/world/2008-04-30-watchlist_N.htm> (visited May 18, 2014).

¹¹⁹⁰ See generally James Fisher, "What Price Does Society Have to Pay for Security? A Look at the Aviation Watchlists" (2008) 44:3 Willamette L Rev 573 (HeinOnline).

¹¹⁹¹ See "Gordon v. FBI", *American Civil Liberties Union [of Northern California]* (22 April 2003) online: American Civil Liberties Union of Northern California <www.aclunc.org/cases/landmark_cases/gordon_v._fbi.shtml?ht=gordon%2520vs%2520fbi%2520gordon%2520vs%2520fbi> (visited May 18, 2014).

¹¹⁹² Shahid Mahmood, "Why this man cannot earn frequent flier points", *Toronto Star [Ontario Edition]* (21 June 2005) A13 (ProQuest). Air Canada banned him in 2004; Canada's No-Fly list did not come into force until 2007.

¹¹⁹³ *Secure Flight Program, Notice of proposed rulemaking*, 72 Fed Reg 48356 (2007).

¹¹⁹⁴ *Privacy Act of 1974: Implementation of Exemptions; Secure Flight Records*, 72 Fed Reg 48397 (2007)

¹¹⁹⁵ *Privacy Act of 1974: Implementation of Exemptions; Secure Flight Records*, 72 Fed Reg 63706 (2007).

2008, it published a Privacy Impact Assessment¹¹⁹⁶ followed one week later by the publication of the Secure Flight Final Rule.¹¹⁹⁷ It seemed that the TSA had listened to its critics and adopted their ideas. In addition to its action on the privacy issue, the TSA took steps to avoid false positives by including *inter alia*, date of birth and gender as data fields in the No-Fly list.¹¹⁹⁸

These changes have not been completely successful; several innocent victims, including four US military veterans, with the assistance of the ACLU, brought suit against the US government in 2010.¹¹⁹⁹

b) Canada: a more cautious approach
Even though Canada created the legal basis for establishing No-Fly lists in May 2004, its Passenger Protect program only came into effect in June 2007, over three years later. From the beginning, Canada's standards for inclusion were to be much tougher than those of the US, to the extent that the persons named had to be considered "imminent threats to aviation security."¹²⁰⁰ In the words of Canada's Transport Minister, the Hon. Lawrence Cannon:

Canada's program has learned lessons from countries all over the world with respect to watchlists, and has taken necessary precautions. This is why the Canadians Specified Persons List took three years of parliamentary consideration, and two years of policy development.¹²⁰¹

Canadian government officials provide the list of "specified person" to the carriers rather than *vice versa*.¹²⁰² Thus, the passenger's private information is not provided by the carrier to the Canadian government or used for a purpose other than that for which the passenger provided it to the carrier. If the passenger's name, date of birth and gender are the same as those of a "specified" person in the list supplied by the Canadian government, the carrier must notify the

¹¹⁹⁶ Department of Homeland Security, Transportation Security Administration, *Privacy Impact Assessment for the Secure Flight Program* (2008), online: Transportation Security Administration (21 October 2008) online: US Department of Homeland Security <www.dhs.gov/xlibrary/assets/privacy/privacy_pia_secureflight2008.pdf> (visited May 25, 2014).

¹¹⁹⁷ *Secure Flight Program*, *supra* note 1172.

¹¹⁹⁸ US, Department of Homeland Security, Office of Inspector General, *Role of the No Fly and Selectee Lists in Securing Commercial Aviation* (OIG-09-64) (2009), online: Office of Inspector General, US Department of Homeland Security <www.oig.dhs.gov/assets/Mgmt/OIGr_09-64_Jul09.pdf> (visited May 18, 2014). This is the unclassified version of the report.

¹¹⁹⁹ See American Civil Liberties Union, "Latif, et al. v. Holder, et al. - ACLU Challenge to Government No Fly List", online: American Civil Liberties Union <www.aclu.org/national-security/latif-et-al-v-holder-et-al-aclu-challenges-government-no-fly-list> (visited May 18, 2014).

¹²⁰⁰ Jeff Sallot, "Appeal process promised for no-fly decisions", *The Globe and Mail* (22 October 2005) A14.

¹²⁰¹ Lawrence Cannon, "Strict guidelines will govern 'no-fly list'", *Edmonton Journal* (23 June 2007) A18.

¹²⁰² *Identity Screening Regulations*, SOR/2007-82. See s 3.

Minister of Transport.¹²⁰³ Transport Canada has promised to work hard to avoid false positives,¹²⁰⁴ and in the event of an initial match, Transport Canada undertakes to examine additional factors such as place of birth, names of parents, other citizenships held, and physical characteristics. Perhaps for these reasons, when Passenger Protect debuted in June 2007, it did so without controversy.¹²⁰⁵

c) Secrecy of List and inclusion criteria

One of the most frustrating things about No-Fly lists is the complete secrecy surrounding them. Only two lists— America's Secure Flight¹²⁰⁶ and Canada's Passenger Protect¹²⁰⁷ — are publicly acknowledged to exist. As already mentioned above, the UK is believed to have a list, but its existence is hard to confirm.¹²⁰⁸ In July 2011, the UK claimed to have implemented "a No-Fly procedure, intended to enable us to stop people boarding an aircraft bound for or leaving the UK who may intend to destroy it"¹²⁰⁹ but details are scant. While their existence is not acknowledged to the public, it is believed that other countries have No-Fly lists. For example, Transport Canada has stated that "on flights to international destinations, passengers may also be required to be screened according to the regulations of those countries."¹²¹⁰ This suggests that other countries may have No-Fly lists.¹²¹¹

The only way for persons to discover that their names appear on a No-Fly list is to be denied a boarding pass or read a press report identifying a false positive. The list's contents, number of names,¹²¹² and reasons for inclusion are secret so persons who are wrongly included are unable

¹²⁰³ *Identity Regulations*, *supra* note 1202, s 3(3).

¹²⁰⁴ See Public Safety Canada, "Understanding Delays at Airport Check-in, Safeguarding Canadians with Passenger Protect", online: Public Safety Canada <www.publicsafety.gc.ca/cnt/ntnl-scrct/cntr-trrrsm/pssngr-prtct/ndrstndng-dlys-eng.aspx> (visited May 18, 2014) [*Passenger Protect Delays*].

¹²⁰⁵ Craig Pearson, "No-fly list introduced; Security program debuts without incident", Windsor Star (19 June 2007) A3 (Lexis).

¹²⁰⁶ See Secure Flight's website, online: Transportation Security Administration <www.tsa.gov/stakeholders/secure-flight-program>.

¹²⁰⁷ See Passenger Protect's website, online: Public Safety Canada <www.publicsafety.gc.ca/cnt/ntnl-scrct/cntr-trrrsm/pssngr-prtct/index-eng.aspx> (visited May 18, 2014).

¹²⁰⁸ There is no law or website publicly associated with a British No-Fly list.

¹²⁰⁹ UK, Home Office, *The United Kingdom's Strategy for Countering terrorism* (Content presented to Parliament) by Secretary of State for the Home Department (London: Her Majesty's Stationary Office, 2011) at 11.

¹²¹⁰ See Passenger Protect; Delays, *supra* note 1204. The details of these regulations are rarely made public.

¹²¹¹ In addition, the US is believed to share the contents of its No-Fly list with 22 foreign governments. See *Ibrahim v Department of Homeland Security*, 669 F (3d) 983 at 993 (9th Cir Cal 2012) (available on QL) [*Ibrahim 2012*].

¹²¹² Indeed, one highly classified document that was released (in redacted form) as a result of a lawsuit brought by the American Civil Liberties Union contained information with respect to the number of persons on the list in 2001 and 2002. That document is available online. See US, Transportation Security Intelligence Service, *TSA Watchlists*

to determine why they have been targeted or why their names¹²¹³ were included.¹²¹⁴ Thus the spirit of *habeas corpus* is violated: a person wrongly included on a No-Fly list is effectively detained (prevented from travelling) without due process.¹²¹⁵

Wrongly included persons are rarely provided with a "meaningful opportunity to contest their continued inclusion on a No-Fly List."¹²¹⁶ The Department of Homeland Security (DHS) is well aware of the problem and justifies its refusal to address this issue further by arguing that the responses to persons denied boarding as a result of the No-Fly rules are deliberately written in such a way as to prevent recipients from knowing whether they are the subject of a law enforcement investigation¹²¹⁷ or on the broader terrorist watchlist.¹²¹⁸ DHS argues that if the target persons knew they were on the list, they could take steps to avoid surveillance or capture and may put law enforcement officials at risk.¹²¹⁹ Thus if DHS were to tell wrongly-included persons that they were not the intended target, this might alert the real targets that their names were on the list.¹²²⁰ These arguments overlook the probability that the real targets of the US No-Fly list already know of their status and will book travel under an alternate identity. Moreover, when an innocent person brings suit, or contacts the media in an effort to seek a solution, this informs the true targets of their inclusion on the list in any event.

To date, arguments based on lack of standing¹²²¹ or jurisdiction,¹²²² have foiled attempts to have US courts address wrongful inclusion on the No-Fly list but a recent decision of the US 9th

(December 2002) online: American Civil Liberties Union of Northern California

<www.aclunc.org/cases/landmark_cases/asset_upload_file371_3549.pdf> (visited May 19, 2014).

¹²¹³ A name is not just a name; many of the targeted persons have aliases. See US, Government Accountability Office, *Terrorist Watchlist Screening: Opportunities Exist to Enhance Management Oversight, Reduce Vulnerabilities in Agency Screening Processes, and Expand Use of the List* (GAO-08-110) (2007) at 8.

¹²¹⁴ This is because the criteria for inclusion have been deemed sensitive by the TSA. See US, Department of Justice, Office of the Inspector General: Audit Division, *The Federal Bureau of Investigation's Terrorist Watchlist Nomination Practices* (Audit Report 09-25) (2009) at 70, online: US Department of Justice <www.justice.gov/oig/reports/FBI/a0925/final.pdf> (visited May 19, 2014).

¹²¹⁵ See generally Jeffrey Kahn, "International Travel and the Constitution" (2008) 56:2 UCLA L Rev 271.

¹²¹⁶ See *Latif v Holder*, 2011 WL 1667471 (WL Can) (Or Dist Ct 2011). The District Court dismissed the action for lack of Jurisdiction and the US Court of Appeals for the 9th Circuit, sitting in Portland, heard an appeal on May 11, 2012. See *Latif v Holder*, 686 F (3d) 1122 (9th Cir 2012) (available on WL Can) [*Latif 2012*].

¹²¹⁷ US, Department of Homeland Security, Office of Inspector General, *Effectiveness of the Department of Homeland Security Traveler Redress Inquiry Program* (OIG-09-103) (2009) at 89, online: Office of Inspector General, US Department of Homeland Security <www.oig.dhs.gov/assets/Mgmt/OIG-09-103r_Sep09.pdf>.

¹²¹⁸ *Ibid* at 96.

¹²¹⁹ *Ibid*.

¹²²⁰ *Ibid*.

¹²²¹ *Scherfen v Department of Homeland Security*, 2010 WL 456784 (WL Can) (MD Pa 2010).

Circuit¹²²³ granted an alien resident in Malaysia standing to challenge her inclusion as a violation of her First and Fifth Amendment rights. Her inability to contest these issues on American soil stemmed directly from her inclusion on the US No-Fly list.¹²²⁴ The 9th Circuit held that the District Court retains jurisdiction to grant an injunction ordering the Terrorist Screening Center to remove names from the No-Fly list,¹²²⁵ and in January 2014 the District Court ordered a name to be removed from the No-Fly list.¹²²⁶

d) How necessary is secrecy?

The first truly worldwide 'no-travel' list is the United Nations Security Council (UNSC) "Consolidated list".¹²²⁷ It adopts a very different strategy than that employed in the United States in that it is transparent and lists the personal data and reasons for inclusion of the targeted persons. Thus, for example, Ibrahim Hassan Tali Al-Asiri, born April 19, 1982 in Riyadh, Saudi Arabia, is included on the list and is alleged to be "Operative and principal bomb maker of Al-Qaida in the Arabian Peninsula" wanted by Saudi Arabia and Interpol.¹²²⁸ Where the information is available, the list also provides additional information such as known aliases, the names of family members and occasionally addresses, financial information and passport numbers.¹²²⁹ So transparent is the list that a press release is issued when a person is added¹²³⁰ or deleted.¹²³¹ The

¹²²² *Ibid*. See also *Ibrahim v Department of Homeland Security*, 538 F (3d) 1250 (9th Cir Cal 2008) (available on WL Can) [*Ibrahim 2008*].

¹²²³ *Ibrahim 2012*, *supra* note 1211.

¹²²⁴ Government lawyers actually argued that the appellant had failed to allege that she was still on a government watchlist while refusing to confirm or deny her status. See *Ibid* at 992.

¹²²⁵ *Ibrahim 2008*, *supra* note 1222 at 1256; *Ibrahim 2012*, *supra* note 1211 at 991 and *Latif 2012*, *supra* note 1216.

¹²²⁶ For insight into an eight year battle to remove an innocent person's name from the no-fly list, see *Ibrahim v. Dep't of Homeland Sec.*, (ND Cal 2014) online: Courthouse News Service <www.courthousenews.com/2014/04/17/IbrahimUNR.pdf>.

¹²²⁷ "The List established and maintained by the Committee pursuant to Resolutions 1267 (1999) and 1989 (2011) with respect to individuals, groups, undertakings and other entities associated with Al-Qaida, Security Council Committee pursuant to Resolutions 1267 (1999) and 1989 (2011) concerning Al-Qaida and associated individuals and entities", see online: UN <www.un.org/sc/committees/1267/aq_sanctions_list.shtml> .

¹²²⁸ "The List established and maintained by the Al-Qaida Sanctions Committee with respect to individuals, groups, undertakings and other entities associated with Al-Qaida", see online: UN <www.un.org/sc/committees/1267/AQList.htm> (visited May 19, 2014) and scroll down to QI.A.291.11

¹²²⁹ See *Ibid* and scroll down to QI.L.190.05.

¹²³⁰ See United Nations, Security Council, Press Release, SC/10405, "Security Council Al-Qaida Sanctions Committee Adds Ibrahim Awwad Ibrahim Ali Al-Badri Al-Samarrai to its Sanctions List" (5 October 2011) online: UN <www.un.org/News/Press/docs/2011/sc10405.doc.htm> (visited May 19, 2014).

¹²³¹ Thus, a Press Release announced the deletion of Sudanese-Canadian, Mr. Abu Sufian al-Salamabi Muhammed Ahmed Abd al-Razziq. See United Nations, Security Council, Press Release, SC/10467, "Security Council Al-Qaida Sanctions Committee Deletes Entry of Abu Sufian Al-Salamabi Muhammed Ahmed Abd Al-Razziq from its List" (30 November 2011) online: UN <www.un.org/News/Press/docs/2011/sc10467.doc.htm> (visited May 19, 2014).

UNSC makes great efforts to ensure that all nations are aware of the full meaning and implications of inclusion of the list.¹²³² The UNSC has designed the program in order to focus the full weight of international sanctions on its intended targets. In submitting a new name to the list a UN Member State must provide all available information.¹²³³

Although UNSC Resolution 1904/2009 created the Office of an Ombudsman¹²³⁴ to facilitate the delisting of individuals, in most cases this is expected to happen only as a result of the death of the listed individual.¹²³⁵ In other words, the UNSC listing process is sufficiently robust and requires sufficiently detailed information that the risk of "false positives" is all but negated from the outset. This differs dramatically from the US approach and has very different results. The people on the UN Consolidated List do not travel under their own names or any known aliases.

e) Profiling

If proper intelligence is gathered and processed, the type of profiling to which critics object probably is not necessary because authorities would examine passengers' behavior rather than their race, religion or nationality. Has the passenger bought a one-way ticket with cash? Is she carrying an appropriate amount of baggage for the destination? What other stamps/visas are in his passport? Has she committed violent crimes in the past? These types of factors are much more useful in building a profile than basing profiling on the types of generic personal characteristics that are normally prohibited by human rights law. Thus in its 1997 report, the Gore Commission recommended:

No profile should contain or be based on material of a constitutionally suspect nature - e.g., race, religion, national origin of US citizens.... [Selection factors should not be] based on national origin, racial, ethnic, religious or gender characteristics.

¹²³² "Useful Papers, Security Council Committee pursuant to resolutions 1267 (1999) and 1989 (2011) concerning Al-Qaida and associated individuals and entities", online: UN <www.un.org/sc/committees/1267/usefulpapers.shtml> (visited May 19, 2014).

¹²³³ See UN, Security Council Committee Pursuant to Resolutions 1267 (1999) and 1989 (2011) Concerning Al-Qaida and Associated Individuals and Entities, *Guidelines of the Committee For the Conduct of its Work: Adopted on 7 November 2002, as amended on 10 April 2003, 21 December 2005, 29 November 2006, 12 February 2007, 9 December 2008, 22 July 2010, 26 January 2011, 30 November 2011, and 15 April 2013* (15 April 2013) at para 6(G), online: UN <www.un.org/sc/committees/1267/pdf/1267_guidelines.pdf> (visited May 19, 2014).

¹²³⁴ *Resolution 1904 (2009) Adopted by the Security Council at its 6247th meeting, on 17 December 2009*, SC Res 1904, UNSCOR, 2009, UN Doc S/RES/1904, (2009) s 20, online: UN <[www.un.org/en/ga/search/view_doc.asp?symbol=S/RES/1904\(2009\)](http://www.un.org/en/ga/search/view_doc.asp?symbol=S/RES/1904(2009))> (visited May 19, 2014).

¹²³⁵ *Ibid.*, ss 20-27.

Factors ... should be based on measurable, verifiable data indicating that the factors chosen are reasonable predictors of risk, not stereotypes or generalizations. A relationship must be demonstrated between the factors chosen and the risk of illegal activity."¹²³⁶

Whether this advice is always followed is debatable,¹²³⁷ but States can surely agree that any profile must be based on these principles.

f) Divergent views on Privacy

Differences between European and American views on privacy issues provoked a protracted dispute between the two allies. The Europeans saw the American request for passenger information as a potential violation of EU privacy laws.¹²³⁸ Negotiations started in 2003, and in 2007, an interim agreement¹²³⁹ and later a permanent agreement¹²⁴⁰ were reached and work was begun on an EU Council Framework Decision on the use of Passenger Name Record (PNR) information for law enforcement purposes.¹²⁴¹ The enactment of the Lisbon treaty¹²⁴² in 2007 threatened to delay the passage of EU¹²⁴³ implementing legislation.¹²⁴⁴ A 2010 resolution of the European Parliament seemed to be seeking further negotiations,¹²⁴⁵ and an Opinion of the European Data Protection Supervisor sought clarifications¹²⁴⁶ while a new agreement was being

¹²³⁶ See Gore Commission, *Final*, *supra* note 1179, Recommendation 3.19.

¹²³⁷ For a fascinating look at racial profiling by an airline, not government, and the US courts handling of it, see Benjamin D Williams, "Antidiscrimination Law – In the Face of Racial Profiling, the First Circuit Holds that Longstanding Antidiscrimination Principles Must Yield to Airline Safety: *Cerqueira v. American Airlines, Inc.*", Case Comment, (2009) 74:1 J Air L & Com 131 (HeinOnline).

¹²³⁸ See D Richard Rasmussen, "Is International Travel *Per Se* Suspicion of Terrorism? The Dispute between the United States and European Union over Passenger Name Record Data Transfers" (2008) 26:2 Wis Int'l LJ 551.

¹²³⁹ *Interim Agreement Between the European Union and the United States Regarding the Transfer of Passenger Name Record Data*, 72 Fed Reg 348 (2007).

¹²⁴⁰ *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)*, [2007] OJ, L 204/18 at 18–20.

¹²⁴¹ European Commission, *Proposal for a Council framework decision on the use of Passenger Name Record (PNR) for law enforcement purposes*, COM(2007) 654 (22 October 2007).

¹²⁴² *Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community, signed at Lisbon, 13 December 2007*, [2007] OJ, C 306/1 [Lisbon Treaty].

¹²⁴³ Not all of the EU members were on the same page. The UK has given itself similar powers. See *Anti-Terrorism Act*, *supra* note 1088; *Commissioners for Revenue & Customs Act 2005* (UK), c 11.

¹²⁴⁴ Arthur Rizer, "Dog Fight: Did the International Battle over Airline Passenger Name Records Enable the Christmas-Day Bomber?" (2010) 60:1 Cath U L Rev 77 at 98 (HeinOnline).

¹²⁴⁵ See EC, *European Parliament resolution of 5 May 2010 on the launch of negotiations for Passenger Name Record (PNR) agreements with the United States, Australia and Canada*, [2011] OJ, C 81E/70.

¹²⁴⁶ *Opinion of the European Data Protection Supervisor on the proposal for a Council Decision on the conclusion of the 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*, [2012] OJ, C 35/16.

negotiated.¹²⁴⁷ The new 2011 Agreement entered into force on July 1, 2012; its text required the parties to jointly review its implementation one year later and regularly thereafter.¹²⁴⁸

During the protracted discussions between the US and the European Union, perhaps greater exploration should been given to the issue of whether the APIS/PNR information should be transmitted to a foreign government, or whether the contents of the No-Fly list could be furnished, albeit in encrypted form, to security officials in the country from which the passenger's flight was departing. The vast majority of non-stop flights from the EU to the United States depart from an airport located in one of the 23 EU members¹²⁴⁹ that are also members of either NATO¹²⁵⁰ or of the "14 Eyes", which is a high-level military intelligence sharing alliance.¹²⁵¹ In respect of these types of flights, one assumes that the sharing of the contents of the No-Fly list could be done in a manner that respects all relevant security policies and protocols.¹²⁵² Alternatively, as observed earlier, under the terms of Canada's Passenger Protect regime, the "specified persons list" is sent by the government to the airlines rather than the carriers having to send their passenger information to government authorities.¹²⁵³ This alternative avoids privacy concerns.

However, even perfect harmony with respect to the sharing and treatment of passenger information is not enough if law enforcement does not act on the information. For example, on or before December 25, 2009, Delta Airlines, pursuant to 49 USC § 44909 (c), dutifully notified US

¹²⁴⁷ *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*, [2012] OJ, L 215/5.

¹²⁴⁸ European Commission, *Joint Review of the implementation of the Agreement between the European Union and the United States of America on the processing and transfer of passenger name records to the United States Department of Homeland Security*, SEC(2013) 630 final (27 November 2013), online: European Commission <ec.europa.eu/dgs/home-affairs/what-is-new/news/news/docs/20131127_pnr_report_en.pdf> at 4. The review is required by Article 23 (1).

¹²⁴⁹ The five EU non-NATO and non-14 Eyes members are: Austria, Cyprus, Finland, Ireland and Poland. There are no flights between North America and Cyprus. In addition, the US has a Customs Pre-Clearance Agreement with Ireland and thus US Customs and Border Protection has the passengers' APIS/PNR information prior to departure.

¹²⁵⁰ EU NATO members are: Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, and the United Kingdom.

¹²⁵¹ The 14 Eyes is a high-level military intelligence sharing alliance. Its EU members are: Belgium, Denmark, France, Germany, Italy, the Netherlands, Spain, Sweden and the United Kingdom. See Carly Nyst, "The Five Eyes Fact Sheet", *Privacy International* (27 November 2013) online: Privacy International <www.privacyinternational.org/blog/the-five-eyes-fact-sheet> [*Five Eyes Fact*].

¹²⁵² Presumably agreements would have to be reached with Austria, Finland and Poland, but their carriers' share of EU-North America non-stop flights is relatively small. Finnair and LOT Polish Airlines combined only offer 26 flight a week to the US. Only Austrian Airlines has a significant transatlantic service.

¹²⁵³ See above Part V) D) 4) b) How necessary is secrecy?

officials that a Nigerian national, Mr. Umar Farouk Abdulmutallab would be travelling from Amsterdam to Detroit on flight Northwest Flight 253 that day.¹²⁵⁴ Delta Airlines sent both the five-field APIS information from the passenger's Nigerian passport, as well as the 19 fields of APIS information that Delta had with respect to the reservation, itinerary and payment methods.

The airline was not informed that the passenger's father had warned the US Embassy in Lagos of his son's radicalization,¹²⁵⁵ that British Authorities had denied him a visa and put him on a UK watchlist,¹²⁵⁶ that he was being monitored by US authorities,¹²⁵⁷ or that his US visa had triggered concerns.¹²⁵⁸ Instead Delta was authorized to give him a boarding pass for the flight.

In his clothing the passenger Umar Farouk Abdulmutallab had concealed a device containing Pentaerythritol Tetranitrate (PETN), Triacetone Triperoxide (TATP) and other ingredients, in order to cause an explosion aboard Flight 253. Shortly prior to landing at Detroit Metropolitan Airport, he detonated the device, causing a fire on board Flight 253.¹²⁵⁹

The reaction was immediate;¹²⁶⁰ interrupting his holidays, President Obama "admitted that "human and systemic failures" contributed to a "potentially catastrophic breakdown in security" that allowed the attempted attack on a Detroit-bound aeroplane on Christmas Day."¹²⁶¹ The President's analysis was confirmed 5 months later when No-Fly listee Faisal Shahzad paid for a ticket to Dubai in cash and boarded an Emirates plane at JFK before the FBI arrested him.¹²⁶²

¹²⁵⁴ Northwest was merged into Delta on January 31, 2010, roughly a month after this incident.

¹²⁵⁵ Karen DeYoung & Michael Leahy, "Uninvestigated terrorism warning about Detroit suspect called not unusual", *The Washington Post* (28 December 2009), online: The Washington Post <www.washingtonpost.com/wp-dyn/content/article/2009/12/27/AR2009122700279.html>.

¹²⁵⁶ "Many Questions, Few Answers in Terror Case", *CBS News* (28 December 2009), online: CBS News <www.cbsnews.com/news/many-questions-few-answers-in-terror-case/> (visited May 19, 2014).

¹²⁵⁷ *Ibid.*

¹²⁵⁸ Armen Keteyian, "US Failed to Catch Suspect's Active Visa", *CBS News* (28 December 2009), online: CBS News <www.cbsnews.com/news/us-failed-to-catch-suspects-active-visa/> (visited May 19, 2014). In fact, the US wanted to revoke his visa only to find he had been issued a multiple-entry visa in 2008.

¹²⁵⁹ See Grand Jury Indictment in *United States v Abdulmutallab*, 739 F (3d) 891 (6th Cir 2014) (available on WL Can), Case 2:20-cr-20005-NGE-DAS, para 5 – 12.

¹²⁶⁰ Before Christmas Day was over, the TSA had issued Aviation Security Directive, SD 1544-09-06, which required that passengers remain in their seats without access to carry-on items or blankets, or personal belongings one hour prior to arrival at a US airport.

¹²⁶¹ Nick Allen, "Barack Obama admits 'unacceptable systemic failure' in Detroit plane attack", *The Telegraph* (29 December 2009), online: The Telegraph <www.telegraph.co.uk/news/worldnews/barackobama/6908709/Barack-Obama-admits-unacceptable-systemic-failure-in-Detroit-plane-attack.html> (visited May 19, 2014).

¹²⁶² The FBI had to alert the pilot, hold the plane and arrest the man. Eileen Sullivan & Matt Apuzzo, "No-Fly List Failed To Keep Faisal Shahzad Off Plane, Suspect Slipped Past Feds", *Associated Press* (4 May 2010) online: Huffington Post <www.huffingtonpost.com/2010/05/04/faisal-shahzad-gained-cit_n_562837.html>.

5) *Physical Security*

The above-mentioned 'Christmas Day Bomber' (CDB) incident provoked a decline in confidence in the 'intelligence' community and calls for a greater reliance on stronger physical security measures. In the domain of aviation anti-terrorism systems, physical security was not only more reliable than intelligence measures, it faced few legal challenges. Despite this, the United States has long preferred using intelligence over physical security in denying terrorists access to the aviation system.¹²⁶³

The best way to achieve secure commercial aviation is to ensure that no person enters the aircraft with anything that could be used as a weapon or bomb, or anything which could be combined with other items in the possession of the passenger or accomplices to become either a bomb or a weapon. This requires a very thorough screening of passengers and their carry-on baggage. While passenger screening has been a feature of air travel since the 1970s, over the years the prohibited items list has evolved and the screening technology has become more invasive.

a) Prohibited Items List

For many years, if one could walk through a magnetometer without setting off an alarm, one was free to board the aircraft. As late as December 2002, Transport Canada's advice to travelers was:

Ensure there are no sharp objects like scissors or pocket knives in your carry-on bag. Pack them in your checked luggage instead. Make sure electronic devices such as cell phones, laptop computers and portable or electronic games are charged and ready to be turned on for inspection. You may be asked to demonstrate that they work. Pack prescription medication in its original labelled container. Syringes or needles for personal medical use must have the needle guard in place and also be accompanied by the medication in its original labeled container.¹²⁶⁴

The idea of the prohibited items list¹²⁶⁵ *per se*, emerged subsequent to the August 10, 2006, plot to explode North American-bound planes in midair.¹²⁶⁶ Canada, the US and the United Kingdom announced liquids and gels regulations the same day.¹²⁶⁷

¹²⁶³ Ian David Fiske, "Failing to Secure the Skies: Why America has Struggled to Protect Itself and How it Can Change" (2010) 15 Va JL & Tech 173 at 175 (HeinOnline).

¹²⁶⁴ Transport Canada, News Release, H 133/02, "Aviation Security Tips for Holiday Travellers" (16 December 2002), online: Government of Canada <news.gc.ca/web/article-en.do?ctr.sj1D=&ctr.mnthndVl=1&mthd=advSrch&ctr.dpt1D=6695&nid=630419&ctr.lc1D=&ctr.tp1D=&ctr.yrStrtVl=2002&ctr.kw=&ctr.dyStrtVl=14&ctr.aud1D=&ctr.mnthStrtVl=12&ctr.page=1&ctr.yrndVl=2003&ctr.dyndVl=20>.

¹²⁶⁵ *Interim Order Respecting Prohibited Items*, PC 2006-1583, (2006) C Gaz I, 4365. It was renewed on December 14, 2008. See (2008) C Gaz I, 3217. The US and most European countries, plus Australia, have similar legislation.

While one may conceive of reasons why the types of prohibited items might vary from one State to another,¹²⁶⁸ there are very strong reasons to create international norms, especially for international travelers, who may otherwise find that an item is permitted through a security checkpoint at one airport but not another. For example, for a time, security checkpoints in Canada were confiscating scissors with a 6-centimeter handle that security checkpoints in Europe and the US were accepting,¹²⁶⁹ with the result that passengers would lose items at a small Canadian airport that had passed through a security checkpoint at a major EU or US airport.¹²⁷⁰ Or a traveler who bought a bottle of liquor in a duty-free shop or aboard an intercontinental flight might have the bottle confiscated at the next airport screening point. This latter possibility was sufficiently problematic that the TSA posted notices in airports.¹²⁷¹

The Prohibited Items List is not without economic consequences. In 2007 the International Association of Airport Duty-free Shops estimated that liquids and gels accounted for nearly 50% of the US\$ 34 billion aggregate of airport duty-free sales.¹²⁷² Given that the rent that airport

¹²⁶⁶ Doug Saunders, "On Trial in Britain: Airline schedules, liquid bombs and a dastardly plan of terror: Crown outlines case against eight accused of planning to down flights over the Atlantic", *The Globe and Mail* (4 April 2008) A14 (ProQuest).

¹²⁶⁷ Indeed the situation evolved over the course of the day. First no liquids or gels were permitted in carry-on luggage. See "Canada's New Government Announces", *supra* note 195. Later baby formula and breast milk were allowed. See Transport Canada, News Release, "Transport Canada today announced a modification to the list of prohibited items announced on August 10, 2006" (13 August 2006) online: Government of Canada <news.gc.ca/web/article-en.do?ctr.sj1D=&ctr.mnthndVl=8&mthd=advSrhc&ctr.dpt1D=6695&nid=232739&ctr.lc1D=&ctr.tp1D=&ctr.yrStrtVl=2006&ctr.kw=&ctr.dyStrtVl=9&ctr.aud1D=&ctr.mnthStrtVl=8&ctr.page=1&ctr.yrmdVl=2006&ctr.dyndVl=20>. See also US Transportation Security Administration, Press Release, "Statement By Homeland Security Secretary Michael Chertoff Announcing A Change To The Nation's Threat Level For The Aviation Sector" (10 August 2006), online: Transportation Security Administration <www.tsa.gov/press/releases/2006/08/10/statement-homeland-security-secretary-michael-chertoff-announcing-change>.

¹²⁶⁸ Some nations would prohibit certain reading materials or electronic media.

¹²⁶⁹ Transport Canada, News Release, H 011/11, "Government of Canada enhances passenger convenience and aviation security" (3 February 2011) online: Government of Canada <news.gc.ca/web/article-en.do?ctr.sj1D=&ctr.mnthndVl=2&mthd=advSrhc&ctr.dpt1D=6695&nid=616229&ctr.lc1D=&ctr.tp1D=&ctr.yrStrtVl=2011&ctr.kw=&ctr.dyStrtVl=1&ctr.aud1D=&ctr.mnthStrtVl=2&ctr.page=1&ctr.yrmdVl=2011&ctr.dyndVl=3>.

¹²⁷⁰ Thus, the Security and Prosperity Partnership of North America Aviation Security Working Group examined "comparative screening, inspection protocols and the expanded use of information systems for baggage and cargo transported on passenger and cargo airplanes." They also worked on "the coordination of prohibited items lists" so that a scissors that had passed through TSA airport security at Newark could also pass through CATSA security in Halifax. The fact that these issues were discussed at such a high-level meeting indicates just how serious they are. See online: The Aviation Security Working Group, Security and Prosperity Partnership of North America, Government of Canada <www.spp-psp.gc.ca/eic/site/spp-psp.nsf/eng/00022.html> (visited May 19, 2014).

¹²⁷¹ See Emily Manthei, "TSA Rules for International Travel", *USA Today* (29 December 2009), online: USA Today <traveltips.usatoday.com/tsa-rules-international-travel-62791.html> (visited May 25, 2014). New rules went into effect on January 14, 2014.

¹²⁷² Information on file with author. In the same year, liquor and fragrances made up over 40% of the total.

retail outlets pay is a significant portion of the revenue of certain airports, a decline in sales could indirectly result in increased landing fees and other airport charges for carriers. Efforts to avoid this have produced a number of measures, including granting access to airport duty-free shops¹²⁷³ to arriving passengers.¹²⁷⁴ When agreement was reached on the carriage of small amounts of liquids and gels,¹²⁷⁵ the ICAO Council¹²⁷⁶ recognized the importance of compatible standards and proposed the use of Sealed Tamper-Evident Bags.¹²⁷⁷ While the European Union accepts these from Canada, the US and Croatia,¹²⁷⁸ it was not until January 31, 2014 that the United States began to accept them from any other country and even then the US requires that such liquids and gels originate at an airport duty-free shop and are packed in a secure tamper-evident bag.¹²⁷⁹

b) Re-screening of Checked Baggage

Prior to 2008, minor differences between Canada and American security standards applied to checked baggage, although passengers were unaware of them. The checked luggage of US-bound Canadians proceeding beyond a US carrier's hub was screened twice; once before proceeding through the US Customs Pre-Clearance process at the Canadian airport and then a

¹²⁷³ See November 15, 2006, minutes of Greater Toronto Airports Authority Consultative Committee, item 3.4 "Arrivals Duty Free" (on file with author). See Brent Jang, "Airports push for arrivals duty free", *Globe and Mail* (4 November 2008), online: Globe Advisor

<secure.globeadvisor.com/servlet/ArticleNews/story/gam/20081104/RDUTYFREE04>.

¹²⁷⁴ Anouska Forte, "IAADFS is optimistic on transfer passenger issue", *TR Business* (25 April 2007) online: TR Business <www.trbusiness.com/index.php/regional/americas/7691-IAADFS-is-optimistic-on-transfer-passenger-issue.html> (visited May 19, 2014).

¹²⁷⁵ The idea of 100ml containers inside a transparent re-sealable 1L bag is mentioned in an October 5, 2006, EU Press Release. See European Commission, Press Release, Memo/06/363, "Aviation security: EU acts against liquid explosives Questions and answers" (5 October 2006), online: European Commission <europa.eu/rapid/press-release_MEMO-06-363_en.htm?locale=en> (visited May 19, 2014). Yet America's TSA seems to claim authorship of the 3-1-1. For example, it is not based on the metric system; 3 ounces or smaller, in 1 zip top bag of a 1-quart-size. See Transportation Security Administration, "3-1-1 for Carry Ons; Prepare for Take-off", online: Transportation Security Administration <www.tsa.gov/assets/pdf/311_brochure.pdf>.

¹²⁷⁶ Taïeb Chérif, Secretary General of ICAO, sought action. See *State Letter AS 811 1-061100 Confidential dated 1 December 2006, containing security control guidelines for screening liquids, gels and aerosols, and two reminder letters, AS 811 1-07126 Confidential of 30 March 2007 and AS 8/11-07/53 Confidential of 6 July 2007*.

¹²⁷⁷ These are very similar to those used by law enforcement to collect evidence from the scene of a crime, for use as evidence in judicial proceedings. See the website of Nelmar, a security packaging company, "STEB Duty-Free Bags", online: Nelmar <nelmar.com/application/steb-duty-free-bags/> (visited May 19, 2014).

¹²⁷⁸ EC, *Commission Regulation (EU) No 358/2010 of 23 April 2010 amending Regulation (EU) No 185/2010 of 4 March 2010 laying down detailed measures for the implementation of the common basic standards on aviation security*, [2010] OJ, L 105/12 at 13–14.

¹²⁷⁹ Andrew Moran, "TSA relaxes international alcohol rules" *WorldIssues* 360 (5 February, 2014) online: WorldIssues 360 <www.worldissues360.com/index.php/tsa-relaxes-international-alcohol-rules-92252/>.

second time when s/he made the connection at the US carrier's hub.¹²⁸⁰ The subtle differences between the two standards required a secondary screening, at considerable cost to the airline and at the cost of longer transit times for passengers.

c) Advanced Imaging Technology (AIT)

Almost immediately after the Christmas Day Bomber (CDB) incident,¹²⁸¹ President Obama called on the DHS to "aggressively pursue enhance screening technology"¹²⁸² and Advance Imaging Technology (AIT) started making its appearance at major airports. AIT is a collective name for Backscatter X-Ray or Millimeter Wave technology in which low-radiation X-ray is bounced off a passenger to produce photo-quality images as if s/he were undressed.¹²⁸³

[T]oday, the threats are more insidious, with magical marvels of technology making walls transparent, penetrating clothing to expose the nude body, and turning darkness into daylight.¹²⁸⁴

In fact the technology had debuted in 2001 and was still being evaluated.¹²⁸⁵ In 2004, London Heathrow experimented with AIT scanners, three years later it was being tested in Phoenix,¹²⁸⁶ and shortly thereafter Canadian authorities evaluated similar technology in Kelowna.¹²⁸⁷ The CDB incident was the perfect rationale for justifying the decision of the authorities to deploy

¹²⁸⁰ Thus Canada's 2008 Federal Budget, "Responsible Leadership" tabled in the House of Commons, February 26, 2008 by the Hon James Flaherty, provided at 188-189, CA\$ 29 million for, among other things, the "future elimination of duplicate baggage screening on connecting flights in North America."

¹²⁸¹ The incident happened on December 25, 2009. Within two weeks, on January 5, 2010, Canada's Transport Minister announced "full body and behavioural screening" of passengers. See Transport Canada, News Release, H 002/10, "Government of Canada invests in full body and behaviour screening to further enhance security at Canadian Airports" (5 January 2010), online: Government of Canada <news.gc.ca/web/article-en.do?ctr.sj1D=&ctr.mnthndVl=2&mthd=advSrch&ctr.dpt1D=6695&nid=504619&ctr.lc1D=&ctr.tp1D=&ctr.yrStrtVl=2010&ctr.kw=&ctr.dyStrtVl=1&ctr.aud1D=&ctr.mnthStrtVl=1&ctr.page=2&ctr.yrmdVl=2010&ctr.dyndVl=5>.

¹²⁸² The White House, Press Release, "Presidential Memorandum Regarding 12/25/2009 Attempted Terrorist Attack" (7 January 2010), online: The White House <www.whitehouse.gov/the-press-office/presidential-memorandum-regarding-12252009-attempted-terrorist-attack> (visited May 19, 2014).

¹²⁸³ Authorities claim that computer processing partially obscures the image that is available to operators.

¹²⁸⁴ Stephen A LaFleur, "Kyllo v. United States: Something Old, Nothing New; Mostly Borrowed, What To Do?" (2002) 62:3 La L Rev 929 (HeinOnline).

¹²⁸⁵ See generally Ann Cavoukian, *Whole Body Imaging in Airport Scanners: Activate Privacy Filters to Achieve Security and Privacy* (Toronto: Information and Privacy Commissioner of Ontario, 2009), online: Information and Privacy Commissioner of Ontario <www.ipc.on.ca/images/Resources/wholebodyimaging.pdf>.

¹²⁸⁶ See Paul Gibling & Eric Lipton, "New Airport X-Rays Scan Bodies, Not Just Bags", *The New York Times* (24 February 2007), online: The New York Times <www.nytimes.com/2007/02/24/us/24scan.html?_r=1>.

¹²⁸⁷ CATSA tested an AIT scanner at Kelowna airport in July 2008. See Office of the Privacy Commissioner of Canada, News Release, "Airport security scanners must respect privacy, Privacy Commissioner insists" (January 2010) online: Office of the Privacy Commissioner of Canada <www.priv.gc.ca/media/nr-c/2010/op-ed_100107_e.asp> (visited May 19, 2014).

"advanced imaging technology to provide greater explosives detection capabilities"¹²⁸⁸ to assure a concerned public that the government was doing everything possible to keep the skies safe.

Persons concerned about a potential invasion of privacy were quickly assured that:

- a) AIT is a secondary screening method and magnetometers are the primary means of screening;
- b) facial features are blurred;
- c) the machine operator never sees the person being screened;
- d) the process is anonymous;
- e) the images are deleted after the person has been screened;
- f) a physical pat-down is always an alternative to screening by an AIT machine.¹²⁸⁹

More recently, the TSA has announced a pilot test of new 'Automatic Target Recognition software' which will "display anomalies on a generic figure, as opposed to displaying the image of a specific individual's body"¹²⁹⁰ and thus the AIT operator will no longer need to be isolated from seeing the individual being screened.¹²⁹¹

Nonetheless, no matter how AIT is used, it raises concerns. First and foremost is the degree to which sensitive images are in fact blurred, leading to accusations that the technology may violate child pornography laws.¹²⁹² There are also questions as to whether AIT constitutes unlawful search and seizure.¹²⁹³ Various US court decisions have held that a person who elects to enter the sterile area of an airport consents to a reasonable¹²⁹⁴ search,¹²⁹⁵ even if that search is conducted via AIT.¹²⁹⁶ However, even if the search is presumptively reasonable, courts must examine

¹²⁸⁸ Department of Homeland Security, "Secretary Napolitano Outlines Five Recommendations To Enhance Aviation Security", Press Release Jan 7, 2010, online: US Department of Homeland Security <www.dhs.gov/ynews/releases/pr_1262907427865.shtm>. US Department of Homeland Security, Press Release, "Secretary Napolitano Outlines Five Recommendations To Enhance Aviation Security" (7 January 2010), online: US Department of Homeland Security <www.dhs.gov/news/2010/01/07/secretary-napolitano-outlines-five-recommendations-enhance-aviation-security> .

¹²⁸⁹ *Ibid.*

¹²⁹⁰ US, Department of Homeland Security, *Privacy Impact Assessment Update for TSA Advanced Imaging Technology* (25 January 2011) at 5, online: US Department of Homeland Security <www.dhs.gov/xlibrary/assets/privacy/privacy-pia-tsa-ait.pdf> (visited May 19, 2014).

¹²⁹¹ *Ibid.*

¹²⁹² Alan Travis, "New scanners break child porn laws", *The Guardian* (4 January 2010) online: The Guardian <www.guardian.co.uk/politics/2010/jan/04/new-scanners-child-porn-laws> (visited May 19, 2014).

¹²⁹³ Certainly, it may have the ability to discover small amounts of illicit drugs.

¹²⁹⁴ See Brittany R Stancombe, "Fed Up with Being Felt Up: The Complicated Relationship Between the Fourth Amendment and TSA's "Body Scanners" and "Pat-Downs"", (2011-2012) 42:1 Cumb L Rev 181 at 203–212 (HeinOnline).

¹²⁹⁵ See *United States v Biswell*, 406 US 311 (1972) (available on QL). See also *Cassidy v Chertoff*, 471 F (3d) 67 (2d Cir 2006) (available on QL); *MacWade v Kelley*, 460 F (3d) 260 (2d Cir 2006) (available on QL).

¹²⁹⁶ See *Electronic Privacy Information Center v Department of Homeland Security*, 653 F (3d) 1 (DC Cir 2011) (available on QL).

whether less invasive means could have been used to provide the same information.¹²⁹⁷ There is also the troubling question as to whether AIT images can be stored or re-transmitted. While the TSA claims that it is not possible, privacy advocates disagree.¹²⁹⁸ Currently, AIT is being used in the United States, Canada and in Europe (although predominantly to screen US-destined passengers),¹²⁹⁹ and soon may be introduced in Australia.¹³⁰⁰

Lost in all the debate about AIT is the larger question of whether the technology actually works as advertised:

It is very likely that a large (15–20 cm in diameter), irregularly-shaped, cm-thick pancake with beveled edges, taped to the abdomen, would be invisible to this technology, ironically, because of its large volume, since it is easily confused with normal anatomy. Thus, a third of a kilo of PETN, easily picked up in a competent pat down, would be missed by backscatter "high technology". Forty grams of PETN, a purportedly dangerous amount, would fit in a 1.25 mm-thick pancake of the dimensions simulated here and be virtually invisible.¹³⁰¹

The United States' General Office of Accounting has questioned where AIT would have been able to detect the weapon used by the CDB and observed that the TSA had not conducted a cost-benefit analysis of their AIT deployment strategy.¹³⁰² In November 2011, the Office of the Inspector General for the Department of Homeland Security admitted that it had "identified

¹²⁹⁷ See generally M Madison Taylor, "Bending Broken Rules: The Fourth Amendment Implications of Full-Body Scanners in Preflight Screening", online: (2010) 17:1 Rich JL & Tech 4 (HeinOnline).

¹²⁹⁸ See Rohen Peterson, "The Emperor's New Scanner: Muslim Women at the Intersection of the First Amendment and Full-Body Scanners" (2011) 22:2 Hastings Women's LJ 339 at 346 (HeinOnline). The website Gizmodo claims to be in possession of Full Body Scanner images stored by US Marshals. See Gizmodo, "One Hundred Naked Citizens: One Hundred Leaked Body Scans", online: Gizmodo <gizmodo.com/5690749/these-are-the-first-100-leaked-body-scans> .

¹²⁹⁹ Bart Elias, *Changes in Airport Passenger Screening Technologies and Procedures: Frequently Asked Questions* (Washington, DC: Congressional Research Service, 2011) at 3, online: Federation of American Scientists <www.fas.org/sgp/crs/homsec/R41502.pdf>.

¹³⁰⁰ In May 2012, the Australian Government started consultations on the use of AIT at its large international airports. See Austl, Commonwealth, Australian Communications and Media Authority, *Proposed Arrangements to Deploy Body Scanners at Australian International Airports* (Consultation paper) (Melbourne: Australian Communications and Media Authority, 2012) online: Australian Communications and Media Authority <www.acma.gov.au/webwr/_assets/main/lib410230/ifc16-2012-body_scanners_at_australian_international_airports.docx>.

¹³⁰¹ Leon Kaufman & Joseph W Carlson, "An Evaluation of Airport X-ray Backscatter Units Based on Image Characteristics" (2011) 4:1 Journal of Transportation Security 73 at 93 (ProQuest).

¹³⁰² See US, Government Accountability Office, *Aviation Security: TSA is Increasing Procurement and Deployment of the Advanced Imaging Technology, but Challenges to This Effort and Other Areas of Aviation Security Remain* (GAO-10-484T) (2010).

vulnerabilities in the screening process at the passenger screening checkpoint at the domestic airports where we conducted testing."¹³⁰³

Whether the machines work or not may be irrelevant. Just as America reacted with remarkable speed to the events of September 11, AIT technology was implemented in the immediate wake of the CDB incident without taking the time to conduct careful risk-based analysis of its effectiveness. Reports suggest that political influence¹³⁰⁴ spurred the purchase of AITs and some of them are still sitting in warehouses:

TSA's failure to implement a risk-based approach in the procurement and deployment of its screening technologies has resulted in hundreds of millions of dollars of wasted taxpayer investment [and its] failure to efficiently manage its screening technology acquisition process has led to the deployment of operationally ineffective technologies, also resulting in the accumulation of thousands of pieces of screening equipment in storage for excessive amounts of time.¹³⁰⁵

d) The European Approach to AIT

European aviation security experts are undoubtedly aware of America's mixed experience with AIT technology and their adoption of it has been far more cautious. In October 2008, Members of the European Parliament passed a resolution calling on the European Commission to within three months to "carry out a fundamental rights impact assessment . . . a scientific and medical assessment of the possible health impact of [body scanning] technologies . . . [and] an economic, commercial and cost-benefit impact assessment."¹³⁰⁶ Subsequent to the CDB incident, the European Parliament repeated its call for an EU Commission report evaluating "body scanners on the grounds of effectiveness, impact on health and fundamental rights."¹³⁰⁷

¹³⁰³ US, Department of Homeland Security, Office of Inspector General, *TSA Penetration Testing of Advanced Imaging Technology* (OIG-12-06) (2011), online: Office of Inspector General, US Department of Homeland Security <www.oig.dhs.gov/assets/Mgmt/OIG_SLR_12-06_Nov11.pdf>. This is the unclassified version of the report.

¹³⁰⁴ Politics played a role in getting AIT machines into US airports, see Michael Grabell & ProPublica, "US Glossed Over Cancer Concerns Associated with Airport X-Ray Scanners", *Scientific American* (1 November 2011) online: *Scientific American* <www.scientificamerican.com/article/us-glossed-over-cancer-concerns/>.

¹³⁰⁵ *Airport Insecurity: TSA's Failure to Cost-Effectively Procure, Deploy and Warehouse its Screening Technologies*, (9 May 2012) at 5–6, online: US House of Representatives <oversight.house.gov/wp-content/uploads/2012/05/5-9-2012-joint-tsa-staff-report-final.pdf>.

¹³⁰⁶ EC, *European Parliament resolution of 23 October 2008 on the impact of aviation security measures and body scanners on human rights, privacy, personal dignity and data protection*, [2010] OJ, C 15E/71.

¹³⁰⁷ See European Parliament, Press Release, "Body scanners: MEPs not yet convinced, await impact analysis"– (28 January 2010), online: European Parliament <www.europarl.europa.eu/sides/getDoc.do?language=en&type=IM-PRESS&reference=20100125IPR67965>.

Within days of the CDB incident, AIT scanners were being tested at airports in the UK, Finland, the Netherlands, Germany, France and Italy,¹³⁰⁸ but in November 2011 due to potential health issues, the EU banned the use of any AIT scanner that uses X-rays, permitting only the use of those that are based on "millimeter wave" technology.¹³⁰⁹

The use of AIT in the world is likely going to take very different paths. In Europe there are countries that will not use it, the US will be using it only as a secondary mode of screening, and Australia plans to make it mandatory, but only in respect of randomly selected passengers, at all international airports.¹³¹⁰ The different approaches taken or to be taken by the US, Europe and Australia may reflect their relative perceptions of the degree to which they are exposed to terrorist risks and also differences in the extent to which they see a given technology or strategy as effective in defending the State against such risks.

VI) DIVERGENT NOTIONS OF RISK ASSESSMENT

As noted earlier, prior to September 11, there had never been a terrorist hijacking or bombing on a domestic flight originating on US soil and Americans did not perceive the same security threats as Europeans did based on their greater exposure to domestic terrorism. It can be argued that aviation security should be tighter at an airport where someone has tried to launch a bazooka at a foreign aircraft¹³¹¹ than at an airport where the largest plane carries 18 passengers.¹³¹² However, in an airport system, aviation security is only as strong as its weakest link. Since a passenger screened at Wabush, Labrador, and a passenger screened at Toronto, Ontario, may sit beside each other on a Montreal-Geneva flight, both passengers should in principle have to be screened to a common standard. This simple example underscores the risk assessment challenges of aviation security.

¹³⁰⁸ "Commission adopts", *supra* note 1009.

¹³⁰⁹ *Ibid.*

¹³¹⁰ Australia's *Aviation Transport Security Amendment (Screening) Bill 2012*, became law on 8 September 2012. See *Aviation Transport Security Amendment (Screening) Act 2012* (Cth). See also The Parliament of the Commonwealth of Australia, House of Representatives, *Explanatory memorandum: Aviation Transport Security Amendment (Screening) Bill 2012* (2012), online: Parliament of Australia <parlinfo.aph.gov.au/parlInfo/download/legislation/ems/r4745_ems_e1821abe-f200-4b7c-9f73-e48e99c868c2/upload_pdf/364935.pdf;fileType=application%2Fpdf> (visited May 20, 2014)

¹³¹¹ On two separate occasions in January 1975, Carlos the Jackal attempted to blow up an El Al jet at Paris Orly Airport with a Bazooka. On the second of these attempts, he grabbed hostages in order to negotiate an escape. See Patrick Bellamy, *Carlos the Jackal: Trail of terror*, (Courtroom Television Network LLC, 2001).

¹³¹² Thus the Canadian Air Transport Security Authority (CATSA) does not normally screen passengers at the Vancouver Seaplane base, but did so during the 2010 Vancouver Winter Olympics.

A) Understanding Screening

In the United States, the legal requirement for the screening of passengers is contained in 49 USC § 44901, and implemented by regulation 49 CFR § 1544.201 (b):

(b) Screening of individuals and accessible property.

Except as provided in its security program, each aircraft operator must ensure that each individual entering a sterile area at each preboard screening checkpoint for which it is responsible, and all accessible property under that individual's control, are inspected for weapons, explosives, and incendiaries as provided in §1544.207. [emphasis added]

The 'sterile area' is the post-screening area and is considered to be free from any prohibited items that could constitute a threat to aviation security. Except for authorized persons¹³¹³ there are only two ways to gain entrance to an airport's sterile area:

- 1) Pass through the screening point at that airport; or
- 2) Arrive on a flight from an airport with similar screening procedures.

The second condition is essential to the operation of major hubs such as Dallas-Fort Worth,¹³¹⁴ where over a 90-minute block on an average day, 90 American Airlines flights carrying thousands of passengers¹³¹⁵ depart for dozens of destinations in the United States and the Bahamas, Mexico, Jamaica and Japan.¹³¹⁶ Those flights are 'fed' by a similar bank of flights arriving from all over the United States as well as Canada and if all of these arriving passenger needed to pass through a screening point prior to boarding the connecting flight, the hub operation would not be possible.¹³¹⁷ Thus hubs have to operate on the basis that all arriving passengers have been screened to similar standards. In this example, all of the American passengers will have been screened according to TSA standards at the US airport from which

¹³¹³ These are airport/airline employees and are often subject to a criminal background check before being granted access to the terminal's sterile areas or the airport's tarmac. In 2006, Canada pioneered the biometric-enabled Restricted Area Identity Card to grant access as necessary to airport personnel at Canada's 28 major airports. See Canadian Air Transport Security Authority, "Restricted Area Identify Card, About Us", online: CATSA <www.catsa.gc.ca/restricted-area-identity-card-raic>. Australia's Aviation Security Identification Cards are similar. See Austrl, Department of Infrastructure and Regional Development, "Aviation Security Identification Cards (ASICs)", online: Australian Government Department of Infrastructure and Regional Development, <www.infrastructure.gov.au/transport/security/aviation/asi/asics.aspx> (visited May 20, 2014).

¹³¹⁴ Most US domestic hubs, including Atlanta, Chicago O'Hare, Denver, Detroit and Houston, have 'banks' of flights.

¹³¹⁵ These 90 flights on an average day offer a total of nearly 9,400 seats.

¹³¹⁶ Based American Airlines departures from DFW between 8:40 A.M. and 10:10 A.M. weekdays in July 2013. See OWT 713, *supra* note 645.

¹³¹⁷ Most US carriers allow a "domestic" connection (one that does not require customs or immigration processing) in as little as 30 minutes. This would not be possible if passengers had to be screened again.

they departed and even passengers arriving from Canada on a pre-cleared flight¹³¹⁸ will have been screened in Canada to TSA standards, including the removal of footwear.¹³¹⁹

Around the world, there is no assumption that arriving passengers have been screened to a common standard and practices vary. Rarely is an arriving international passenger in transit¹³²⁰ allowed to board a departing international flight without being subject to security screening. Certain airports, such as Hong Kong¹³²¹ screen arriving 'transit' passengers before allowing them to enter a sterile transit area. Other airports may allow the passenger to directly enter a non-sterile transit zone with screening facilities provided at the gate of the departing flight. This suggests aviation security officials generally do not place their trust in the screening procedure and practices of other countries.

Although many international hub airports have large transit areas where arriving international passengers may wait for connecting flights without clearing the border control procedures necessary to enter the country, the implementation of this concept in North America is not widespread. This is principally due to immigration and security concerns but the airports of Montreal, Vancouver and Toronto¹³²² are beginning to implement rudimentary versions of this as a result of modifications to Section 11.4 of the Customs Act¹³²³ giving Customs Officers the power to search the bags of someone leaving a Customs Controlled Area. As a result of this change, and negotiations with the United States, a passenger traveling from Tel Aviv to Chicago via Toronto does not have to clear Canada Border Services Agency (CBSA) procedures upon arrival at Toronto, but may proceed directly to US Customs and Border Patrol. This is a significant development and may assist Air Canada in garnering a greater share of US-Europe

¹³¹⁸ Pre-cleared flights operated from airports where the US Customs and Border Patrol has designated officers. See US, Customs and Border Patrol, "Preclearance Locations", online: US Customs and Border Patrol <www.cbp.gov/xp/cgov/toolbox/contacts/preclean_locations.xml>.

¹³¹⁹ At every Canadian airport with US pre-clearance, the CATSA screeners in the US departure zone ask travelers to remove their footwear in accordance with US regulations. CATSA screeners working in the domestic or international departure zones do not follow this policy.

¹³²⁰ The document check ensures that the arriving passenger has the necessary documentation for onward travel.

¹³²¹ Hong Kong International Airport (Chek Lap Kok) screens arriving passengers. Paris Charles de Gaulle has similar procedures.

¹³²² See also Air Canada, "Connecting at Toronto Pearson International Airport", online: Air Canada <www.aircanada.com/en/travelinfo/airport/images/yyz.pdf> (visited May 20, 2014).

¹³²³ *Customs Act*, *supra* note 118. The modifications were made in 2009. See S.C. 2009, c. 10, s. 3.

market.¹³²⁴ Similarly, a passenger travelling from Mexico to London via Toronto is not required to clear CBSA procedures between flights.

B) Where is screening done?

In achieving common screening standards, it does not really matter where, in the process, the passengers are screened. They could be screened upon entering the airport concourse,¹³²⁵ or at the departure lounge immediately prior to boarding the aircraft,¹³²⁶ or even upon arrival at a hub airport for travelers who have travelled on a non-sterile flight from a small regional airport.¹³²⁷

Prior to September 11, the latter was the practice at Canada's regional airports,¹³²⁸ but this practice has changed. In February 2002, during the debate on the creation and funding of the Canadian Air Transport Security Authority¹³²⁹ (CATSA), some Members of Parliament suggested screening might not be required of tiny airports¹³³⁰ or those without commercial air service.¹³³¹ Canada's government rejected their suggestions.¹³³² In the United States a similar logic applies. The airport for the tiny town of Ely, Nevada,¹³³³ served only 227 passengers in

¹³²⁴ Calin Rovinescu, Address (Presentation delivered at the Canadian Club of Montreal: Air Canada's Renewed Partnership with Montreal, Montreal, 15 March 2010) at 20 [unpublished].

¹³²⁵ In most large airports, the sterile area includes shops and restaurants as well as access to the boarding lounges.

¹³²⁶ See Changi Airport Singapore, "Travel Tips For Departure", online: Changi Airport <www.changiairport.com/passenger-guide/safety-and-security/travel-tips-for-departure>. This allows non-passengers to access the shops.

¹³²⁷ Thus Australia's very small regional airports had no screening. Australia categorized its airports and will now implement various levels of screening based on different factors. See Australian Government, Department of Infrastructure and Transport, "Regional Screening" (on file with author).

¹³²⁸ Ms. Margaret Bloodworth (Deputy Minister of Transport) testifying before the House of Commons Standing Committee on Transport and Government Operations during that committee's Study of Airline Security & Safety on October 4, 2001. See Statement of Ms. Margaret Bloodworth (Deputy Minister of Transport) at House of Commons, Standing Committee on Transport and Government Operations, *Evidence*, 37th Parl, 1st Sess, Hansard (4 October 2001), online: Parliament of Canada <www.parl.gc.ca/HousePublications/Publication.aspx?DocId=1040972&Language=E&Mode=1&Parl=41&Ses=1> (visited May 17, 2014). Comments are at 10:35.

¹³²⁹ *Canadian Air Transport Security Authority Act*, SC 2002, c 9, s 2.

¹³³⁰ Ken Epp, MP, proposed exempting tiny Kuujuaq and later Lourdes-de Blanc-Sablon from screening requirements. See Statement of Mr. Ken Epp, *supra* note 1131. Comments are at 15:40.

¹³³¹ Ken Epp, MP, also proposed exempting Miramichi, New Brunswick, from CASTA authority on the ground that the airport had no commercial air service. See *ibid*. Comments are at 15:45. See also comments by Mr. Scott Brison, MP

¹³³² Australia bases screening on a number of factors including the Maximum Take-Off Weight of the aircraft. See Austl, Commonwealth, *Flight Path to the Future: National Aviation Policy* (White Paper) (Canberra: Department of Infrastructure, Transport, Regional Development and Local Government, 2009) at 138–140, online: Australian Government Department of Infrastructure and Regional Development <www.infrastructure.gov.au/aviation/publications/pdf/Aviation_White_Paper_final.pdf>.

¹³³³ Ely's population was 4,255 in 2010. See online: US Census Bureau, "NV - Nevada, 2010 Demographic Profile, 2010 Population Finder", online: US Census Bureau <www.census.gov/popfinder/?s=32> (visited May 20, 2014).

2010¹³³⁴ and the TSA screened all of them.¹³³⁵ Thus, both Canada and the United States are applying a common standard: every passenger, no matter where she boards a flight, is subject to security screening. Once screened, the passenger is in the system and does not need to be re-screened at a connecting airport. It has been observed:

[W]ithout pre-board screening at [tiny] airports, a passenger who's getting a connecting flight would then have to deplane, claim his or her luggage, and go through the [screening] process.¹³³⁶

This approach presupposes a common screening standard. In other words, the techniques and technology used to screen the passenger boarding a 19-passenger Beechcraft 1900 in Ely, Nevada, have to be similar to those used to screen a Chicago O'Hare passenger boarding a wide-body flight to Europe.¹³³⁷ This is the only way both passengers can be assured of being able to connect to any destination without being subject to further screening, either in person or through secondary screening unknown to them.¹³³⁸ This is necessary as the sterile area of any major hub airport is only as secure as the weakest security screening checkpoint at the small regional airports that feed the hub. In the words of one expert:

The aviation screening system in the United States ... operates using a single gateway concept, meaning that passengers are typically only screened once at their originating airport. Terrorists may exploit knowledge that smaller airports may not have the same level of advanced checkpoint technologies as larger airports to try to minimize detection.¹³³⁹

Thus, unless governments are prepared to deploy the latest baggage and passenger screening technologies at tiny rural airports, it would probably be wise to subject their passengers to the appropriate screening procedures at a large airport before considering them as having been properly screened. Unless such a standard is adopted both domestically and internationally, passengers will be re-screened in every country in which they make a connecting flight.

¹³³⁴ See "Taxpayers are paying" *supra* note 261.

¹³³⁵ TSA, "Job Posting Transportation Security Officer Ely Nevada" (8 July 2011), (on file with author).

¹³³⁶ Bryon Wilfert, MP, justified having security at tiny airports. See Statement of Mr. Ken Epp, *supra* note 1131. See comments of Bryon Wilfert, MP, at 15:45.

¹³³⁷ At Chicago O'Hare, originating passengers proceed through common security checkpoints, and intercontinental flights depart beside domestic ones. Thus on June 11, 2012, United Flight 972 to Brussels departed from gate C11, right between two domestic flights to Boston (C9) and Houston (C15) that were departing at around the same time, 18:00hrs. Of course, the documents of international passengers are checked at the gate.

¹³³⁸ In the US, passengers' luggage is subject to electronic baggage-screening system, such as GE's CTX 5500 DS system, a TSA-certified explosives detection system that costs US\$ 1 million (US) each.

¹³³⁹ Bart Elias, *Airport Passenger Screening: Background and Issues for Congress* (Washington, DC: Congressional Research Service, 2009) at 34, online: Federation of American Scientists <www.fas.org/sgp/crs/homsec/R40543.pdf> (visited May 19, 2014).

C) Who is screened?

Aviation security experts divide passengers into three groups: (1) the known 'bad' people who belong on a No-Fly list; (2) the known 'good' people, such as air marshals, certain dignitaries,¹³⁴⁰ non-threatening persons,¹³⁴¹ and authorized airport and airline employees, and (3) the 'unknown', meaning the average traveler. Given that just eight million people account for roughly 50% of the 600 million trips made each year in the United States, it is not surprising that the ATSA authorizes the Transportation Security Administration (TSA) to:

Establish requirements to implement trusted passenger programs and use available technologies to expedite the security screening of passengers who participate in such programs, thereby allowing security screening personnel to focus on those passengers who should be subject to more extensive screening.¹³⁴²

Pursuant to this authority, the TSA developed a "Registered Traveler" (RT) scheme under which successful applicants, after the vetting of comprehensive personal data, would be entitled to take advantage of expedited screening processes. In July 2004, the TSA launched a pilot RT program at 5 airports.¹³⁴³ The pilot was to lapse in September 2005, but strong consumer demand encouraged further trials. In 2006, 19 airports¹³⁴⁴ were selected for a 2-year pilot.¹³⁴⁵ The pilot suffered a major set-back in July 2008 when a laptop containing the data of an RT member disappeared.¹³⁴⁶

¹³⁴⁰ Persons such as the Dalai Lama, the Duke and Duchess of Kent, and Prime Minister Gordon Brown, who used to fly British Airways as a passenger when on official government business, may not always be subject to screening.

¹³⁴¹ The TSA has now decided that persons over age 75 and under age 12 pose less of a security threat than the average person and has allowed them slightly relaxed screening procedures. See US Transportation Security Administration, Press Release, "TSA Shares Tips to Streamline Summer Travel" (25 May 2012), online: www.tsa.gov/press/releases/2012/05/25/tsa-shares-tips-streamline-summer-travel (visited May 20, 2014).

¹³⁴² *Aviation and Transportation Security Act*, *supra* note 81 s 109(a)3.

¹³⁴³ The 5 airports were Boston, Houston, Los Angeles, Minneapolis and Washington Reagan. See also *Registered Traveler Interoperability Pilot Program*, 73 Fed Reg 44275 (2008).

¹³⁴⁴ They used a private sector service provider. See "Clear Statement on Its Selection as Provider for Registered Traveler Program at Atlanta Airport", *PR Newswire* (12 May 2008), online: www.prnewswire.com/news-releases/clear-statement-on-its-selection-as-provider-for-registered-traveler-program-at-atlanta-airport-57236457.html.

¹³⁴⁵ See *Intent To Request Renewal From OMB of One Current Public Collection of Information: Registered Traveler Pilot (RT) Pilot Program; Satisfaction and Effectiveness Measurement Data Collection Instruments*, 71 Fed Reg 40731 (2006).

¹³⁴⁶ The laptop, protected by two levels of password protection, contained the names, addresses, birth dates, driver's license numbers, and passport information of RT members, and was reported stolen from a secured room at San Francisco International Airport. It was found in the same room on August 5, 2008.

Forty months later, in November 2011, the process was re-started and introduced as TSA Pre✓.¹³⁴⁷ The plan was limited to US citizens and welcomed frequent flyers from designated US carriers and CBP Trusted travelers such as NEXUS card holders.¹³⁴⁸ In the best case scenario, 'Trusted Travelers' would be able to go through a special screening lane and not have to remove shoes, belt, a light jacket from their person or remove a laptop or liquids and gels from their carry-on luggage.¹³⁴⁹ But 'Trusted travelers' were not guaranteed expedited screening and on other days might find themselves having to be screened like any other passenger. In order to be offered the chance to avoid the normal screening process and qualify as a 'Trusted Traveller', a person must submit to an interview and provide significant personal information including work history, addresses, fingerprint and iris scan, which is then screened through various government security databases.

Other countries, such as Canada, offer a similar program,¹³⁵⁰ but the only perceptible advantage is shorter wait times in a dedicated line.

D) How Important is Screening?

Each new terrorist incident or technological marvel foists new nightmares on the travelling public, but just as the frog does not notice the water boiling around him, for most travelers the changes to aviation security are incremental and thus there is no revolt.¹³⁵¹ Thus few passengers, when requested to walk through an AIT scanner, would ask if an AIT can find drugs within a person's body,¹³⁵² or why they must empty their pockets and remove their belts and shoes before walking through the scanner if the AIT technology is really as powerful as advertised.

One expert in aviation security wrote:

¹³⁴⁷ See *Securing Our Nation's*, *supra* note 1011 at 10 (Hon John S Pistole, Administrator, TSA).

¹³⁴⁸ Transportation Security Administration, "TSA Precheck", online: Transportation Security Administration <www.tsa.gov/tsa-precheck/faqs> . Canadian citizens who are members of NEXUS are now eligible for Precheck.
¹³⁴⁹ Transportation Security Administration, "What Does TSA Precheck mean for travelers?", online: Transportation Security Administration <www.tsa.gov/tsa-precheck/what-tsa-precheck> (visited May 24, 2014).

¹³⁵⁰ CATSA offers these benefits to NEXUS card holders. See Canadian Air Transport Security Authority, "Traveller CATSA Security Line", online: Canadian Air Transport Security Authority <www.catsa.gc.ca/sites/default/files/imce/TrustedTravellerLine.pdf> (visited May 24, 2014).

¹³⁵¹ However, recently in Portland and Denver passengers have stripped naked in protest against TSA procedures. See Gareth Dorrian, "Business or pleasure, sir? Plane passenger strips naked at Portland airport in protest at security searches", *Daily Mail* (18 April 2012), online: Mail Online <www.dailymail.co.uk/news/article-2131456/Naked-man-Portland-airport.html> (visited May 19, 2014).

¹³⁵² Indeed, the US government has donated AIT scanners to Nigeria for drug interdiction work. See United States Diplomatic Mission to Nigeria, "US Government Donates Body Scanners To Nigerian Drug Law Enforcement Agency" (27 March 2008), online: United States Diplomatic Mission to Nigeria <nigeria.usembassy.gov/prog_03272008.html> (visited May 20, 2014).

The crux of the problem ... is our wrongheaded approach to risk. In attempting to eliminate all risk from flying, we have made air travel an unending nightmare for US passengers and visitors from overseas, while ... creating a security system that is brittle where it needs to be supple.¹³⁵³

In most countries, airport screening is almost completely focused on eliminating prohibited items, and the media reports gleefully when relatively innocent items are overlooked.¹³⁵⁴ Before 9/11, knitting needles posed no threat to aviation security. However, today's prohibited items include not only the needles but also nail clippers and juice boxes, and their confiscation does not necessarily make us more secure.¹³⁵⁵ This fixation with 'prohibited items' serves as a tremendous distraction from the real task, the deterrence of terrorists and hijackers, and this is illustrated by an incident where an armed hijacker ran through an airport screening checkpoint and right into the cockpit of a foreign airline's jet.¹³⁵⁶ Fortunately, the airport security screening point is not the only barrier between potential terrorists and their mission.

VII) AVIATION SECURITY AS AN ONION

In a 2003 presentation to Interpol, Jacques Duchesneau, then CEO of CATSA, described aviation security as an onion and identified 10 layers.¹³⁵⁷ Security intelligence fed into all of the layers and seven of these focused on airline security: registration area and document check; security screening point; airport sterile area; boarding gate; air marshals; fellow passengers; freight and luggage screening. Another three layers focused on airport security: airport perimeter; airfield; and police presence at airport. America's TSA identifies "20 layers of security"¹³⁵⁸ while Australia sees just six.¹³⁵⁹ However, the fundamental elements are the same everywhere. Thus even though, in contrast to the United States, neither the Canadian nor the Australian models

¹³⁵³ Kip Hawley, "Why Airport Security is Broken – And How to Fix it", *The Wall Street Journal* (15 April 2012), online: Wall Street Journal <online.wsj.com/article/SB10001424052702303815404577335783535660546.html> (visited May 20, 2014). Mr. Hawley is former head of the Transportation Security Administration.

¹³⁵⁴ See Laura Hibbard, "Girl Claims She Got Knife Past Airport Security, Takes Pictures Of It On Plane", *The Huffington Post* (27 March 2012), online: The Huffington Post <www.huffingtonpost.com/2012/03/27/girl-gets-knife-past-airport-security_n_1383346.html> (visited May 20, 2014).

¹³⁵⁵ Paul Seidenstat & Francis X Splane, *Protecting Airline Passengers in the Age of Terrorism* (Santa Barbara, Cal: Praeger Security International, 2009) at 113.

¹³⁵⁶ In April 2009, a lone armed man attempted to hijack a Canjet Boeing 737 from Montego Bay, Jamaica. See Janet Silvera, "Never again - Golding orders hijacking probe - Government of Jamaica tackles airport security", *The [Jamaica] Gleaner* (21 April 2009), online: The Gleaner <jamaica-gleaner.com/gleaner/20090421/lead/lead1.html>.

¹³⁵⁷ Jacques Duchesneau, "Air Transport Security" (Presentation delivered at the 72nd Interpol General Assembly Session, Madrid, 1 October 2003), slide 23 [unpublished].

¹³⁵⁸ US, Government Accountability Office, *Efforts to Validate TSA's Passenger Screening Behavior Detection Program Underway, but Opportunities Exist to Strengthen Validation and Address Operational Challenges* (GAO-10-763) (2010) at 9.

¹³⁵⁹ See *Flight Path to the Future*, *supra* note 1332 at 137.

explicitly recognize 'hardened cockpit door' as a distinct layer, this feature is common to the aviation security policies of all three countries. Various members of the European Union likewise have recognized and implemented many layers of security. Thus, for example, the UK thinks of modernizing aviation security in these terms:

Modernising the regulatory regime for aviation security forms part of a cross-departmental approach to improving aviation security.... Effective aviation security regulations complement the wider border security role of the UK Border Agency and ports policing operations which, for example through passenger screening, contribute to aviation security, to driving up security standards and to improving passengers' experience.¹³⁶⁰

Having various layers of security is important so that the failure of one layer does not facilitate a terrorist incident. Information and courage, for example, thwarted a terrorist attempt on September 11, 2001.¹³⁶¹ Intelligence foiled the August 10, 2006, plot to blow up planes departing London Heathrow.¹³⁶² Air marshals foiled the attempted hijacking of an Egyptian airliner in 1985,¹³⁶³ and again in 2009,¹³⁶⁴ and killed two hijackers of an Ethiopian Airlines flight in 2002;¹³⁶⁵ air marshals also shot a man attempting to retrieve a 'bomb' from his carry-on in 2005.¹³⁶⁶ Passengers overcame the 'Shoebomber' in 2001,¹³⁶⁷ a would-be hijacker on a Turkish jet in 2008,¹³⁶⁸ the Christmas Day Bomber in 2009,¹³⁶⁹ and subdued an erratic Captain of a

¹³⁶⁰ See UK, Department for Transport, *Better Regulation for Aviation Security Consultation Document* (Consultation Document) (London: Department for Transport, 2011) at 5, online: GOV.UK <www.gov.uk/government/uploads/system/uploads/attachment_data/file/2593/dft-2011-21-consultation.pdf>.

¹³⁶¹ On September 11, 2001, the passengers of United Flight 93 thwarted the terrorists' plan to fly the Boeing 757 into a target after being informed that two aircraft had been crashed into the World Trade Center. See March 1, 2006 "Stipulation" between the prosecution and the defense in *United States v Moussaoui* (ED Va 2006), Criminal No 01-455-A, at 9-12, online: US District Court Eastern District of Virginia <www.vaed.uscourts.gov/notablecases/moussaoui/exhibits/prosecution/ST00001A.pdf>.

¹³⁶² A British undercover agent informed on the gang's activities.

¹³⁶³ An Egyptian air marshal shot and seriously wounded a terrorist on Egypt Air Flight 648 from Athens to Cairo on November 23, 1985. That flight actually carried four air marshals. See Adam Dolnik & Keith M Fitzgerald, *Negotiating Hostage Crises with the New Terrorists* (Westport, Conn: Praeger Security International, 2008) at 34.

¹³⁶⁴ On October 21, 2009, two Egyptian air marshals overpowered a hijacker who had threatened a flight attendant with a knife. See online: HdDASN <aviation-safety.net/database/record.php?id=20091021-1>.

¹³⁶⁵ In June 2002, in-flight security personnel shot two hijackers who managed to bring a model explosive and two small knives on board an Ethiopian Airlines domestic flight. Online: HdDASN <aviation-safety.net/database/record.php?id=20020609-0>.

¹³⁶⁶ See "7 December 2005; American Airlines 757; Miami, FL", online: AirSafe.com <www.airsafe.com/events/fatal05.htm> (visited May 20, 2014).

¹³⁶⁷ On December 21, 2001, the attempted destruction of American Flight 63 by the 'Shoebomber' Richard Reid was foiled when other passenger subdued him. See Affidavit of Margaret G Cronin, Criminal Complaint, *United States v Reid*, (Mass Dist Ct 2001), online: Federation of American Scientists <www.fas.org/irp/news/2002/01/reidcomplaint.pdf>.

¹³⁶⁸ Adrian Blomfield, "Passengers overcome hijacker on Turkish Airlines flight", *The Telegraph* (15 October 2008), online: The Telegraph <www.telegraph.co.uk/news/worldnews/europe/russia/3203377/Passengers-overcome-hijacker-on-Turkish-Airlines-flight.html> (visited May 19, 2014).

JetBlue flight in 2012.¹³⁷⁰ Passengers and crew foiled a Qantas hijacking in 2003,¹³⁷¹ and crew overpowered a hijacker planning to ignite gasoline in 2003.¹³⁷² Police intervened to arrest hijackers in 2003,¹³⁷³ and duped a hijacker in 2005.¹³⁷⁴ These examples give us reason to believe the security layers are working. There were some 38 million flights in 2011,¹³⁷⁵ and there has not been a passenger death related to a hijacking since 2002.¹³⁷⁶

A) The reactive nature of Aviation security

In April 2012, Kip Hawley, former head of the TSA wrote:

Looking at [our airport security system], each measure has a reason—and each one provides some security value. But taken together they tell the story of an agency that, while effective at stopping anticipated threats, is too reactive and always finds itself fighting the last war.¹³⁷⁷

The European Union agrees:

Every change in law, every new task tends to add additional layers of measures – and every citizen travelling by air experiences their effects. Therefore, it is a valid question whether adding new security layers after every incident is an effective means to improve aviation security.

Indeed, adding new layers of methods and technologies after each incident proves more and more inefficient. Security checkpoints become overburdened with new equipment and the operation of newly developed security tasks.¹³⁷⁸

¹³⁶⁹ See Wayne County Airports Police Division of Airports, Case 12467, "Statement of Jasper Shuringa" (25 December 2009).

¹³⁷⁰ "Berserk' JetBlue pilot 'ranted about Jesus, 9/11, Iraq, Iran and terrorists and sins of Vegas during bizarre sermon in cockpit'", *Daily Mail* (27 March 2012) online: Mail Online <www.dailymail.co.uk/news/article-2121240/JetBlue-pilot-Clayton-Osbon-restrained-PASSENGERS-going-berserk-mid-flight.html>.

¹³⁷¹ Padraic Murphy & Phillip Hudson, "Heroes foil Qantas hijack attack", *The Age* (30 May 2003) online: The Age <www.theage.com.au/articles/2003/05/29/1054177673194.html> (visited May 20, 2014).

¹³⁷² On February 2, 2003, a hijacker sprinkled gasoline and tried to light it on Air China Flight 1505 before being overpowered by crew members. See online: HdDASN <aviation-safety.net/database/record.php?id=20030202-0> (visited May 20, 2014).

¹³⁷³ In January 2003, rapid intervention by police resulted in a hijacker's arrests moments after landing in Algiers. See online: HdDASN <aviation-safety.net/database/record.php?id=20030119-2> (visited May 20, 2014).

¹³⁷⁴ In July 2004, two Chinese plainclothes police who had been sent to negotiate with a hijacker, managed to arrest him. See online: HdDASN <aviation-safety.net/database/record.php?id=20040726-0> (visited May 20, 2014).

¹³⁷⁵ "Commercial Aviation Safer Than Ever in 2011", *BNO News* (7 March 2012), online: NYC Aviation <www.nycaviation.com/2012/03/commercial-aviation-safer-than-ever-in-2011/> (visited May 20, 2014).

¹³⁷⁶ There were two deaths in each of 2002 and 2012; all of them were hijackers. See online: Aviation Safety Network <aviation-safety.net/statistics/period/stats.php?cat=H2>. See also supra note 1365. In June 2012, two of six hijackers on Tianjin Airlines domestic flight were fatally injured when passengers and crew foiled their plans. Online: HdDASN <aviation-safety.net/database/record.php?id=20120629-0>. The statement was true as of May 22, 2014.

¹³⁷⁷ Hawley, *supra* note 1353.

¹³⁷⁸ EC, *Communication from the Commission to the European Parliament and the Council on the Use of Security Scanners at EU airports*, (Brussels: EC, 2010) COM(2010) 311 final, at 1–20, online: EUR-Lex <eur-lex.europa.eu/resource.html?uri=cellar:2709db86-2d46-404b-882d-84069cb47718.0020.03/DOC_1&format=PDF>.

This chapter has illustrated the frenetic pace of activity that followed both the 1970 Dawson's Field Hijackings and the terrorist incidents of September 11, 2001. However, further changes were made after the Shoenbomber and the Christmas Day Bomber (CDB) incidents. Virtually every terrorist incident has been followed by new laws and policies; in 1985, following the hijacking of TWA Flight 847, "in one 5-day period at least 10 measures were proposed in the House and Senate to improve airport security and prevent further acts of terrorism against Americans."¹³⁷⁹ Thus security measures that would have deterred the last incident are added to the security measures that would have deterred the second-last incident and so forth. Rarely is it asked whether the correct implementation of existing security measures could have averted the incident.

Thus, the 2009 CDB incident was not treated as an illustration of how the "intelligence community failed to connect ... dots",¹³⁸⁰ but as a chance to sell body scanners.¹³⁸¹ Similarly, the horrific events of September 11 were not treated as a chance to examine why no larger aircraft was hijacked from JFK, but rather as a chance to create a bureaucracy.¹³⁸² Rather than continuing to add more layers of security, it is important to determine to what extent current layers of security are working or needed, and to conduct an objective cost-benefit analysis of any proposed new measures.

B) The Motivations of Hijackings

Any system designed to deter a particular type of activity should be based on an understanding of motivating factors. A review of recent scholarly writing on aviation security suggests there are five categories of persons who threaten commercial aviation:¹³⁸³

¹³⁷⁹ Boyd & Crenshaw, *supra* note 1002 at 176, 182.

¹³⁸⁰ The White House, Press Release, "Remarks by the President on Security Reviews" (5 January 2010), online: The White House <www.whitehouse.gov/the-press-office/remarks-president-security-reviews> (visited May 20, 2014).

¹³⁸¹ See Michael Chertoff, "Former homeland security chief argues for whole-body imaging", *The Washington Post* (1 January 2010), online: The Washington Post <www.washingtonpost.com/wp-dyn/content/article/2009/12/31/AR2009123101746.html> (visited May 18, 2014). In fact, Rapiscan Systems, was Chertoff's firm's client and AIT firms had spent US\$ 4.5 million lobbying Congress in the first 9 months of 2010. See Fredreka Schouten, "Body scanner makers doubled lobbying cash over 5 years", *USA Today* (23 November 2010), online: USA Today <www.usatoday.com/news/washington/2010-11-22-scanner-lobby_N.htm>.

¹³⁸² See generally Verkuil, *supra* note 1128. See also above, *September 11, 2001: the un-asked Question*.

¹³⁸³ This classification is based on ideas found in the following works: Feakin, *supra* note 1038 at 2–4; Charles E Martin, *Air Piracy and Terrorism Directed Against US Air Carriers* (Study Project, US Army War College, Carlisle, Pa, 1993) at 2–3 [unpublished], online: Defense Technical Information Center <www.dtic.mil/dtic/tr/fulltext/u2/a264120.pdf> Dempsey, "Aviation Security", *supra* note 1047 at 653. For insight into

1. Persons seeking air service to an unserved destination. This included travel between the US and Cuba,¹³⁸⁴ across the Iron Curtain,¹³⁸⁵ and fleeing an oppressive regime.¹³⁸⁶
2. People wishing to blow up an aircraft in order to collect an insurance payment,¹³⁸⁷ assassinate someone,¹³⁸⁸ hinder prosecution¹³⁸⁹ or for political reasons.¹³⁹⁰
3. Persons using the aircraft and contents as a hostage for ransom. While D. B. Cooper is perhaps the most famous person in this category, few remember Paul Joseph Cini, who hijacked an Air Canada DC-8 *en route* from Vancouver to Toronto via Calgary to Great Falls Montana and demanded US\$ 1.5 million in cash.¹³⁹¹
4. Persons wishing to use the aircraft and its occupants as a political bargaining chip. The Japanese Red Army hijacked Japan Airlines Flight 472 in September 1977 and successfully bargained for the release of six of their comrades.¹³⁹² The PFLP have

the psychology of the first two types of hijackers, see David G Hubbard, *The Skyjacker: His Flights of Fantasy* (New York: Macmillan, 1971).

¹³⁸⁴ US-Cuba hijackings declined in February 1973 following a Swedish-brokered agreement between the US and Cuba to either imprison or extradite hijackers. See Laura Dugan, Gary LaFree & Alex R Piquero, "Testing a Rational Choice Model of Airline Hijackings" (2005) 43:4 *Criminol* 1031 at 1043 (Wiley).

¹³⁸⁵ There are few reports of these crossings. In March 1988, a family from Irkutsk hijacked an Aeroflot plane to London. During a fuel stop in St. Petersburg, Russian troops stormed the aircraft. See online: HdASN <aviation-safety.net/database/record.php?id=19880308-0>.

¹³⁸⁶ In February 2000, persons fleeing the Taliban in Afghanistan hijacked a plane to London. Many received asylum. See US, Department of Transportation, Transportation Security Administration, *Criminal Acts Against Civil Aviation: 2001* (Washington, DC: US Department of Transportation, Transportation Security Administration, 2001) at 45, online: Federal Depository Library Program Electronic Collection <permanent.access.gpo.gov/lps24610/2001/criminal_acts.pdf> (visited May 20, 2014).

¹³⁸⁷ There were many attempts to blown up planes in order to kill insured relatives in the 1950s. See Andrew J Field, *Mainliner Denver: The Bombing of Flight 629* (Boulder: Johnson Books, 2005) at 28-30.

¹³⁸⁸ In April 1955, an Air India plane was blown up in an attempt to kill Chinese Premier Zhou Enlai, who secretly changed his travel plans at the last minute. See *ibid* at 30.

¹³⁸⁹ Pablo Escobar masterminded the bombing of Avianca Flight 203 in 1989 allegedly to kill potential informants. See Robert D McFadden, "Drug Trafficker Convicted Of Blowing Up Jetliner", *The New York Times* (20 December 1994), online: The New York Times <www.nytimes.com/1994/12/20/nyregion/drug-trafficker-convicted-of-blowing-up-jetliner.html>. An alternative motive is allegedly an attempt to kill Presidential candidate César Gaviria Trujillo, who changed travel plans at the last minute. See Mark Bowden, *Killing Pablo: The Hunt for the World's Greatest Outlaw*, 1st ed (New York: Penguin Books, 2001) at 80.

¹³⁹⁰ On November 29, 1987, two North Korean agents placed a bomb on Korean Airlines Flight 858 in an effort to destabilize South Korea. See Peter Maass, "Woman Says She Sabotaged Plane On Orders From N. Korean Leader", *The Washington Post* (15 January 1988) a26 (ProQuest).

¹³⁹¹ The flight was Air Canada Flight 808 on November 12, 1971. Cini was subdued by the crew and arrested. See David Varnes, "A Brief History (and Rant) on Airline Hijacking", *The Snag Sheet* (November 2009) 2 at 2-3, online: Canadian Airways Lodge 764 <www.iam764.ca/upload/2009/Nov2009SnagSheet3.pdf>. Flight attendant Mary Dohey was awarded the Cross of Valour by the Government of Canada for her conduct during the incident.

¹³⁹² The Japanese government actually chartered a plane to deliver the ransom money, reputedly US\$ 6 million. See Mark Schreiber, *Shocking Crimes of Postwar Japan*, 1st ed (Tokyo: Yenbooks, 1996) at 216 – 217.

hijacked several aircraft including Air France Flight 139 (Entebbe)¹³⁹³ and Lufthansa Flight 181 (Mogadishu).¹³⁹⁴

5. People wishing to use the aircraft as a weapon. September 11, 2001, is a prime example of this strategy but this was not the first time¹³⁹⁵ such an idea had been considered.

There is now limited air service between the US and Cuba¹³⁹⁶ and modern forensics are very good at finding the cause of an aircraft explosion. Thus, the number of hijackings motivated by factors 1 or 2 above has declined in recent years. Metal detectors, the possibility of lengthy jail terms and the low probability of success have eliminated all hijackings motivated by factor 3 and most motivated by factor 4. Only the fifth motivation seems unrestrained by technology or law because a fundamental distinction must be drawn between the first four categories and the fifth. Hijackers in the fifth category are prepared to sacrifice their lives in order to achieve their mission, rather like the famed Kamikaze pilots of World War II.¹³⁹⁷ If one is prepared to die for the cause, neither jail sentences nor post-incident legal liability are likely to serve as effective deterrents.

The other distinction between the first four motivations and the fifth is that the latter is the only category where there is a strong probability of targeted ground damage;¹³⁹⁸ in the other cases the damage is limited to the aircraft and its occupants/contents.

Regardless of the above-mentioned category in which the hijackers might be considered, the probability that they will achieve their objective has declined since 9/11. Quite simply, the many layers of aviation security from airport screeners to the aircraft's passengers and crew to law enforcement conspire against the successful outcome of a terrorist plot.

¹³⁹³ On June 27, 1976, Air France Flight 139, *en route* from Tel Aviv to Paris via Athens, was hijacked by 4 terrorists seeking the release of 40 Palestinians held in Israel and 13 other prisoners being held in Europe. See Yeshayahu Ben Porat, Eitan Haber & Zeev Schiff, *Entebbe Rescue* (New York: Delacorte Press, 1977).

¹³⁹⁴ Lufthansa Flight 181 was hijacked in October 1977 to Mogadishu by terrorists seeking US\$ 15 million in ransom and the release of 11 Red Army Faction terrorists from Germany prisons. See Ensalaco, *supra* note 1024 at 115.

¹³⁹⁵ See above, *Part III HISTORICAL UNDERPINNINGS OF AVIATION SECURITY*.

¹³⁹⁶ See Mimi Whitefield, "Cuba charter business consolidates in Florida", *Miami Herald* (5 January 2014), online: Miami Herald <www.miamiherald.com/2014/01/05/3854256/cuba-charter-business-consolidates.html>.

¹³⁹⁷ For a better understanding of the salient motives of suicide bombers see JS Piven, "Psychological, Theological, and Thanatological Aspects of Suicidal Terrorism" (2007-2008) 39:3 Case W Res J Int'l L 731 (HeinOnline).

¹³⁹⁸ Most bomb makers try to destroy the aircraft over a body of water or an inaccessible area such as a desert in order to impede investigators. See *supra* note 966.

VIII) THE IMPACT OF AVIATION SECURITY ON AIRLINE COMPETITION

Assuming there is not a significant price difference, passengers clearly will prefer the convenience of an international route with the fewest transit airport screening points and passport checks. This is not just the case for persons travelling on business; it also applies to families with young children, travelers with special needs, persons who like to buy duty-free perfume or alcohol, and residents of countries that need visas to visit any of Australia, Canada, the European Union, New Zealand or the US. The explosive growth of GBMCs, such as Emirates, Etihad and Qatar Airways, stands as testimony that people in the Middle East, South Asia and South America prefer bypassing transit visa requirements and undesirable aviation security burdens. Global air travel is being reshaped, and as was demonstrated in Chapter 3, this growth is coming at the expense and the opposition of international carriers based in non-GBMC countries.

Historically, a passenger from a smaller EU city destined to Brisbane or Perth would fly first to a major hub, such as London or Frankfurt or Paris, connect to a non-stop flight to Bangkok or Singapore, and from there to Sydney or Melbourne, then finally to the passenger's destination. The trip required at least three stops and the passenger was subject to security screening and visa requirements at each one of them. Today, the GBMCs offer daily non-stop service from many smaller EU cities, such as Birmingham, Geneva and Venice, to their hubs, from where they offer non-stop service to Australian cities including both Brisbane and Perth. The passenger is not typically subject to security screening at the GBMC hub city unless s/he is changing carriers, and visas are not usually required as long as the passenger remains in the terminal.¹³⁹⁹ These one-stop EU-Australia services have negatively impacted the fortunes of EU carriers and Qantas.¹⁴⁰⁰

Passengers experience similar benefits on routes between South Asia and South America. A decade ago, a Sao Paulo-bound Kolkatan would have had to change planes in Delhi, London and New York, and would have been subjected to security screening in all three places and might have required both US and UK visas. Today, that same passenger is screened on departure from Kolkata and connects at Dubai without further screening or visa checks. As the non-stop flights

¹³⁹⁹ For example, a connecting passenger at Dubai, even if s/he misses a flight, is unlikely to spend significant time in the Dubai because Emirates offers multiple daily flights to many destinations in the EU, South Asia and Australia.

¹⁴⁰⁰ In 2009, Emirates (Dubai) and Etihad (Abu Dhabi) carried 15.6% and 3.3% respectively of EU-Australia traffic, up from 0% a decade earlier. In the same year, Qantas carried 31.9%. Qantas warned the Australian Consumer & Competition Commission (ACCC) that the "structural disadvantage of Qantas ... will increase as mid-point carriers [Emirates and Etihad] increase their scale and scope." See Qantas Airways Limited & British Airways plc, *Application for Revocation and Substitution: Restated Joint Services Agreement Submission to ACCC*, Public Register Version, (16 October 2009) at 22, Appendix E.

between Dubai and Brazil do not overfly the United States or the European Union, there is no requirement to check the passenger's name against a No-Fly list. While the avoidance of multiple security screenings, visa requirements and No-Fly checks are clearly not the only reason that a Sao Paulo-bound Kolkatan would travel via Dubai, these benefits cannot be ignored and may explain why an increasing number of people in South Asia and China are preferring to travel to South America are through a GBMC hub instead of via Europe or the US, or both.

Many airlines are opposed to granting more rights to GBMCs, arguing for the need for a 'level playing field.'¹⁴⁰¹ Although such a concept is multi-dimensional, the aviation security element cannot be excluded. Given that travelers on GBMCs have the possibility of fewer *en route* screenings, with fewer potential losses of liquids and gels, reduced visa requirements, and lower likelihood of being vetted against the US No-Fly list, the non-EU, non-US routes of the GBMCs are likely to grow at a dramatic pace. The distortive impact of aviation security on competition is not limited to competition with GBMCs. There is also reason to believe they may influence the choice of passenger as between US and EU carriers for international trips.¹⁴⁰² This constitutes a very genuine threat to the profitable long-haul operations of EU, North American and Australian, New Zealand carriers and must be addressed forthwith.

A) Time for a review

The risk of the future weaponization of a commercial aircraft was virtually eliminated at 9:57 A.M. on the morning of September 11, 2001, when the passengers of United Flight 93 attacked the cockpit after learning that other aircraft had been crashed into the World Trade Center.¹⁴⁰³ In virtually every jurisdiction, cockpit doors have been hardened¹⁴⁰⁴ since September 11 and regulations require the cockpit door to be locked at all times¹⁴⁰⁵ during flight. On many occasions, discussed earlier, would-be terrorists or hijackers have been foiled by other

¹⁴⁰¹ See generally Fred Lazar, "A Tale of Four Cities: Candaa and the UAE" (March 2011), especially at 62, online: Air Canada <www.aircanada.com/en/about/media/facts/documents/canada_uae_en.pdf> (visited May 14, 2014).

¹⁴⁰² A Denver passenger who flies Lufthansa to Frankfurt and then Paris and returns following the same routing has far fewer security hassles than a passenger who travels between Denver and Paris via Chicago on United.

¹⁴⁰³ See Jim Harper, testimony before the US House of Representatives Subcommittee on Economic Security, Infrastructure Protection, and Cybersecurity Committee on Homeland Security, "The Promise of Registered Traveler" (9 June 2005) online: CATO Institute <www.cato.org/publications/congressional-testimony/promise-registered-traveler> (visited May 20, 2014).

¹⁴⁰⁴ See Airbus, Press Release, "Airbus' high-security cockpit doors gain certification" (21 May 2002), online: Airbus <www.airbus.com/presscentre/pressreleases/press-release-detail/detail/airbusapos-high-security-cockpit-doors-gain-certification/> (visited May 20, 2014).

¹⁴⁰⁵ On the Airbus A380, most passengers are not aware of the cockpit location as it is not located near an entrance.

passengers, crew or air marshals. The flying public and the airline industry have progressed; even previously non-suspicious behavior may attract unwanted attention. In 2003, an Israeli who asked a pilot if he would be flying a particular flight was not allowed to board that flight.¹⁴⁰⁶

Thus, while aviation security has evolved dramatically since 2001, the efficiency or efficacy of certain measures adopted in the multiple layers that make up the aviation security regime may be questioned. For example, a former TSA Administrator, Kip Hawley, argues that aside from prohibiting obvious weapons, the 'prohibited items' list should be abolished.¹⁴⁰⁷ He contends that the aviation security system is often so busy fighting the last battle that it does not have the proper time to conduct the redesign that is so obviously necessary.¹⁴⁰⁸ For this reason, it is of concern that the ATSA does not contain sunset provisions or a clause requiring a statutory review at set intervals.

It is of perhaps greater concern that no major changes were made to CATSA after the recent mandate review. Article 33 of the Canadian Air Transport Security Authority Act¹⁴⁰⁹ requires that a "review of the provisions and the operation of this Act must be completed by the Minister during the fifth year after this section comes into force." The 2006 Review Panel Report noted "Advanced explosives detection equipment has been deployed in all 89 [Canadian] airports"¹⁴¹⁰ but omitted details. Six months earlier, a journalist had stated:

At some of our 89 major airports, checked luggage now goes through a CT scanner that delivers a 3-D image of the contents. That's a million dollar machine. Passenger screeners also have access to new, more powerful, X-ray machines. They can cost up to \$50,000. And anyone who's gone through security has seen carry-on bags being swabbed for trace amounts of explosives. The machine that analyzes the results goes for about \$70,000.¹⁴¹¹

The Review Panel argued that some of the 89 airports should be removed from the designated list¹⁴¹² and concluded that from a cost-benefit analysis, it is difficult to justify maintaining equivalent security screening technology at Toronto's Pearson International Airport and in

¹⁴⁰⁶ See Williams, *supra* note 1237 at 132–134.

¹⁴⁰⁷ Hawley, *supra* note 1353.

¹⁴⁰⁸ Kip Hawley talking with the Wall Street Journal's Jessica Vascellaro about his new book, "Permanent Emergency," in which he outlines why airport security needs to change. See Hawley, *supra* note 1353.

¹⁴⁰⁹ *Canadian Security Authority Act*, *supra* note 1329, s 33.

¹⁴¹⁰ Transport Canada, *Review of the Canadian Air Transport Security Authority Act: Flight Plan: Managing the Risks in Aviation Security: Report of the Advisory Panel* (Ottawa: Transport Canada, 2006) at 14 .

¹⁴¹¹ Hana Gartner, "Fasten Your Seatbelts; Airport Security in Canada" (CBC, The Fifth Estate, Nov 9, 2005) online: Canadian Broadcasting Corporation < www.cbc.ca/fifth/episodes/2009-2010/fasten-your-seatbelts > (visited May 25, 2014).

¹⁴¹² See, *supra* note 1410 at 96.

Churchill Falls, Labrador. Within four years, Canada's government had launched a full review of CATSA itself, with a view to identifying "whether changes are required to better serve Canadian industry and the travelling public."¹⁴¹³ In February 2011, a single-page press release announced that the full review had been completed and as a result of its findings, "small scissors and tools that are no longer than six centimetres"¹⁴¹⁴ would be removed from the prohibited items list and that Canada would launch a trusted traveler program.¹⁴¹⁵

The need for a more comprehensive overhaul of aviation security is acknowledged in many quarters. While it is obvious that many of today's security practices are rooted in yesteryear's battles, it is also clear that much, if not all, of the spending happens with relatively little scrutiny. Over a decade ago, a Canadian Senate Committee report called on Canada's Auditor General to have the power to conduct 'value-for-money' audits of aviation security expenditures.¹⁴¹⁶ Such an audit would reveal not just whether aviation security funds are being spent on targeted purposes, but whether the same objectives can be reached more efficiently, and whether best practices are being followed. It would have the potential to provoke a complete rethink of how aviation security is being implemented in Canada.

B) Forging a Multilateral Consensus

Australia, Canada, New Zealand, the United Kingdom and the United States are members of a secret military intelligence-sharing organization known as the "Five Eyes."¹⁴¹⁷ Intelligence is shared with a group called the 14 Eyes, comprised of the members of the Five Eyes and nine other states, namely, Belgium, Denmark, France, Germany, Italy, the Netherlands, Spain and Sweden.¹⁴¹⁸ Membership is based on the fact that they have common values and, perhaps more importantly, common enemies. Thus, their concerns about aviation security will be compatible

¹⁴¹³ Transport Canada "Government of Canada Moves to Further Enhance Air Transport Security" Press Release No. H074/10, June 14, 2010.

¹⁴¹⁴ Transport Canada "Government of Canada Enhances Passenger Convenience and Aviation Security" Press Release No. H011/11, February 3, 2011.

¹⁴¹⁵ *Ibid.* As noted above, Canada's program does not allow travelers to avoid any security procedures. However, a pilot program that debuted in November 2013 for US bound passengers at Toronto's Pearson Airport may allow some Nexus members to avoid certain security inconveniences. See online: Canada Border Services Agency, "NEXUS: Trusted Traveller Trial at Toronto-Pearson International Airport", online: Canada Border Services Agency <www.cbsa-asfc.gc.ca/prog/nexus/trial-projet-eng.html> (visited May 20, 2014).

¹⁴¹⁶ *The Myth of Security at Canada's Airports: Fifth Report* (21 January 2003) at 125, Recommendation VIII.5, online: Parliament of Canada <www.parl.gc.ca/Content/SEN/Committee/372/defe/rep/rep05jan03-e.htm> (visited May 20, 2014).

¹⁴¹⁷ See The Technical Cooperation Program, online: <www.acq.osd.mil/ttcp/> (visited May 23, 2014).

¹⁴¹⁸ See *Five Eyes Fact*, supra note 1251.

and they often take similar positions on aviation security matters at ICAO.¹⁴¹⁹ Given the depth of their cooperation in intelligence matters, and the efforts they invest in identifying and address external threats, perhaps they could also focus on developing an adaptable and efficient aviation security system at a higher level than that recommended by ICAO standards. Such a system could be implemented collectively by Australia, Canada, the European Union, New Zealand and the United States. Such a system could provide enhanced aviation security benefits while being less intrusive and less capricious.

If a passenger can take a six centimeter knife through an airport screening position in Calgary, she should not lose that knife when being screened for the return flight, whether the return flight is departing from Canberra, Copenhagen, Christchurch or Cleveland. The same logic should apply to "Trusted Travelers". If a Trusted Traveler can qualify for reduced screening in Atlanta, she should qualify for similar treatment at Adelaide, Abbotsford, Amsterdam and Auckland. The US and Canada have created systems that allow trusted travelers to more easily cross the Canada-US border in both directions,¹⁴²⁰ and Canada has begun granting those individuals some recognition at airport screening points, such as allowing them to keep "shoes, belts and light jackets on"¹⁴²¹ and leave "laptops, large electronics, and compliant liquids, aerosols and gels in carry-on bags."¹⁴²² There are signs of further progress. While American authorities originally required TSA Pre✓ program members to be US citizens or Lawful Permanent Residents, they are now accepting Canadian citizens who are NEXUS card holders.¹⁴²³

The value-for-money audit recommended by Canada's 2003 Senate report should not be conducted only on the Canadian aviation security system. Ideally, if such a process were simultaneously implemented in Australia, Canada, the EU, New Zealand and the US, it could

¹⁴¹⁹ For example, at ICAO's 38th Assembly, a working paper entitled "Aviation Security for the next Triennium" was presented by a group of countries including Australia, Canada, many EU members, New Zealand and the United States. See Australia et al, *Aviation Security for the Next Triennium*, ICAO Assembly, 38th Sess, Agenda Item 13, Working Paper No 128, Doc A38-WP/128/Ex/46 (20 August 2013), online: ICAO <www.icao.int/Meetings/a38/Documents/WP/wp128_en.pdf>.

¹⁴²⁰ See online: Canada Border Services Agency, "NEXUS", online: <www.cbsa-asfc.gc.ca/prog/nexus/menu-eng.html> (visited May 20, 2014); , US Customs and Border Protection, "NEXUS Program Description", online: US Customs and Border Protection <www.cbp.gov/xp/cgov/travel/trusted_traveler/nexus_prog/nexus.xml> (visited May 20, 2014)

¹⁴²¹ Canada Border Services Agency, "NEXUS: Trusted Traveller Trial at Toronto-Pearson International Airport", online: :Canada Border Services Agency <www.cbsa-asfc.gc.ca/prog/nexus/trial-projet-eng.html> (visited May 20, 2014).

¹⁴²² *Ibid.*

¹⁴²³ See *supra* note 1348.

identify the full possible range of innovative best practices and spark new common standards, based not on the motivation to be seen to be immediately reacting to a threat, or to support the business interests of political contributors, but on learning from the past with a view to building a more responsive, nimble, and adaptable intercontinental aviation security system. Intelligence sharing by the Five Eyes, common aviation security positions at ICAO, and the initial 'trusted traveler' initiatives between Canada and the United States suggest there is already reason for optimism. However, the task of building an efficient aviation security system in any single country remains unfinished, and the work of ensuring compatibility across Australia, Canada, the EU, New Zealand and the US is not yet at any advanced stage.

IX) CONCLUSION

Aviation is a global undertaking, and aviation security cannot be addressed only on a domestic country-by-country basis. Where national aviation security systems are not compatible, this may produce the type of competitive distortion that encourages consumers to seek other alternatives. It is no longer sufficient to claim that security trumps trade; it is time to advance aviation security standards through international consensus in order to facilitate and enable trade.

The aviation security system in Canada, the US, the EU and Australia and New Zealand needs an overhaul. It focuses on finding pocket knives instead of discovering terrorists and it is too busy trying to find knitting needles that it does not have the resources to conduct the review that it knows is necessary. It screens people in Ely, Nevada, and Wabush, Labrador, and put Nelson Mandela on a No-Fly list, but allowed the Christmas Day Bomber to board a US airliner in Europe.

If Australia, Canada, the European Union, New Zealand and the United States collectively believe that ICAO standards are not sufficient, these nations should develop a harmonious aviation security system among them. Collectively, they could redesign the system completely and perhaps identify common approaches to issues, such as passenger information requirements, No-Fly lists and prohibited items, where differences now exist. As will be pointed out later in Chapter 6, *–CREATING THE OPEN SKIES INTERCONTINENTAL AVIATION BLOCK* - any security standard collectively developed by these authorities has the potential to become the *de facto* new world standard.

A common global standard would have the benefit of addressing the competitive distortion enjoyed by GBMCs and the differences in national regulations that currently unintentionally impair the competitive situation of carriers located elsewhere. A common global standard has the potential to do so much more. Many passengers now see aviation security procedures as a burdensome bureaucratic barrier between them and their destination. A thoughtful risk-based approach might re-engage the commitment of the public to the battle against terrorism with profound effects. If passengers could be screened in a consistent manner and only once on any single trip, much of the perceived capriciousness of aviation security would disappear. Moreover, if the public could be convinced to see aviation security staff as their allies in a fight against a common enemy, rather than the miscreants who randomly confiscate a good bottle of duty-free rum, dramatically improved aviation security outcomes are in reach.

CHAPTER 5 – ACHIEVING GLOBAL ENVIRONMENTAL HARMONY

I INTRODUCTION

Climate change is upon us,¹⁴²⁴ and there can be no doubt that there will be mounting pressure on the airline industry to reduce its greenhouse gas (GHG) emissions, and not on a per-flight basis, but rather in absolute terms. Fortunately, for the airline industry, any reduction in GHGs implies a reduction in non-renewable hydro-carbons consumed, and this, in turn, may lead to less congested skies and airports. These problems have balance sheet implications for commercial airlines, so it should come as no surprise that around the world, three interlocking themes are discussed at aviation conferences. These are: growing airport congestion and the related demands on air traffic management (ATM) systems; the role of commercial aviation in contributing to GHG emissions; and the increasing cost of jet fuel and its impact on airline balance sheets. Thus, at the 2012 Annual meeting of the United States' Transportation Research Board, panels focused on "Meeting and Measuring NextGen Air Traffic Management Challenges", "Recent Advancements in Evaluating and Modeling Airport Capacity and Delay", "Promoting the Productivity of Infrastructure Investments", "Transitioning US Air Transport System to Higher Fuel Costs" and "The Role of Aviation in a Sustainable Society."

At the meeting the potential link among ATM challenges, growing GHG emissions and the rapid depletion of non-renewable hydrocarbons was not directly explored although a paper by a trio of engineers from Massachusetts Institute of Technology (MIT) raised the need to "use efficient aircraft, [and] reduce demand for air travel."¹⁴²⁵

Meeting attendees¹⁴²⁶ were probably unaware that the S-Curve theory¹⁴²⁷ means greater flight frequency is better, and consequently airlines have down-gauged their aircraft by 30% or more, so that three flights now carry the same number of passengers that two flights did 20 years ago. They may not have known that airline competition is so intense that competitor's jets literally follow each other across the skies, not only in the US domestic market but also on routes

¹⁴²⁴ See The White House, "Climate Change and President Obama's Action Plan", online: The White House <www.whitehouse.gov/climate-change> (visited May 8, 2014). See also National Climate Assessment, online: <nca2014.globalchange.gov/downloads> (visited May 8, 2014).

¹⁴²⁵ Rahul Kar et al, "Assessment of the Fleet-wide Effects of Diffusion Dynamics of New Fuel Efficient Aircraft: Implications for Aircraft Manufacturer Strategies and Public Policy" (Paper delivered at the 90th Annual Meeting of the Transportation Research Board, Washington, 23-27 January 2011), at 24, line 541 [unpublished].

¹⁴²⁶ The author of this thesis attended the 2012 TRB Annual Meeting in Washington, DC, January 22-26, 2012.

¹⁴²⁷ See *below* Part IV B) The "S-Curve" as a Driver of Frequency.

between major airports in the EU and US.¹⁴²⁸ Attendees would have been shocked to learn of recent guidelines on how regional airports can best use subsidies to lure low-cost carriers, and many expressed concern about reports that China is building dozens of new airports.¹⁴²⁹

Participants at the meeting were enthusiastic about prospective new aircraft, including the exciting "D8 Double Bubble w/high BPR BLI Propulsion", a 180-passenger plane still at the concept stage that uses the latest technology and future technology to cut fuel consumption by up to 70% compared with current aircraft of similar size.¹⁴³⁰ Another aircraft on the drawing board is the Large Aircraft for Short Ranges (LASR) with the potential to cut emissions and also demands on airport and ATM infrastructure.¹⁴³¹ Neither aircraft exists yet, but there is a consensus among scientists and engineers that it is not too early to be taking bold steps to address climate change and that 'sooner is better' when it comes to embracing technological initiatives.

Current market conditions where airlines follow each other across the skies in 50-seat regional jets do not favor the creation of such innovative aircraft. However, if the conditions can be created that allow airlines to profitably up-gauge aircraft, there is reason to hope that the aircraft of the future will soon become a reality. Comfort can be found in two recent developments: a February 2011 decision by Lufthansa to replace two wide-body Frankfurt-New York JFK flights with a single Airbus A380 flight, and Delta's May 2012 call on its commuter partners to replace inefficient 50-seat regional jets with more modern and capacious 76-seat aircraft. Both were examples of 'up-gauging' where fewer, bigger aircraft carry the same number of passengers as a greater number of their smaller siblings. It will be argued here that up-gauging has the potential

¹⁴²⁸ Every day in July 2012, at 10:15, 14:00, 16:00 and 18:05, two jets departed London Heathrow for airports in the New York area. In each case one aircraft follows the other right across the Atlantic.

¹⁴²⁹ About 80% of the population will be within 100 kilometers of an airport by the middle of this decade. See Gordon G Chang, "Will China Build 82 Unneeded Airports By 2012? You Betcha", *Forbes* (22 July 2012), online: www.forbes.com/sites/gordonchang/2012/07/22/will-china-build-82-unneeded-airports-by-2015-you-betcha/.

¹⁴³⁰ See Elena de la Rosa Blanco & Edward M Greitzer, "Subsonic Civil Transport Aircraft for 2035" (2009-2010) 7 *AeroAstro* 1, online: aeroastro.mit.edu/sites/aeroastro.mit.edu/files/inline/aeroastro7.pdf (visited May 20, 2014).

¹⁴³¹ See *below* Part IV E) Large Aircraft for Short Ranges (LASR).

to both reduce congestion at airports and in the skies, and to reduce GHG emissions per passenger mile.¹⁴³²

Up-gauging will also be shown to be a necessary ingredient in fostering the development and production of tomorrow's much more efficient aircraft.

While up-gauging can be implemented by a single carrier in certain cases, it is hoped that the strategy will be embraced by metal neutral joint ventures (MNJVs) such as the A++ joint venture between Air Canada, Lufthansa and United. Rather than wait for rising fuel prices and growing environmental concerns to force more drastic actions, it is proposed that a creative approach be explored: in limited and defined circumstances, competitive rivals and even rival alliances should be encouraged to share the use of an efficient aircraft that is larger than either would have flown on its own account. There are precedents and structures that confirm that such an approach could be implemented without competitive distortions and with the positive externalities described above.

Whether the European Union's Emissions Trading Scheme (ETS) is expanded to cover international aviation, or whether the International Civil Aviation Organization (ICAO) adopts market-based measures (MBMs), the approach proposed herein is one which regulators in Australia, Canada the European Union (EU), New Zealand and the United States (US) can implement collectively as a practical way to dramatically reduce GHGs and congested skies, pending a broader solution. The prospects of successful collective action are good since each country is the home base of an airline with a demonstrated commitment to reducing the impact of greenhouse gases on the environment. Australia's Qantas has partnered with Shell Australia in the development of "sustainable aviation fuel,"¹⁴³³ Canada's WestJet is a "North American leader in the use of blended winglet technology,"¹⁴³⁴ Europe's Lufthansa is the first airline to use biofuels in regular scheduled service,¹⁴³⁵ Air New Zealand seeks to be the "world's most

¹⁴³² GHG/passenger mile, is the measurement of greenhouse gases emitted by an aircraft in the transport of one passenger the distance of one mile. This is not an exact science as many factors from wind, to the actual route flown to noise abatement procedure on take-off and landing can have an impact.

¹⁴³³ See Qantas, "Sustainable Fuel", online: Qantas <www.qantas.com.au/travel/airlines/sustainable-aviation-fuel/global/en> (visited May 20, 2014).

¹⁴³⁴ See Westjet, "Caring for our environment", online: Westjet <www.westjet.com/guest/en/about/environment/>.

¹⁴³⁵ Mat McDermott, "Lufthansa Will Become First Airline Using Biofuels On A Commercially Scheduled Route", *Treehugger* (8 July 2011), online: Treehugger <www.treehugger.com/aviation/lufthansa-will-become-first-airline-using-biofuels-on-a-commercially-scheduled-route.html> (visited May 20, 2014).

sustainable airline by 2020",¹⁴³⁶ and Virgin America is a "leader in recycling, and biofuel research ... and offer[s] some of the best carbon offsets."¹⁴³⁷ Thus, there is reason to believe that the airlines in these countries would be open to exploring creative new strategies to reduce GHGs, especially where that strategy also would facilitate a decrease in fuel consumption, and in reducing the demands on ATM and airport infrastructure. Regulators who have approved intercontinental MNJVs on "public interest" grounds should encourage member airlines, also in the "public interest," to up-gauge their aircraft on high-traffic routes to reduce GHGs from aviation. It is argued that up-gauging is a necessary part of any solution aimed at reducing GHGs, and that regulatory action is needed to spur this initiative forward.

II THE ENVIRONMENT: A COMMON GLOBAL CONCERN

Environmentalists argue that the impact of GHG emissions at commercial flying altitude exceeds the impact of GHG emissions at sea level.

Aviation is now seen as a far greater cause of climate change than was previously believed. Not only is it the world's fastest growing source of carbon dioxide (CO₂) emissions, aircraft also produce water vapour. This condenses to form water ice crystals in the upper part of the lower atmosphere, known as the troposphere. These ice crystals, popularly known as vapour trails, trap the earth's heat. Taken together, the CO₂, local ozone formation from other aircraft emissions, and the condensation trails of the aircraft have 2.7 times the effect of CO₂ alone.¹⁴³⁸

It is argued that climate change prevention is an intergenerational global pure public good.¹⁴³⁹ Indeed, if "goods exhibiting both the relevant characteristics-non-rivalness in consumption and non-excludability are likely to be few in number,"¹⁴⁴⁰ a clean atmosphere¹⁴⁴¹ would surely be the exception to the rule. It was the recognition that our atmosphere ignores all political borders that prompted the negotiation and signing of the US-Canada agreement to reduce acid rain in

¹⁴³⁶ See New Zealand, Energy Efficiency and Conservation Authority, "Supreme winner Air New Zealand 'delivering for NZ Inc'", EECA Awards 2012, online: EECA Business <www.eecabusiness.govt.nz/awards-2012/supreme-award> (visited May 21, 2014).

¹⁴³⁷ James Durston, "US and Europe's most eco airlines revealed", *CNN* (8 May 2012), online: CNN <travel.cnn.com/explorations/life/us-and-europes-most-eco-airlines-revealed-173008> (visited May 21, 2014).

¹⁴³⁸ Paul Brown, *Global Warming: The Last Chance for Change* (London: A & C Black: Guardian Books, 2007) at 58.

¹⁴³⁹ See Todd Sandler, "Intergenerational Public Goods: Strategies, Efficiency and Institutions" in Kaul, Grunberg & Stern, *Global*, *supra* note 94, 20 at 24.

¹⁴⁴⁰ See AR Prest, *Public Finance: In Theory and Practice*, 4th ed. (London: Weidenfeld and Nicolson, 1970) at 66.

¹⁴⁴¹ The atmosphere is chosen here because it is more universal than any other element of the environment, and it affects all others. Not all persons live near a major body of water, but all persons breathe.

1991.¹⁴⁴² The atmosphere is imperatively and immediately essential in ways that no other public good is; it belongs in a category by itself. Comprehending the crucial distinctions between the atmosphere and all other public goods is central to taking any meaningful concerted action to protect it.

Unlike local drinking water, the atmosphere is ubiquitous, expansive and boundless. It is precisely this nature of the atmosphere that makes the "Tragedy of the Commons"¹⁴⁴³ so applicable. The provision of an additional low-cost flight makes the passengers and local tourism service providers much better off and the entire planet very slightly worse off. Thus the positive utility to the passengers and the tourism industry is easily measurable and often instant. The negative utility is much more difficult to measure and much less immediate.¹⁴⁴⁴

State inaction on the environmental front is motivated by free rider issues, as all countries benefit even if just one country reduces carbon emissions.¹⁴⁴⁵ Countries that have made progress reducing the carbon footprint seem to want to sit on their laurels, large countries with great temperature variance and developed economies point to their obvious energy needs, and the developing world asks why it cannot have the same standard of living that the first two groups have. Scott Barrett uses the term "simple theory of international cooperation" and writes:

Provision of a global good (such as cutting CFC or [GHG] emissions) by any country benefits every country. But only the countries that provide the good pay for its provision. So each country may prefer that others provide the public good, with the result that little of the good will be provided in total.¹⁴⁴⁶

These factors explain the radically divergent views within the airline industry with respect to airline emissions. However, airlines have a vested interest in reducing their emissions because

¹⁴⁴² *Agreement between the Government of Canada and the Government of the United States of America on Air Quality*, 13 March 1991, Can TS 1991 No 3 (entered into force 13 March 1991).

¹⁴⁴³ Hardin, *supra* note 100.

¹⁴⁴⁴ If even a tiny portion of an aircraft's exhaust emissions were routed through its ventilation system, such that passengers would cough occasionally, the use of high-speed rail on EU routes served by low-cost carriers might rise rather dramatically.

¹⁴⁴⁵ Thus Canada's former Environment Minister, the Hon. John Baird, asked why Canada should adhere to Kyoto goals if Brazil, Russia, India and China refuse to do so. See Shawn McCarthy, "Baird comes out swinging at China at Cancun climate talks", *Globe and Mail* (8 December 2010), online: *Globe and Mail* <www.theglobeandmail.com/news/politics/baird-comes-out-swinging-at-china-at-cancun-climate-talks/article1318910/> (visited May 24, 2010). For a deeper exploration of this, see Geoffrey Heal, "New Strategies For the Provision of Global Goods: Learning from International Environmental Challenges" in Kaul, Grunberg & Stern, *Global*, *supra* note 94, 220 at 233–237.

¹⁴⁴⁶ Scott Barrett, "Montreal versus Kyoto: International Cooperation and the Global Environment" in Kaul, Grunberg & Stern, *Global*, *supra* note 94, 192 at 197.

aircraft emissions are directly tied to the consumption of costly non-renewable hydro-carbons and this has driven both the quest for alternative fuels¹⁴⁴⁷ and for greater fuel efficiency.¹⁴⁴⁸

A) Intensity-Based Targets

One often overlooked factor in the broader environmental debate is the basis of the targets. Frequently, the target is intensity based, which means that it is "a ratio of greenhouse gas emissions per unit of economic activity",¹⁴⁴⁹ such as a revenue passenger mile (rpm). In a scenario where the GHG emissions per revenue passenger mile are reduced by 15% but the number of revenue passenger miles increases by 20%, the actual quantity of GHG emissions will rise by 2%.¹⁴⁵⁰ Thus, environmental advocates argue that meeting intensity-based targets will not reduce GHG emissions; this can only be achieved by setting clear targets and timelines for true emissions reductions and then meeting those targets.¹⁴⁵¹

Given that air traffic worldwide is growing, unless a very significant percentage reduction in emissions per unit can be reached, there is little likelihood that industry will be able to achieve a true reduction of its emissions. In other words, whatever environmental targets are set and agreed to by the airline industry, they are essentially moot unless significant progress can be made in reducing either the number of flights or very significantly reducing the GHG emissions per flight.

B) Listening to Engineers

Engineers and scientists have been thinking about adaptation to climate change.¹⁴⁵² There is not the aspirational world of policy makers, but a flawed world of intractable problems where the

¹⁴⁴⁷ See Charles E Schlumberger, "Are Alternative Fuels an Alternative?: A Review of the Opportunities and Challenges of Alternative Fuels for Aviation" (2010) 35:1 Ann Air & Sp L 119.

¹⁴⁴⁸ For an examination of the challenges of improving fuel efficiency, see PM Peeters, J Middel & A Hoolhorst, *Fuel Efficiency of Commercial Aircraft: An Overview of Historical and Future Trends*, NLR-CR-2005-669 (Amsterdam: National Aerospace Laboratory NLR, 2005) online: Transport & Environment <www.transportenvironment.org/sites/te/files/media/2005-12_nlr_aviation_fuel_efficiency.pdf>.

¹⁴⁴⁹ Dale Marshall, "Intensity-Based Targets: Not the Solution to Climate Change", Briefing Note, *David Suzuki Foundation* (26 February 2007) at 1, online: Climate Action Network Canada <climateactionnetwork.ca/archive/e/publications/dsf-intensity-targets.pdf> (visited May 21, 2014).

¹⁴⁵⁰ *Ibid.*

¹⁴⁵¹ *Ibid.*

¹⁴⁵² For example, see Climate Leadership Academy, *Promising Practices in Adaptation & Resilience: A Resource Guide for Local Leaders*, version 1 (Institute for Sustainable Communities, 2010), online: Institute for Sustainable Communities <www.iscvt.org/who_we_are/publications/Adaptation_Resource_Guide.pdf>; Amy K Snover et al, *Preparing for Climate Change: A Guidebook for Local, Regional, and State Governments* (Oakland, Cal: ICLEI – Local Governments for Sustainability, 2007), online: Climate Impacts Group, College of the Environment <www.cses.washington.edu/db/pdf/snoveretalgb574.pdf>.

task is to solve the possible and find adaptive strategies for the rest. They are the ones who question the basic assumptions of the environmental discourse and attempt to ensure that policies are based on accurate information. If the principle of "polluter pays" is to be used, it is important to be able to accurately measure carbon emissions. However, of the seven allocation methods proposed by the International Panel for Climate Change (IPCC), none relies of the actual characteristics of the aircraft.¹⁴⁵³

[T]o establish the framework for CO₂ analysis, it is necessary to predict where and how much carbon is emitted. Also, it is necessary to identify the critical parameters for an informed decision at all levels, including carbon trading schemes, optimal aircraft operations, aircraft design, etc. The critical parameters are the aircraft, the engine performance, and several operational parameters: flight distance, flight schedule, [and] useful load, etc.¹⁴⁵⁴

Another study shows how different emissions calculators can give dramatically different results:

[T]wo different emissions calculators¹⁴⁵⁵ estimate emissions for a return flight from London to New York to be 1.53^a or 3.48^b tCO_{2e}, a variation of more than a factor of 2. This highlights the huge uncertainty in calculating aviation emissions, and its critical dependence on the methodology adopted.¹⁴⁵⁶

Painfully aware of the ongoing environmental bickering,¹⁴⁵⁷ engineers are looking for practical solutions. If aircraft cannot be made more fuel efficient in the short term, more direct flight routes, and different take-off and landing procedures offer reduced fuel consumption and consequently fewer emissions. Thus, engineers are tackling growing capacity constraints at major airports¹⁴⁵⁸ and in the air traffic management (ATM) system. Indeed, traffic restrictions have been proposed to deal with overcrowding at major US airports such as Newark¹⁴⁵⁹ and solutions such as slot auctions¹⁴⁶⁰ were proposed although their implementation was stayed by

¹⁴⁵³ Antonio Filippone, "Analysis of Carbon-Dioxide Emissions from Transport Aircraft" (2008) 45:1 Journal of Aircraft 185 at 186 (Aerospace Research Central).

¹⁴⁵⁴ *Ibid* 185.

¹⁴⁵⁵ Climate Care, Online: <www.climatecare.org/>; and Atmosfair, online: <www.atmosfair.de/en/> .

¹⁴⁵⁶ Christian N Jardine, *Calculating The Carbon Dioxide Emissions Of Flights*, Final Report (Oxford: Environmental Change Institute, Oxford University Centre for the Environment, 2009) at 2, online: Environmental Change Institute <www.eci.ox.ac.uk/research/energy/downloads/jardine09-carboninflights.pdf>.

¹⁴⁵⁷ The debate has run for over three decades. The *Montreal Protocol on Substances that Deplete the Ozone Layer*, 16 September 1987, 1522 UNTS 3, Can TS 1989 No 42, 26 ILM 1550, helped rid the world of ozone-depleting chlorofluorocarbons. It was also one of the first conventions to differentiate obligations based on a State's level of economic development. See Nina E Bafundo, "Compliance with the Ozone Treaty: Weak States and the Principle of Common but Differentiated Responsibility", Comment, (2006) 21:3 Am U Int'l L Rev 461 (HeinOnline).

¹⁴⁵⁸ Land where new runways or new airports can be built is increasingly hard to find. America's newest airport, Denver International, opened in 1995 on farmland 25 miles/40 km from Denver. The battle to build a 3rd runway at London's Heathrow airport has been ongoing since 2003. See *The Future of Air Transport*, *supra* note 752.

¹⁴⁵⁹ *Operating Limitations at Newark Liberty International Airport*, 73 Fed Reg 14552 (2008).

¹⁴⁶⁰ *Operating Limitations at John F. Kennedy International Airport*; 73 Fed Reg 3510 (2008).

the courts.¹⁴⁶¹ Similarly, the explosive growth in air traffic¹⁴⁶² has provoked research into how to safely guide more aircraft¹⁴⁶³ through increasingly crowded skies.¹⁴⁶⁴

1) NextGen

Engineers have been working on elements of the Next Generation Air Transportation System (NextGen) since 1995.¹⁴⁶⁵ It is based on Automatic Dependent Surveillance Broadcast (ADS-B) technology and will facilitate precise aircraft tracking.¹⁴⁶⁶

Increased accuracy will allow tighter aircraft separation standards, higher probability of clearance requests and enhanced visual approaches, all of which will contribute to greater aircraft throughput. Additionally, ADS-B will result in more direct routings and optimized departures and approaches, which will increase capacity and save time and fuel.¹⁴⁶⁷

NAV CANADA has developed an ADS-B network in the Hudson Bay area and Southern Greenland to enable more efficient trans-Atlantic routings and fuel savings of US\$ 187 million annually.¹⁴⁶⁸ The United States plans to use similar technology to replace their ATM system by 2025.¹⁴⁶⁹

2) Single European Sky

The challenges of efficient ATM within the European Union are considerably more complex than in North America.

Because it is based still on national sovereign airspace, ATM in Europe is very fragmented and dominated by national monopoly service provision. As air traffic volumes have increased considerably, not least because of the development of the aviation single market, this fragmentation is now ... causes needless fuel consumption and emissions and generates higher infrastructure charges than would be the case if it would operate at European rather than national level.¹⁴⁷⁰

¹⁴⁶¹ These were stayed on December 8, 2008, by the US Court of Appeal. See *Port Authority*, *supra* note 189.

¹⁴⁶² See the EU's deregulation of commercial aviation, *supra* note 121.

¹⁴⁶³ Before the EU deregulated the skies, observers concerned about increased demands on ATM and on airport infrastructure. See "Room for More in the Crowded Skies?", *Air Transport World* 29:4 (April 1992) 52 (ProQuest).

¹⁴⁶⁴ See John Guy, "Managing Europe's crowded skies", *IEE Review* 44:4 (16 July 1998) 159 (IEEE Xplore).

¹⁴⁶⁵ AS Debelack et al, "Next Generation Air Traffic Control Automation" (1995) 34:1 IBM Systems Journal 63.

¹⁴⁶⁶ Donald McCallie, Jonathan Butts & Robert Mills, "Security Analysis of the ADS-B Implementation in the next generation air transportation system" (2011) 4:2 International Journal of Critical Infrastructure Protection 78 at 80.

¹⁴⁶⁷ *Ibid.*

¹⁴⁶⁸ Adrian Schofield, "Northern Network: Nav Canada prepares for next steps in bringing ADS-B coverage to major intercontinental air routes", *Aviation Week & Space Technology* 172:10 (8 March 2010) 42 (EBSCO HOST).

¹⁴⁶⁹ For an overview of NextGen, see William J Dunlay, Jr & Jasenka Rakas, "NextGen, the Next Generation Air Transportation System: Transforming Air Traffic Control from Ground-Based and Human-Centric to Satellite-Based and Airplane-Centric", *TR News* 276 (September-October 2011) 7, online: Transportation Research Board <onlinepubs.trb.org/onlinepubs/trnews/trnews276.pdf> .

¹⁴⁷⁰ EC, Commission, *Report from the Commission to the European Parliament and the Council on the implementation of the Single Sky legislation: time to deliver*, COM(2011) 731 final, at 2, online: European

The Single European Sky (SES) is an initiative launched by the European Commission in 1999 to transform Europe's nationally-based ATM system into an integrated modern high-capacity pan-European system.¹⁴⁷¹ It involves converting 67 mostly State-based airspace blocks into 9 multi-State Functional Airspace Blocks (FABs).¹⁴⁷² FAB Europe Central (FABEC) covers all the airspace over France, Germany, Belgium, the Netherlands, Luxembourg, and Switzerland. The Single European Sky ATM Research (SESAR) program is the technical pillar of SES and constitutes the European equivalent of NextGen.¹⁴⁷³ That some European States have agreed to cede sovereignty in order to facilitate more efficient ATM is truly extraordinary¹⁴⁷⁴ and demonstrates the fact that had this not happened, the explosive growth of air traffic would have either resulted in a decreased level of safety or would have created gridlock in the skies, with a consequent and profound increase in emissions.

III WHY SO MUCH AIR TRAFFIC?

While there was unimpressive population growth in the European Union,¹⁴⁷⁵ between 1970 and 2002, the number of annual passenger miles¹⁴⁷⁶ on intra-EU routes grew by an astonishing 748%.¹⁴⁷⁷ By contrast the United States had a slightly greater population growth rate¹⁴⁷⁸ but a very slow growth in airline passenger traffic.¹⁴⁷⁹ This suggests that in the US and the EU there are different explanations for increasingly crowded skies. In the European Union, the dramatic

Commission

<ec.europa.eu/transport/air/single_european_sky/doc/reports/2011_11_14_com_2011_0731_f_rapport_en.pdf>

¹⁴⁷¹ This process is ongoing. See *Ibid*.

¹⁴⁷² See EUROCONTROL "FABs, Single European Sky, Pan-European Sky", online: EUROCONTROL

<www.eurocontrol.int/dossiers/fabs> (visited May 24, 2014).

¹⁴⁷³ EC, *Commission Staff Working Paper on preparing a deployment strategy for the Single European Sky technological pillar*, SEC(2010) 1580 final, online: European Commission

<ec.europa.eu/transport/air/sesar/doc/2010-sec-2010-1580-f.pdf> (visited May 22, 2014).

¹⁴⁷⁴ But it has already happened in Africa and Central America. See *supra* 1671 and 1672.

¹⁴⁷⁵ The long-term EU population growth rate over the past 50 years is roughly 3.5%, see Monica Marcu, *Population and Social Conditions*, Eurostat Statistics in focus: 38/2011, (Brussels: Eurostat, 2011), online: European Commission <epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-SF-11-038/EN/KS-SF-11-038-EN.PDF>.

¹⁴⁷⁶ A passenger mile measures airline performance. It is the carriage 1 passenger the distance of 1 mile. An increase means an increase in passengers carried, average distance traveled or a combination of both.

¹⁴⁷⁷ Erling Holden, *Achieving Sustainable Mobility: Everyday and Leisure-Time Travel in the EU* (Burlington, Vt: Ashgate Publishing, 2007) at 172.

¹⁴⁷⁸ The US growth rate since the 1970s to 2010 has averaged slightly less than 10%. See Paul Mackun et al, *Population Distribution and Change: 2000 to 2010*, 2010 Census Briefs (US Census Bureau, US Department of Commerce, March 2011), online: US Census Bureau <www.census.gov/prod/cen2010/briefs/c2010br-01.pdf>.

¹⁴⁷⁹ Airline passenger traffic in the United States grew by roughly 4% annually between 1950 and 2000. See Helen Jiang & R John Hansman, "An Analysis of Profit Cycles in the Airline Industry" (Paper delivered at the 6th AIAA Aviation Technology, Integration and Operations Conference (ATIO) Wichita, Kansas, 25 - 27 September 2006), AIAA 2006-7732 (American Institute of Aeronautics and Astronautics, 2006) at 2, online: DSpace@MIT <dspace.mit.edu/bitstream/handle/1721.1/34988/AIAA-2006-7732-942%20Profit%20Cycle.pdf?sequence=1>.

increase in annual passenger kilometers is due, at least in part, to the growth of Low Cost Carriers (LCCs) such as Ryanair and easyjet. In the United States, Canada and to a lesser extent in the EU, airlines are offering more flights with smaller aircraft, resulting in air traffic increases.

A) Low Cost Carriers

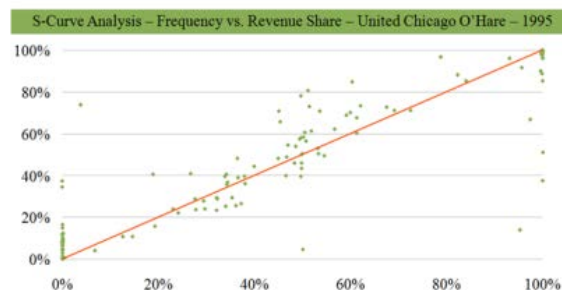
Just a year prior to issuing advice on how and when to provide State subsidies to attract low cost airlines to regional airports,¹⁴⁸⁰ European authorities had identified those same low cost carriers as a contributing cause of an astonishing 87% increase in GHG emissions between 1990 and 2004.¹⁴⁸¹ It would seem that European authorities are caught between two conflicting goals: fighting climate change on the one hand and providing low cost vacations to citizens and stimulating local economies on the other. Perhaps if EU authorities put greater emphasis on expanding their already impressive high-speed train networks and less on low cost air carriers, they could provide genuine leadership in the fight against climate change.¹⁴⁸²

B) The "S-Curve" as a Driver of Frequency

The S-Curve theory¹⁴⁸³ was first developed by Harvard Business Professor William E. Fruhan.¹⁴⁸⁴ It posits that airlines that achieve a frequency-share advantage attain disproportionately high market shares¹⁴⁸⁵:

To achieve market dominance, and given there is sufficient free airport capacity to do so, airlines add [flights] to excess. And herein lies the "tragedy." The S-Curve phenomenon can lead to destruction by overpopulating the airport "commons."¹⁴⁸⁶

S-Curve Suggests Carriers With Frequency Advantages Can Sustain Premiums



¹⁴⁸⁰ "Questions on State aid", *supra* note 273.

¹⁴⁸¹ The increase was in the Community's share of international aviation activities in the scheme for greenhouse gas emission allowance trading within the Community - {SEC(2006) 1684}{SEC(2006) 1685}, COM(2006) 818 final, 2006/0304 (COD), at 2, online: EUR-Lex <eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2006:0818:FIN:EN:PDF>.

¹⁴⁸² See generally Fitzgerald, "Europe's Emissions", *supra* note 45.

¹⁴⁸³ Graph from "Survival of the Fittest: The Impact of Low-Fare Carriers on Competition", Gary Chase and Winnie Clark, Lehman Brothers, Embry-Riddle Aeronautical University, Airline Economics Seminar, National Press Club, Washington, April 7, 2004, slide 12, online: Embry-Riddle Aeronautical University <www.erau.edu/er/events/chase.ppt>.

¹⁴⁸⁴ See William E Fruhan, *The Fight for Competitive Advantage: A Study of the United States Domestic Trunk Air Carriers* (Boston: Harvard Graduate School of Business Administration, 1972) at 126–130.

¹⁴⁸⁵ *Ibid* at 126-127.

¹⁴⁸⁶ Gesell & Dempsey, *Air Transportation*, *supra* note 543 at 451.

Indeed, where an airline offers more than 50% of the flights in a defined city-pair market, it will earn significantly more than 50% of the market share as measured by passenger or revenue passenger miles. This increased market share includes a disproportionately larger share of business travellers and thus significantly increased revenues.¹⁴⁸⁷ Moreover, given the traditional supply and demand curve, the scarcity of slots and gates at congested hub airports drives higher yields. The most attractive hubs, from a revenue standpoint, are congested hubs near large business communities since the S-curve theory is particularly applicable to business travelers who put a premium on convenience and the choice of a wide variety of potential flight times. The more congested the airport, the scarcer the resource becomes.¹⁴⁸⁸ In turn, this scarcity drives prices higher as exemplified by the fact that one airline with grandfathered slots or gates at busy airports actually listed "Domestic slots and airport operating and gate lease rights" as an asset on its balance sheet.¹⁴⁸⁹

Predictably, airlines have reacted by offering business travelers greater frequencies and have managed to maintain load factors by reducing aircraft size. For example,¹⁴⁹⁰ in August 1992 four US airlines offered non-stop service from New York JFK to Los Angeles. American offered 9 flights, Delta and TWA offered 3 each and United offered 4.¹⁴⁹¹ The most capacious aircraft used was a 474-passenger Boeing 747, and the least capacious was a 204-passenger Boeing 767.¹⁴⁹² The 19 flights offered 4,488 seats in total or on average 236 seats each. By 2010,¹⁴⁹³ American, after having acquired TWA, was offering 10 daily flights over the route,¹⁴⁹⁴ Delta was offering 7 flights¹⁴⁹⁵ and United was offering 6.¹⁴⁹⁶ The 23 aircraft being used offered 3,456 seats in total or on average 150 seats each. Thus, over the 18 year period, the number of flights had increased by 21%, the number of seats had decreased by 22%, but more importantly, the average number of seats offered per flight had decreased by 36%, representing a dramatic down-gauging of the size of aircraft used on this prestigious and competitive route. A similar phenomenon was observed

¹⁴⁸⁷ See Peter Belobaba et al., *The Global Airline Industry*, (Chichester, U.K.: John Wiley & Sons, 2009) at 69.

¹⁴⁸⁸ *Ibid* at 449.

¹⁴⁸⁹ See AMR Corp, "10-K: Annual report", *supra* note 480 at 55. American depreciates these assets over 25-years.

¹⁴⁹⁰ These examples show one-way traffic from X to Y; the numbers would be double for traffic between X and Y.

¹⁴⁹¹ See OAG Desktop:NA, *supra* note 582 at 295.

¹⁴⁹² *Ibid*.

¹⁴⁹³ 2010 is used rather than 2012 in order to show the situation prior to the United merger with Continental.

¹⁴⁹⁴ oneworld: *oneworld Timetable: May 14, 2010 – June 11, 2010* [OWT 710].

¹⁴⁹⁵ Delta Airlines, *Delta Worldwide Timetable: July 1, 2009*, at 201.

¹⁴⁹⁶ See Star Alliance, *Star Alliance Timetable: May 1st – July 18th 2010*, at 253 – 254 [STAR 710].

on routes from Chicago O'Hare to each of Detroit¹⁴⁹⁷ and Newark, similarly busy airports where slots are valuable.

The same phenomenon exists in Europe. In the summer of 1992, British Airways and Air France offered 10 and 12 flights respectively from London Heathrow to Paris Charles de Gaulle.¹⁴⁹⁸ Between them they offered over 5,100 seats a day and the average flight could carry 235 passengers. Twenty years later, after the launch of the Eurostar high-speed rail service¹⁴⁹⁹ and the entry of easyJet (a low-cost carrier) onto the route,¹⁵⁰⁰ the two airlines operated 7 flights each¹⁵⁰¹ for a combined total of over 2,200 seats a day, meaning that the average flight offered 157 seats, a dramatic 33% decline from the 1992 figures.

Even in Canada, where Air Canada is the only carrier offering business class, similar downgrading of aircraft exists. On the Toronto-Vancouver route, in August 2002 the carrier offered 14 flights a day¹⁵⁰² with a total capacity of 3,000 seats for an average of 215 seats per flight. A decade later, in October 2012 Air Canada was offering 16 flights a day¹⁵⁰³ with a capacity of 2,566 seats for an average of 160 passengers per flight, a 25% decline from the 2002 figures. When one considers that Toronto is an increasingly congested airport and that S-Curve considerations do not fully apply on routes where no other carrier offers business class service, Air Canada's down-gauging of aircraft is cause for concern in view of impact on increasing emissions. Moreover, the Vancouver-Toronto route is just one example; the same down-gauging has happened on routes from Toronto to Calgary,¹⁵⁰⁴ Edmonton¹⁵⁰⁵ and Halifax.¹⁵⁰⁶

¹⁴⁹⁷ See section 1), below.

¹⁴⁹⁸ See *OAG Desktop*, *supra* note 32 at 980 – 981.

¹⁴⁹⁹ Service started on November 14, 1996. See Eurostar, "Our History", online: Eurostar <www.eurostar.com/UK/uk/leisure/about_eurostar/company_information/eurostar_history.jsp>.

¹⁵⁰⁰ Service started on June 12, 2002. See easyJet, News, "easyJet takes off from London Luton to Paris" (2002) online: Latest news, Media, easyJet <corporate.easyjet.com/media/latest-news/news-year-2002/12-06-02-en.aspx?sc_lang=en> (visited May 22, 2014).

¹⁵⁰¹ Air France, *Air France Timetable: March 25, 2012 – October 27, 2012*, at 40; *OWT 710*, *supra* note 1494.

¹⁵⁰² *ACT 902*, *supra* note 601 at 21.

¹⁵⁰³ Air Canada, *Air Canada Timetable: Effective October 4, 2012 to January 6, 2013*, at 204.

¹⁵⁰⁴ The number of flights increased from by 40% from 10 in 2002 to 14 in 2012. The largest aircraft in 2002 was a 211-passenger Boeing 767-300 and the smallest was a 120-passenger Airbus A319. In 2012, the largest aircraft was a 174-passenger Airbus A321 and the smallest was a 97-seat Embraer 190.

¹⁵⁰⁵ The number of flights increased from by 43% from 7 in 2002 to 10 in 2012. The largest aircraft in 2002 was a 189-passenger Boeing 767-200 and the smallest was a 120-passenger Airbus A319. In 2012, the largest aircraft was a 146-passenger Airbus A320 and the smallest was a 97-seat Embraer 190.

¹⁵⁰⁶ The number of flights increased from by 25% from 8 in 2002 to 10 in 2012. The largest aircraft in 2002 was a 211-passenger Boeing 767-300 and the smallest was a 146-passenger Airbus A320. In 2012, the largest aircraft was a 146-passenger Airbus A320 and the smallest was a 97-seat Embraer 190.

In many cases the down-gauging is a result of sourcing the flight to commuter airlines.

1) Contracting to Commuter Carriers

One of the most illustrative examples of down-gauging is the route from Chicago O'Hare to Detroit Metropolitan Wayne County Airport, two of America's busiest airports. In 1992, three airlines served the route, American, Northwest and United. Between them they offered 20 flights a day,¹⁵⁰⁷ with a combined capacity of 3,264 seats, meaning the average aircraft flown on the route could carry 161 passengers.¹⁵⁰⁸ Twenty years later, the same airlines (Delta had replaced Northwest) had increased their flight frequency by 15% to 23 flights a day,¹⁵⁰⁹ with a combined capacity of 1,734 seats and an average aircraft capacity of fewer than 76 passengers,¹⁵¹⁰ representing a decrease of 53% in the number of passengers per flight.

This significant reduction in aircraft size was almost entirely achieved by the use by each of the three airlines of cheaper 'regional carriers' to serve their passengers. Whereas in 1992 100% of the flights offered over this route were operated by the major airline flying its own equipment, by 2012, fully 86% of the flights on this route were flown by regional carriers on behalf of the major airlines.¹⁵¹¹ The shift to regional carriers by major airlines is not limited to the United States. Airlines in Canada, the EU and Australia increasingly, albeit to a lesser extent, are contracting flights previously flown by their own crews and aircraft, to cheaper low-salaried regional airlines who operate the flights on their behalf. These operations are usually based on a capacity purchase agreement (CPA), where the major airline purchases 100% of the capacity of the regional carrier and resells those seats in its own name.¹⁵¹² This practice is so commonplace in the United States that these operations are seen as a major contributing cause to increased air traffic congestion in that country.¹⁵¹³

¹⁵⁰⁷ See *OAG Desktop:NA*, *supra* note 582 at 175.

¹⁵⁰⁸ The smallest aircraft flown was a 78-passenger DC9, the largest was a 287-passenger DC-10.

¹⁵⁰⁹ See American Airlines, *American Worldwide Timetable: Effective August 5, 2012*, at 47 – 48 [AAT 812]; Delta Airlines, *Delta Timetable: August 2012*, at 101 [DT 812]; *UST 712*, *supra* note 583 at 130.

¹⁵¹⁰ The smallest aircraft flown was a 44-passenger regional jet, the largest was a 152-passenger Boeing 737-800.

¹⁵¹¹ Of the 23 flights offered, only 2 Northwest and 1 United Airlines flights were actually flown by those carriers.

¹⁵¹² For an overview of this practice, and an inside look at an unknown regional airline that flies on behalf of various competing airlines, see Republic Airways, online: <www.rjet.com/> (visited May 24, 2014).

¹⁵¹³ See Aleksandra Mozdzanowska, R John Hansman & Jonathan Histon, "Emergence of Regional Jets and The Implications on Air Traffic Management" (Paper delivered at the 5th Eurocontrol/FAA ATM R&D Seminar, Budapest, Hungary, 23 – 27 June 2003) in *ICAT – Reports and Papers* (Cambridge, Mass: International Center for Air Transportation, MIT, 2003), online: DSpace@MIT <dspace.mit.edu/handle/1721.1/35881> (visited May 22, 2014).

2) Were the aircraft of the early 1990s too big?

In order to understand why down-gauging happened, it is necessary to understand the situation of the US airline industry of the early 1990s. Research by Dr. Nawal Taneja shows a spike in the ratio of US revenue passenger miles to the US Gross Domestic Product (GDP) during this period.¹⁵¹⁴ This could be a result of larger aircraft, more departures or longer flights, or a combination of these factors. Certainly, in 1991 and 1992, huge numbers of previously-ordered new aircraft were delivered to financially troubled US airlines,¹⁵¹⁵ and this added capacity to an already bloated industry. The massive volume of unsold seat miles helped to depress prices; from 1985 to 1990 US airlines grew the seat mile¹⁵¹⁶ supply at roughly twice the pace of consumer demand for them.¹⁵¹⁷ If price elasticity of demand was 1.5, a GDP forecast error that was just 5% too optimistic would cause airlines to grow capacity by 7.5%. Their subsequent attempts to fill unsold seats would cut fares by an average of 10.7% and airline revenues would fall by 4.0%.¹⁵¹⁸

Former United Airlines Chairman Stephen M. Wolfe also linked the overcapacity problem to weak US bankruptcy laws under which a failing airline could "operate literally for years without paying their debt obligations; consequently, their capacity is retained in the system and the result is economic havoc for all."¹⁵¹⁹ Indeed, some airlines sought protection from creditors several times; TWA sought protection in 1992, 1995 and 2001¹⁵²⁰ before being bought by American in 2001.¹⁵²¹ Thus, it had spent much of a decade protected from creditors and maintaining its capacity in what was probably a bloated airline industry.¹⁵²² The aircraft used in 1992 may also have been over-capacious, but there is no specific research that would allow one to determine

¹⁵¹⁴ Nawal K Taneja, *Airline Survival Kit: Breaking Out of the Zero Profit Game* (Burlington, Vt: Ashgate Publishing, 2003) at 13.

¹⁵¹⁵ The quote applies to the worldwide industry but US carriers had been particularly hard hit. See Eldad Ben-Yosef, *The Evolution of the US Airline Industry: Theory, Strategy and Policy*, (Springer 2005) at 95.

¹⁵¹⁶ A seat mile is an airline unit of production. When it is occupied by a passenger it becomes a passenger mile.

¹⁵¹⁷ See Steven Morrison & Clifford Winston, *The Evolution of the Airline Industry* (Washington, DC: Brookings Institution, 1995) at 91.

¹⁵¹⁸ *Ibid* at 92.

¹⁵¹⁹ Stephen M Wolfe, quoted by Rhoades, *supra* note 290 at 5.

¹⁵²⁰ The dates were January 31, 1992; June 30, 1995; January 1, 2001. See Airlines for America, "Econ US Airline Bankruptcies & Service Cessations", online: Airlines for America<www.airlines.org/Pages/U.S.-Airline-Bankruptcies-and-Service-Cessations.aspx> (visited May 22, 2014).

¹⁵²¹ Tom Johnson & Kim Khan, "AMR Takes TWA Aboard", *CNN* (10 January 2001) online: CNN <money.cnn.com/2001/01/10/deals/amr_twa/> (visited May 22, 2014).

¹⁵²² In the aftermath of September 11, 2001, the US airline industry retired roughly 550 aircraft. See Air Transport Association, *Airlines In Crisis: The Perfect Economic Storm* (Washington, DC: Air Transport Association of America, nd) at 13, online: Daily Airline Filings <airlineinfo.com/public/AirlinesInCrisis.pdf>.

whether the down-gauging that occurred in the intervening years was driven by a need to right-size capacity or by concerns related to the S-Curve.

3) Fragmenting the Market

Twenty years ago, passengers travelling from Austin to Detroit, Los Angeles, Minneapolis, Newark, San Francisco or Washington would have made one or more *en route* stops or connections at places such as Dallas, Memphis or Phoenix.¹⁵²³ By August, 2012 Austin had non-stop service to all of these cities.¹⁵²⁴ Given the increased non-stop service to more distant cities, it would not be unexpected to see a dramatic reduction in the number of passengers on the routes to previous connection cities such as Memphis and Phoenix. On the Austin-Memphis route, there was a 45% reduction in daily seat capacity and a 5% increase in frequency.¹⁵²⁵ On the Austin-Phoenix route, daily seat capacity was slightly reduced by 1% while frequency increased by 66%.¹⁵²⁶ Although fragmenting may result in reduced seat capacity on routes to hub cities, there is not always a corresponding decline in frequency. Where an Austin-Washington traveler might previously have changed planes in Memphis, today there is a non-stop flight to Washington in a 70-seat regional jet and the size of the Austin-Memphis flight has been reduced by roughly 45%. Thus, rather than one departure from Austin there are now two, with a corresponding increase of GHG emissions, use of airport slots and gates, and demands on the ATM system.

C) The Impact of down-gauging

Each of the various routes examined above¹⁵²⁷ serves to illustrate the much broader problem of the increasing practice of down-gauging aircraft in Canada, the United States and Western Europe. If the only explanation for the change is that previous aircraft were overly capacious, down-gauging is understandable. However, since down-gauging is coincident with an increase in flight frequency, other factors must be considered. As the preceding discussion demonstrated, these include the need to keep using a valuable slot at a congested airport,¹⁵²⁸ to sub-contract a flight to a lower cost regional carrier or to increase frequency in order to court business travelers.

¹⁵²³ See *OAG Desktop:NA*, *supra* note 582 at 73 – 76.

¹⁵²⁴ See *AAT 812*, *supra* note 1509 at 13-15; *DT 812*, *supra* note 1509 at 64-65; *UST 712*, *supra* note 583 at 105-106.

¹⁵²⁵ See *OAG Desktop:NA*, *supra* note 582 at 315; *DT 812*, *supra* note 1509 at 64.

¹⁵²⁶ See *OAG Desktop:NA*, *supra* note 582 at 422; *STAR 712*, *supra* note 557 at 20.

¹⁵²⁷ The routes are: New York JFK-Los Angeles; Newark-Chicago O'Hare; London Heathrow-Paris CDG; Toronto-Vancouver; Chicago O'Hare-Detroit Metro, Austin-Memphis and Austin-Phoenix.

¹⁵²⁸ At slot-congested airports, incumbents may retain 'grandfather' slots on a "use it or lose it" basis. See A Sentance, "Airport Slot Auctions: Desirable or Feasible?" (2003) 11:1 Utilities Policy 53 at 54 (ScienceDirect).

More often than not, down-gauging practices result in more flights carrying the same number of passengers, with a corresponding increase in take-offs and landings, slot and gate requirements and GHG emissions per passenger.

D) Learning from Japan

While North American and European carriers are offering fewer seats per departure today than they were in the 1990s, the Japanese carriers are moving in the converse direction. Tokyo (Haneda) and Osaka (Itami) are among the world's busiest airports in a country where a premium is placed on punctuality. In August 1992, Japanese carriers offered 16 daily Tokyo-Osaka flights, with an average capacity of 406 seats.¹⁵²⁹ By 2010, demand had nearly doubled and carriers offered 29 daily flights¹⁵³⁰ with an average of 464 seats per flight.¹⁵³¹ Moreover, the majority of those passengers were carried on the Boeing 777, "the most fuel-efficient commercial aircraft currently operating."¹⁵³² While packing over 460 passengers into a single airplane would not be the preferred choice of North American and EU consumers, increasing the number of seats per departure slot is compatible with environmental goals as well as increasing the efficient use of high demand airport infrastructure assets such as slots and gates.

IV UP-GAUGING

Putting the proper value on limited airport infrastructure, and making a genuine commitment to reducing the number of GHGs per passenger, would put into question the North American and European practice of down-gauging and require examination of the practicality of up-gauging. For example, in July 2007, Lufthansa offered three non-stop flights from Frankfurt to New York JFK with a combined seat capacity of 865 per day.¹⁵³³ In February 2011, Lufthansa replaced two

¹⁵²⁹ See *OAG Desktop*, *supra* note 32 at 945. The daily seat offering was 6,500.

¹⁵³⁰ *OWT 710*, *supra* note 1494; *STAR 710*, *supra* note 1496 at 353. The daily seat offering was 13,500.

¹⁵³¹ The most capacious plane was an All Nippon Airlines Boeing 777-300 with 514 seats. See online: List of Aircraft types (Domestic), ANA <www.ana.co.jp/www/japan/e/local/dom/airinfo/aircraft/index.html>.

¹⁵³² As of 2007, see Stefan Gössling & Paul Peeters, "It Does Not Harm the Environment!": An Analysis of Industry Discourses on Tourism, Air Travel and the Environment" (2007) 15:4 *Journal of Sustainable Tourism* 402 at 411 (Taylor & Francis Online).

¹⁵³³ These were two 322-seat Boeing 747-400s and one 221-seat Airbus A340-300. *STAR 707*, *supra* note 885 at 79.

of its flights with a single Airbus A380,¹⁵³⁴ resulting in a reduction of the daily seat capacity of only 17 seats or 1.97% but a reduction in the number of flights by 33%.¹⁵³⁵

A) Up-Gauging and S-Curve

Inherently, it would seem that up-gauging is counter-intuitive; if higher frequencies imply disproportionately higher revenue, any reduction in frequency would seem to reduce revenue. In the case of Lufthansa's Airbus A380, an argument can be made that the level of service offered is better than that of competing aircraft¹⁵³⁶ and this factor might help mitigate a potential S-Curve impact. However, the S-Curve must be examined in context. In the summer of 2008, four airlines operated eight daily Frankfurt-New York flights, of which Lufthansa offered five.¹⁵³⁷ Even after reducing its flight frequency, Lufthansa is still the dominant carrier on the route. Further, the fact that Lufthansa had received antitrust immunity to cooperate with United and Air Canada in the A++ MNJV in 2009¹⁵³⁸ means that Lufthansa is part of a group that offers five flights a day between Frankfurt and New York;¹⁵³⁹ the only other airlines offering non-stop service are Delta¹⁵⁴⁰ and Singapore Airlines.¹⁵⁴¹

B) Metal Neutrality is compatible with Up-gauging

If the partners to an MNJV, such as A++, are presumed to be indifferent with respect which airline operates a given flight,¹⁵⁴² they might also be indifferent as to the number of flights and size of aircraft as long as profits remained stable and the level of service did not decline. Thus, it is possible that the A++ partners, aware that they were dominant on the Frankfurt-JFK route,

¹⁵³⁴ Lufthansa's Airbus A380 has 526 seats. Lufthansa, Press Release, "Lufthansa flying to New York with the A380" (13 December 2012) online: Lufthansa <presse.lufthansa.com/en/news-releases/singleview/archive/2010/december/13/article/1838.html>

¹⁵³⁵ The other flight is a Boeing 747-400 with 322 seats. Star Alliance, *Star Alliance Timetable: May 1st 2011 – July 17th 2011*, at 164.

¹⁵³⁶ See Lufthansa, "A380: Be part of it", online: Lufthansa <a380.lufthansa.com/TAKEPART/#/DE/EN/HOME>.

¹⁵³⁷ Continental offered one flight, CO Flight 51; Delta offered one flight, DL Flight 107; Lufthansa offered five flights: LH Flight 484, LH Flight 400, LH Flight 402, LH Flight 404 and LH Flight 406; and Singapore Airlines offered a single flight, SQ Flight 26. See *SkyGuide*, *supra* note 30 at 169. All served New York JFK, except CO Flight 51, LH Flight 484 and LH Flight 402, which served Newark airport in New Jersey. Newark Liberty International Airport and New York JFK are roughly the same distance from Manhattan.

¹⁵³⁸ See above Chapter 3) IV) METAL NEUTRALITY. Continental has since merged with United.

¹⁵³⁹ Lufthansa's Airbus A380 flight number is LH Flight 400, United lists the flight under UA Flight 8841. In addition to the two flights to JFK, Lufthansa flies daily to Newark, and United also operates two flights from Frankfurt to Newark. See *UST 712*, *supra* note 583 at 171. Since its acquisition of Continental Airlines and their merger in March 2012, Newark has become United's primary East Coast hub.

¹⁵⁴⁰ Delta offers a single daily flight operated by a 208-seat Boeing 767-300. See *DT 812*, *supra* note 1509.

¹⁵⁴¹ See *STAR 712*, *supra* note 557 at 20. See also "Singapore Airlines A380 to fly", *supra* note 815.

¹⁵⁴² See *supra* note 1538.

decided to significantly reduce the number of flights while very marginally reducing the number of seats offered daily. In other words, cognizant of the low probability of revenue dilution as a result of a frequency reduction, the A++ partners made a business-based decision which reduced the number of flights operated, the number of air traffic movements to be handled by ATM system, the number of airport slots and terminal gates used, the amount of fuel consumed and the number of tons of GHGs emitted. Had it not been for the A++ joint venture, Lufthansa's change in the frequency of service might not have been as feasible.

C) Up-Gauging makes business sense

As observed earlier, the shift by major American carriers to regional carriers is based on cost-reduction considerations: employees at regional carriers earn less than their colleagues at major carriers.¹⁵⁴³ However, as the price of fuel increases,¹⁵⁴⁴ the cost advantages to an airline of contracting a regional carrier to operate 2 flights using a 50 passenger regional jet as compared to the airline operating a single flight using one of its own 100-passenger jets, declines. Thus, in May 2012, Delta announced plans to acquire 88 100-seat Boeing 717s and require its commuter partners to dispose of 281 50-seat regional jets, cap the 70-seat regional jet fleet at 102, and increase by 70 the size of the 76-seat two-class regional jet fleet to 325.¹⁵⁴⁵ After implementation of the plan, the percentage of Delta's flights operated by the parent will increase from 54% to 64% in an up-gauging "precedent that could spell a sea-change in the structure of the US air transport business."¹⁵⁴⁶ Indeed, almost immediately, the issue was raised by an analyst with the President of United Continental Holdings during a conference call to discuss that airline's Q2 2012 earnings.¹⁵⁴⁷ Within short order, United¹⁵⁴⁸ and American Airlines¹⁵⁴⁹ followed suit.

¹⁵⁴³ See generally Silke Januszewski Forbes & Mara Lederman, "The Role of Regional Airlines in the US Airline Industry" in Darin Lee, ed, *Advances in Airline Economics: The Economics of Airline Institutions, Operations and Marketing*, vol 2 (Amsterdam: Elsevier, 2007) 193.

¹⁵⁴⁴ A 2005 report from the US Government Accountability Office observed that cost of aviation fuel had increased between 1998 and 2005 by 280%. See US, Government Accountability Office, *Commercial Airline Bankruptcy and Pensions* (GAO-05-945) (2005) at 6.

¹⁵⁴⁵ Delta Airlines, News, "Delta to Take Delivery of Boeing 717 Aircraft Upon Ratification of Pilot Tentative Agreement" (22 May 2012), online: Delta <news.delta.com/index.php?s=43&item=1624>.

¹⁵⁴⁶ Gregory Polek, "Delta Deal Seals Fate of Hundreds of 50-seat Jets", *AIN Air Transport Perspective* (2 July 2012) online: AIN online <www.ainonline.com/aviation-news/2012-07-02/delta-deal-seals-fate-hundreds-50-seat-jets>.

¹⁵⁴⁷ See "United Continental Holdings Management Discusses Q2 2012 Results - Earnings Call Transcript", *Seeking Alpha* (26 July 2012) online: Seeking Alpha <seekingalpha.com/article/753111-united-continental-holdings-management-discusses-q2-2012-results-earnings-call-transcript>.

¹⁵⁴⁸ Gregory Polek, "United To Add 30 E175s to Express Network", *AIN Online* (30 April 2013) online: AIN Online <www.ainonline.com/aviation-news/2013-04-30/united-add-30-e175s-express-network>.

Regulators will be delighted to see these steps towards up-gauging of aircraft. In 2008, the FAA proposed a two-part landing fee to help relieve congestion at major airports.¹⁵⁵⁰ At the time of the proposal, regional jets accounted for over a third of all of the departures from two of America's busiest airports; Newark and Chicago O'Hare¹⁵⁵¹ and the previous Summer severe airport congestion had provoked flight delays, cancellations, and prolonged tarmac holds.¹⁵⁵² The FAA's fee would consist of a per-operation charge and a weight-based charge, and would allow the airport operator to consider congestion when setting the amount of the per-operation charge.¹⁵⁵³ The FAA foresaw the fee as providing an up-gauging incentive for airlines:

By raising the costs of the congested facilities, the airport operator would provide an incentive for current or potential aircraft operators to (1) adjust schedules to operate at less congested times (if they exist); (2) use less congested secondary or reliever airports to meet regional air service needs; or (3) use the congested airport more efficiently by up-gauging aircraft."¹⁵⁵⁴

The ability of airports to implement a two-part landing fee was approved in July 2008,¹⁵⁵⁵ after which America's airlines unsuccessfully sought judicial review.¹⁵⁵⁶ At the very least, the two-part landing fee will discourage down-gauging as the potential per-operation charge is intended to promote fewer departures, with larger planes. By way of example, for every three 50-seat regional flights Delta's partners do not fly, two of their 76-seat regional jets can serve the same number of passengers. Whether up-gauging is driven by higher fuel prices or by the two-part landing fee, or a combination thereof, if all the aircraft involved are of the same generation,¹⁵⁵⁷ it will almost always result in lower GHG emissions. Although there are obviously cases where

¹⁵⁴⁹ See American Airlines, News Release, "American Airlines Announces Large Regional Jet Purchase" (12 December 2013), online: American Airlines <hub.aa.com/en/nr/pressrelease/american-airlines-announces-large-regional-jet-purchase> (visited May 22, 2014).

¹⁵⁵⁰ *Policy Regarding Airport Rates and Charges*, 73 Fed Reg 3310 (2008) [*Policy 3310*].

¹⁵⁵¹ See David Hollander, "How will Future Demand Be Accommodated?" (Presentation delivered at the 33rd Annual FAA Aviation Forecast Conference, Washington, DC, 11 March 2008) at slide 12 [unpublished], online: Federal Aviation Administration <www.faa.gov/news/conferences_events/aviation_forecast_2008/agenda_presentation/media/david_hollander.pdf> .

¹⁵⁵² See Monica Hargrove Kemp, "Mechanisms for Addressing Capacity-Related Delays at US Airports" (2009) 22:2 Air & Space Law 1 at 18 (HeinOnline). Tarmac holds are lengthy periods of delay prior to take-off or after landing. Their frequency in 2007 provoked legislative change in 2009. See 14 CFR § 259.4 (2014).

¹⁵⁵³ *Policy 3310*, *supra* note 1550 at 3315.

¹⁵⁵⁴ *Ibid* at 3313.

¹⁵⁵⁵ *Policy Regarding Airport Rates and Charges*, 73 Fed Reg 40430 (2008).

¹⁵⁵⁶ These were denied on July 13, 2010 by the US Court of Appeal for the District of Columbia. See *Air Transport Association of America v Department of Transportation*, 613 F (3d) 206, 392 US App DC 41 (DC Cir 2010).

¹⁵⁵⁷ Apples-to-apples comparison is important. The carbon-fiber 210-seat Boeing 787, designed and built after 2005, has lower GHGs per person than an aluminum-shelled 416-passenger Boeing 747-400, designed and built two decades earlier.

airlines will up-gauge of their own volition, the S-curve and other factors discourage it and therefore progress in this area may be slower than would be ideal.

D) The Limits of up-gauging.

While it is clear that more capacious aircraft will be heavier than their less capacious competitors, in some cases they will weigh more kg/seat. For example, the 50-seat Embraer ERJ145 weighs 11,667 kg or roughly 233 kg/passenger.¹⁵⁵⁸ A twin-engine 345-seat Airbus A300 weighs 85,910kg or roughly 249 kg/passenger.¹⁵⁵⁹ This difference is due to the fact that the more capacious aircraft can fly 1,000 km further and needs larger heavier wings to carry the extra fuel. However, if two aircraft based on similar technology and offering similar range are compared, the results may favor the more capacious aircraft. For example the Canadair CRJ200 weighs 13,740 kg or roughly 274.8 kg/passenger¹⁵⁶⁰ and has a similar range and comparable age to the Airbus A300.¹⁵⁶¹ Based on the above figures, the A300 will weigh less per passenger than the CRJ200 over a similar range at any time the A300 has a load-factor exceeding 84%.¹⁵⁶² Further, a recent European study suggests that up-gauging on short-haul routes could reduce GHGs and airport congestion.¹⁵⁶³ It compared the relative environmental impacts of wide-body and narrow-body aircraft on short haul routes and concluded:

Increasing aircraft size, switching from an A320 (150 seats) fleet to a B747 (524 seats) fleet and adjusting the service frequency to offer similar seating capacity will increase [local air pollution] but decrease climate change impact. When these impacts are monetized and aggregated the analysis showed that environmental benefits will result. In addition, increasing aircraft size will also reduce noise pollution around airports.¹⁵⁶⁴

The study noted, however, that the majority of the most capacious aircraft are designed for long-haul routes and conceded that this fact limits the potential GHG gain from their use.

¹⁵⁵⁸ Technical Data from airliners.net. Online: [Airliners.net <www.airliners.net/aircraft-data/stats.main?id=198>](http://www.airliners.net/aircraft-data/stats.main?id=198) (visited May 22, 2014).

¹⁵⁵⁹ Assuming 345 passengers in a two-class configuration, technical data from airliners.net. Online: [Airliners.net <www.airliners.net/aircraft-data/stats.main?id=17>](http://www.airliners.net/aircraft-data/stats.main?id=17) (visited May 22, 2014).

¹⁵⁶⁰ Technical Data from airliners.net. Online: [Airliners.net <www.airliners.net/aircraft-data/stats.main?id=125>](http://www.airliners.net/aircraft-data/stats.main?id=125) (visited May 22, 2014).

¹⁵⁶¹ In fact the Airbus A300 first flew in October 1972 and the Canadair CRJ200 first flew in 1995.

¹⁵⁶² With an 84% load factor of 313 passengers, the A300 weighs 274.47 kg/passenger. Fuel efficiency will also depend on engines, routes flown and a variety of other factors.

¹⁵⁶³ Moshe Givoni & Piet Rietveld, *Comparing the Environmental Impact from Using Large and Small Passenger Aircraft on Short Haul Routes*, Working paper No 1033 (Transport Studies Unit, Oxford University Centre for the Environment, 2008), online: [Transport Studies Unit, Oxford University Centre for the Environment <www.tsu.ox.ac.uk/pubs/1033-givoni-rietveld.pdf>](http://www.tsu.ox.ac.uk/pubs/1033-givoni-rietveld.pdf) (visited May 22, 2014).

¹⁵⁶⁴ *Ibid* at 16.

E) Large Aircraft for Short Ranges (LASR)

An aggressive GHG emissions reduction strategy requires the design of a new type of aircraft, a purpose-built large short-haul aircraft:

To make a better use of available runway capacity and to reduce the environmental impact from aircraft operation, especially at large airports, a large (wide body) aircraft designed for short haul operation would be required.¹⁵⁶⁵

Another study argues that a Large Aircraft for Short Ranges (LASR) could have the capacity of a current 300-passenger wide-body jet,¹⁵⁶⁶ without the weight and performance characteristics of current long-haul aircraft,¹⁵⁶⁷ and engineers are examining the feasibility of creating such an aircraft.¹⁵⁶⁸ If a large aircraft were purpose-designed for short-range routes, it would not need the large fuel tanks of long-range aircraft, or the large wings to carry the heavy fuel tanks. It is possible, with existing technology, to design and build a LASR that would weigh 26% less and be 22% more fuel-efficient than similar-sized long-range aircraft.¹⁵⁶⁹

If an LASR had a 300-passenger capacity, it would easily replace four 72-seat Embraer 170 aircraft or two 150-seat Airbus A320-NEO aircraft. If a single larger aircraft is generally more efficient than multiple smaller aircraft, this efficiency is further leveraged when the larger aircraft is a completely new design with much lower GHG emissions than predecessor aircraft of the same size. Compared to the operation of many smaller aircraft, a single LASR could reduce the GHG emissions by 25% or more, while also reducing demands on airport infrastructure and ATM. Such dramatic reductions in GHG emissions/flight will be required if the airline industry continues to grow. Otherwise, there will not be a true reduction in GHG emissions from aviation.¹⁵⁷⁰

¹⁵⁶⁵ *Ibid* at 18.

¹⁵⁶⁶ This was the idea behind the design of the Airbus A300 in 1974. See Gernot Klepper, "Entry into the Market for Large Transport Aircraft" (1990) 34:4 *European Economic Review* 775 at 780 (ScienceDirect).

¹⁵⁶⁷ Gaetan KW Kenway et al, "Reducing Aviation's Environmental Impact Through Large Aircraft For Short Ranges" (Paper delivered at the 48th AIAA Aerospace Sciences Meeting Including the New Horizons Forum and Aerospace Exposition, Orlando, Florida, 4 - 7 January 2010), AIAA 2010-1015 (American Institute of Aeronautics and Astronautics, 2010), online: University of Toronto Institute for Aerospace Studies <oddjob.utias.utoronto.ca/dwz/Miscellaneous/LASROrlando2010.pdf> (visited May 22, 2014).

¹⁵⁶⁸ See Muharrem Mane et al, "Exploration of Designing Short-Range High-Capacity Aircraft" (Paper delivered at the 12th AIAA Aviation Technology, Integration, and Operations (ATIO) Conference and 14th AIAA/ISSMO Multidisciplinary Analysis and Optimization Conference, Indianapolis, Indiana, 17-19 September 2012), AIAA 2012-5496 (American Institute of Aeronautics and Astronautics, 2012) (Aerospace Research Central).

¹⁵⁶⁹ Kenway, *supra* note 1567.

¹⁵⁷⁰ See above Part II A) Intensity-Based Targets.

Despite its potential, the LASR will never fly unless a business case can be made for its launch. Given airlines' interests in providing frequent flights to cater to business travelers and the consequent use of smaller aircraft in order to maintain profitable load factors, engineers are not optimistic that the market conditions will favor the creation of a LASR in the near future.¹⁵⁷¹ If many airports were to adopt the two-part landing fee discussed above, airlines would be encouraged to up-gauge aircraft, but this is not sufficient in and of itself to facilitate the creation of the LASR. Likewise, Delta's up-gauging plans are considerable and will have some positive environmental outcome, but they are in no way connected to the launch of the LASR and the advancements are incremental. Similarly, increasing fuel prices, in and of themselves, are likely to do little more than encourage the development of more fuel efficient engines. In sum, the LASR constitutes a significant leap in efficiency over the aircraft flying today, but it will require greater incentive than that provided by two-part landing fees and higher fuel prices if it is to leave the drawing board.

V A Legal Change in favor of up-gauging.

Up-gauging only makes commercial sense if the larger aircraft can maintain a profitable load factor and if the above-average yields associated with the S-Curve can be preserved. In a hypothetical market where an average of 210 people a day choose airline X to fly from Foxtrot to Sierra, airline X can serve the market in different ways. Some of its options are outlined below:

Choice	# flights	Plane	Size	Total	Load Factor
A	5	ERJ145	50-seat	250	84%
B	3	ERJ175	76-seat	228	92%
C	2	A319	120-seat	240	88%
D	1	A330-200	290-seat	290	72%

In this example, if airline X moves from option A to option B its frequency drops, it up-gauges its flights and its load factor increases. However further up-gauging by moving to options C or D results in lower load factors. In addition, depending on the nature of the route and the number of competitors, the S-Curve might influence the airline to choose options A or B in order to maintain a profitable load factor and also attract high-yield business passengers who favour frequency. Airlines will only engage in up-gauging where both load factors and above-average yields can be attained and this may only be feasible where the airline is dominant on a route,

¹⁵⁷¹ Givoni & Rietveld, *supra* note 1563 at 18.

such as where it has a monopoly,¹⁵⁷² or is a member of an MNJV that dominates or monopolizes a route.¹⁵⁷³ Thus, for example, Lufthansa's February 2011 substitution of a single Airbus A380 for two smaller wide-body jets on the Frankfurt-New York JFK route was facilitated by that airline's participation in the A++ MNJV and the consequent mitigation of S-Curve concerns.

In approving the creation of the A++ MNJV, the US DOT identified a number of resulting "substantial public benefits"¹⁵⁷⁴ which included "efficiencies that would facilitate the introduction of new capacity, give consumers more travel options and shorter travel times, and reduce fares."¹⁵⁷⁵ In light of the Lufthansa up-gauging example, perhaps the list of 'substantial public benefits' should be expanded to include 'reduced GHG emissions associated with the operation of the joint venture as contrasted with those of the individual airlines involved.' This policy would signal that regulators understand that when, as with the A++ MNJV, two or more competitors can share a single aircraft and divide its capacity among them, environmental efficiencies are gained.

The legal underpinning of the A++ MNJV is the codeshare, the idea that one carrier can fly the plane and it and others might share in marketing the seats. The A++ MNJV goes well beyond this, but even a basic codeshare agreement may suffice to facilitate significant up-gauging and the consequent reduction in GHGs. As will be explained below, although codeshare agreements are most frequently entered into among allied carriers, this is by no means a condition precedent. The quest to reduce GHG emissions through up-gauging may warrant the conclusion of codeshare agreements even among competitors. Although this idea may appear unorthodox, it will be seen below that it is not without precedent and is worthy of further exploration.

A) Codeshare Agreements

Codeshare agreements allow two or more airlines to sell space on the same flight as if it were their own. The term comes from the fact that the flight bears the two-digit IATA flight code for

¹⁵⁷² Air Canada has a monopoly on the St. John's–London route. See above Chapter 3 IV A) Are MNJVs monopolistic.

¹⁵⁷³ The A++ MNJV is alone is providing scheduled service between Canada and Germany.

¹⁵⁷⁴ US, Department of Transportation, Order 2009-7-10 (2009) at 4.

¹⁵⁷⁵ *Ibid* at 5.

each of the airlines involved.¹⁵⁷⁶ The airline the aircraft and crew of which are used is the operating carrier and the airlines which sell the seats and list them as their own are the marketing carriers. For the purposes of codesharing a large aircraft to reduce emissions, it will be assumed that the codesharing airlines have similar standing and reputation in the marketplace.

1) Free-Sale Model

At present, most US domestic codesharing agreements, such as those which existed between former Star Alliance partners United and US Airways, employ the free-sale model:

Under a free-sale agreement, the operating carrier maintains and controls the seat inventory but allows its code-share partner(s) to market and sell seats on designated code-share flights under their own marketing code. Hence, both the operating and code-share carriers sell seats out of the same general inventory, and the operating carrier receives all of the ticket revenue, regardless of which carrier actually sells the seat. In return for selling a seat on a code-share flight, the operating carrier usually pays the marketing carrier a nominal commission to cover costs (for example, the cost to the marketing carrier of issuing its frequent-flyer miles).¹⁵⁷⁷

In this model, while the operating carrier has virtually all the revenue accrual opportunities, it also faces virtually all of the risks associated with offering service over the route in question. The marketing carrier is little more than a sales agent, paying only for the seats it actually sells and receiving immediate confirmation of bookings made under its code for seats on the operating carrier's plane.¹⁵⁷⁸ Other codeshare models offer more equitable allocation of risk among the cooperating airlines, and the ability for these to be tailored to the route(s) in question.

2) Block Space Agreements

Other codeshare arrangements may use a block space model, where the marketing carrier buys, and resells as its own, a percentage of seats on the operating carrier's aircraft. Here, the two carriers compete with each other with respect to the sale of the seats within their allotment and thus the seats sold by the marketing carrier are essentially a "virtual flight"¹⁵⁷⁹ on the aircraft of

¹⁵⁷⁶ See generally *Commissioner of Competition v Air Canada*, *supra* note 301 at 9 (Affidavit of Hugh Dunleavy, 24 August 2011). See also Carolyn Hadrovic, "Airline Globalization: A Canadian Perspective" (1990) 19:1 Transp LJ 193 at 193 (HeinOnline).

¹⁵⁷⁷ Harumi Ito & Darin Lee, "Domestic Code Sharing, Alliances, and Airfares in the US Airline Industry" (2007) 50:2 JL & Econ 355 at 359 (HeinOnline).

¹⁵⁷⁸ Steer Davies Gleave, *Competition Impact of Airline Code-Share Agreements: Final Report* (Brussels: Directorate General for Competition, European Commission, 2007), Appendix, online: European Commission <ec.europa.eu/competition/sectors/transport/reports/airlinecodeshare.pdf> (visited May 22, 2014).

¹⁵⁷⁹ *Ibid* at 11.

the operating carrier. One observer described the block seat model as "two planes flying wing to wing."¹⁵⁸⁰ There are two principal forms of block seat arrangements:

- 1) **Soft block:** The marketing carrier buys a defined block of seats from the operating carrier and sells these through its own distribution channels. The marketing carrier may return unsold seats to the operating carrier without penalty 72 hours before the flight.¹⁵⁸¹
- 2) **Hard block:** Here the marketing carrier irrevocably buys a defined number of seats on the operating carrier's flight at an agreed price and thus forfeits the purchase price if the seats are unsold.¹⁵⁸² Thus the airlines are partners in operating the flight and competitors in marketing the seats. Each stands to suffer a financial loss to the extent it does not sell its complement of allocated seats.¹⁵⁸³

Under both versions of the block seat model, the marketing and operating carriers compete to sell seats on the same flight.¹⁵⁸⁴ Each will "independently sell and market [its] fares on the code share service. Each will set its own prices; determine its own fare classes and rules; operate its own independent yield management systems and; sell its products through its respective independent sales networks."¹⁵⁸⁵ Clearly, the degree of risk-sharing undertaken by the marketing carrier is much greater with the hard block arrangement than with the soft block or free-sale models, but it is also clear that with the hard block, and to a lesser extent with the soft block models, the marketing carrier is competing with the operating carriers with respect to the sale of seats on the same flight.¹⁵⁸⁶

These arrangements can cover a wide number of routes or be limited to a single route between two cities. Consider the Air Canada-Sabena arrangement of the early 1990s. The two codeshared only on a segment of a single route: the Brussels-Montreal portion of Sabena's Brussels-

¹⁵⁸⁰ This was a description of John McCaffrey, then of Pan Am, in conversation with the author, September 1990.

¹⁵⁸¹ Gleave, *supra* note 1578 at 29. The actual period may vary; 72 hours would be a typical example.

¹⁵⁸² *Ibid* at 11, 84.

¹⁵⁸³ *Code Share Arrangement between Airlines of Papua New Guinea Limited, and Pacific Blue Airlines (Aust) PTY Limited and Virgin Blue Airlines PTY Limited*, Submission in Support of Application for Authorisation under Section 70 of Independent Competition and Consumer Commission Act (10 September 2008) at 4, online: Docstoc <www.docstoc.com/docs/36409840/CODE-SHARE-ARRANGEMENT-BETWEEN-AIRLINES-OF-PAPUA-NEW-GUINEA> (visited May 22, 2014).

¹⁵⁸⁴ *Ibid* at 20.

¹⁵⁸⁵ *Ibid* at 25.

¹⁵⁸⁶ *Ibid* at 20.

Montreal-Chicago route.¹⁵⁸⁷ Sabena offered connections to Montreal from Africa and Europe,¹⁵⁸⁸ and Air Canada sold seats in Montreal, Quebec City and Ottawa, cities with large francophone populations. The two airlines sold seats in different markets, and competed in selling tickets on this flight.¹⁵⁸⁹

B) Domestic Codeshare Arrangements

One of the earliest codeshare agreements was concluded in 1967 when Allegheny Airlines (now US Air) wanted to abandon service on low-density routes. Faced with regulations that required it to maintain service, it turned the routes over to commuter carriers who agreed to use the "AL" code.¹⁵⁹⁰ Since then, the practice of placing major carriers' 'codes' on the services of commuter carriers has mushroomed to the point that it is now the most common example of codeshare agreements. Many consumers still believe that major carriers provide service to destinations they have long ago abandoned. For example, Air Canada no longer serves New Brunswick, Prince Edward Island or Quebec City, and its Saskatchewan service is limited to non-stop routes to Toronto.¹⁵⁹¹ However, its route maps show a trans-Canadian network serving all 10 provinces and linking most major centers in the country with at least four other Canadian cities.¹⁵⁹² The gap between the routes Air Canada no longer serves and those which figure on its route maps is filled by hundreds of flights operated by its regional partner, Air Canada Express.

Most major US carriers follow similar practices, yet there can be a significant gap between the quality of service offered by the marketing carrier compared to its regional operating partner. For example, United used to offer films on flights whose duration was 3 hours or longer, but it now uses an Embraer 170 operated by Shuttle America (doing business as United Express) to operate its 4.5 hour Montreal-Houston service and many other routes the flight times of which exceed 3 hours. The Embraer 170 has no in-flight entertainment. The idea that a passenger may book a flight thinking it will travel on a "Prestige Airlines" flight but actually travel on a flight

¹⁵⁸⁷ SN Flights 536/535 was a Brussels-Montreal-Chicago round-trip flown by Sabena Airlines. AC Flights 1035/1036 were Air Canada's flight codes for its Brussels-Montreal service. See *OAG Desktop*, *supra* note 32 at 256, 260, 328, 838.

¹⁵⁸⁸ Benin, Senegal, Rwanda, South Africa, France, Germany, the Netherlands, Israel, Italy and Spain. See *ibid* at 837 - 843.

¹⁵⁸⁹ This flight was the only flight involved in the codeshare agreement between the two airlines and Sabena did not code share on Air Canada's Toronto-Manchester-Brussels service.

¹⁵⁹⁰ Hadrovic, *supra* note 1576 at 196. "AL" was the two-letter IATA code for Allegheny Airlines.

¹⁵⁹¹ See *ACT 713*, *supra* note 614.

¹⁵⁹² *Ibid*.

operated by a regional partner offering a lower quality of service has been criticized as "deceptive" and an "unfair practice that deceives, misleads, and confuses consumers in violation of Section 411 of the Federal Aviation Act."¹⁵⁹³

The type of code share arrangement envisaged by this thesis to reduce GHGs is not one involving the sub-contracting of an airline's domestic routes to a commuter carrier, but rather a limited scope codeshare between two competitors of roughly equal commercial standing, level of service, and reputation. For the purposes of the following discussion, it will be assumed that the two competitors negotiate a hard block codeshare arrangement where each irrevocably commits to purchase 50% of the aircraft's seats and markets those seats through its own distribution channels in competition with its rival.

1) US examples

For many years, prior to being absorbed by Delta in 2010, Northwest Airlines offered no service between Arizona and California. This put the carrier, which offered non-stop service to Tokyo from San Francisco and Los Angeles and five other US cities,¹⁵⁹⁴ at a competitive disadvantage in its international market with respect to its arch-rival United Airlines, which offered service from Phoenix to Tokyo via either San Francisco or Los Angeles.¹⁵⁹⁵ To counter this disadvantage, Northwest concluded a codeshare agreement with US Air with respect to certain flights between Arizona and California and also between San Francisco and Los Angeles. This enabled the carrier to compete with United for passengers in the Arizona-Asia and Arizona-Australia markets.¹⁵⁹⁶ Prior to its absorption by Delta, Northwest concluded a similar agreement¹⁵⁹⁷ with America West¹⁵⁹⁸ to facilitate its services to Australasia from Arizona and

¹⁵⁹³ American Airlines submission in US, Department of Transportation, Docket 49223 (1994), cited in Paul Stephen Dempsey & Laurence E Gesell, *Airline Management Strategies for the 21st Century*, 2d ed (Chandler, Ariz: Coast Aire Publications, 2006) at 639.

¹⁵⁹⁴ These were Detroit, Honolulu, Minneapolis, Portland and Seattle. See Northwest Airlines, *Northwest Airlines System Timetable: June 8, 2006 - August 21, 2006*.

¹⁵⁹⁵ United also offered non-stop service to Tokyo from 7 US cities. These were Chicago, Honolulu, Los Angeles, New York, San Francisco, Seattle and Washington. See United Airlines, *United Worldwide Timetable: July 2006*.

¹⁵⁹⁶ This agreement was in effect from roughly 1994 to the January 7, 1999. The Northwest-Continental codesharing agreement covered approximately 850 domestic and international flights to 95 destinations (as a result of Northwest's January 27, 1998, acquisition of voting control of Continental Airlines). The agreement was reprised in 2008 after Continental began its merger talks with United (on file with author).

¹⁵⁹⁷ The date of this agreement is hard to confirm as both carriers have since merged with others. Northwest provided some financial assistance to America West in August 1991. See online: Gale Directory of Company Histories: America West Holdings Corporation, online: Answers <www.answers.com/topic/america-west-holdings> (visited May 23, 2014). The agreement was in place in 1999 (on file with author).

¹⁵⁹⁸ America West bought US Air in 2005. At the time, America West was then the 9th largest US airline.

Nevada,¹⁵⁹⁹ virtually the only two states from which Northwest could not offer competitive service to Asia. As with the Northwest-US Air agreement, the flights were not listed in Northwest's timetable, but only as connections to Australasia.

2) Mexican examples

The US experience proves that domestic carriers can codeshare on selected routes while competing vigorously on others, all in the best interests of consumers and ultimately the environment to the extent that the associated down-gauging contributes to a reduction in emissions. The Mexican experience takes this theory a step further. Prior to 2010, when Mexicana ceased operations, Mexico's two major airlines— AeroMéxico and Mexicana¹⁶⁰⁰— were owned by the same government-run holding company, the Corporación Internacional de Aviación, S.A. de C.V. (Cintra). AeroMéxico was a SkyTeam member and Mexicana was a member of the Star Alliance. Notwithstanding their common owner, they competed aggressively against each other, siphoning passengers to the connecting flights of foreign partners rather than to those of their domestic rival. Yet on a few select domestic routes, these two fierce competitors codeshared with each other.¹⁶⁰¹

On the Acapulco–Mexico route the two codeshared all of their flights. Between them, they offered seven flights a day and their flights were evenly spaced. This codeshare was justified on the basis that a quick connection to Acapulco was needed from virtually every international flight that arrived in Mexico City. Thus, the two airlines codeshared on every flight that they offered between Mexico and Acapulco, but in every other sense they competed.¹⁶⁰² Perhaps the best description for the Mexican codeshares would be "limited co-existence when necessary, but not necessarily co-operation." The codeshare arrangement covered six routes¹⁶⁰³ served by only one of the two carriers and seven routes¹⁶⁰⁴ served by both. These codeshares enhanced competition, giving international passengers a choice of carriers and itineraries.

¹⁵⁹⁹ Without the agreement, Northwest would have had to route the traffic via Minneapolis.

¹⁶⁰⁰ Mexicana ceased operations on August 28, 2010.

¹⁶⁰¹ All the data in this section is based on AeroMéxico and Mexicana timetables for 1998 and 1999.

¹⁶⁰² To Europe, AeroMéxico and its partner Air France each offered Mexico-Paris flights. Mexicana routed Europe-bound passengers to United's Chicago-Paris service or Lufthansa's Mexico-Frankfurt flights.

¹⁶⁰³ Between Mexico and each of Cd. del Carmen, Huatulco, Mexicali, Santiago and Torreon; and Merida–Miami.

¹⁶⁰⁴ Three of the seven routes made it easier to get to Mexico's main tourist resorts. These were Mexico to Acapulco and Ixtapa and Miami–Cancun. Other routes were from Mexico to Hermosillo, Oaxaca, Veracruz and New York. In the last case, AeroMéxico bought seats on a Mexicana flight to Newark, but Mexicana did not reciprocate by buying seats on AeroMéxico services to JFK.

C) Codeshare Lessons Learned

The three codeshare examples set out above— Northwest-US Air, Northwest-America West and AeroMéxico-Mexicana— confirm that rival airlines may enter into limited-scope codeshare agreements to further their individual objectives.

In each case, the codeshare agreements facilitated increased competition over an intercontinental route such as Phoenix-Tokyo or Acapulco-Frankfurt, and did so without being any more comprehensive than absolutely necessary. The three examples are also situations where the two codeshare partners were equals; these were not situations where a major carrier was putting its code on the services of a regional airline affiliate or a smaller local airline. Each of the five airlines chosen for these examples —AeroMéxico, America West, Mexicana, Northwest and US Air — was a full network carrier with a nationwide route system and international services. More importantly, in each case the carriers participating in these codeshare agreements were not members of a common alliance; their only link was the codeshare agreement described here. In every other case they were fierce competitors whose allies were elsewhere.

If "international connectivity" can justify an inter-rival codeshare agreement or be the basis for a grant of antitrust immunity (ATI) approval, similar treatment should be given for initiatives that would reduce greenhouse gas emissions from commercial aviation. It is clear that real progress in cutting greenhouse gases will only come from the adoption of aircraft such as the LASR.¹⁶⁰⁵ However, aircraft such as these will never come into existence in a world where fragmented traffic carried by regional carriers, and frequent flights driven by S-Curve concerns, is the norm. The next section of this chapter will explore the grounds for ATI approval in different jurisdictions and lay the groundwork for the argument that "reducing greenhouse gases" should fall within any "public interest" justification for ATI relief.

VII ANTITRUST IMMUNITY PRINCIPLES

Most major jurisdictions in the Global North have competition or anti-monopoly legislation.¹⁶⁰⁶ The Treaty on the Functioning of the European Union (TFEU)¹⁶⁰⁷ prohibits "all agreements

¹⁶⁰⁵ See above Part IV E) *Large Aircraft for Short Ranges (LASR)*.

¹⁶⁰⁶ See generally Edward Montgomery Graham & J David Richardson, *Global Competition Policy* (Washington, Peterson Institute 1997). The US Justice Department website provides links to the websites of competition authorities in over 80 countries. See US Department of Justice, "Antitrust Division, Contact Information, Antitrust Sites Worldwide", online: US Department of Justice <www.justice.gov/atr/contact/otheratr.html>. The US Federal Trade Commission provides a slightly more detailed list on its website. See US Federal Trade Commission,

between undertakings, decisions by associations of undertakings and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the internal market."¹⁶⁰⁸

Similarly, section 90.1(1) of Canada's Competition Act gives federal authorities the ability to take action against "an agreement or arrangement — whether existing or proposed — between persons two or more of whom are competitors prevents or lessens, or is likely to prevent or lessen, competition substantially in a market."¹⁶⁰⁹

The American policy in these matters is well known¹⁶¹⁰ and plainly stated:

Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several states, or with foreign nations, is declared to be illegal.¹⁶¹¹

Nonetheless, there are sometimes policy reasons for allowing a coordination of efforts or even the lessening of competition, where such a measure produces a greater good to society. Indeed, much of the debate surrounding the passage of the 1890 predecessor to the current US Antitrust law focused on the ability of monopolies to decrease consumer prices.¹⁶¹² This suggests that a monopoly whose efficiencies decreased consumer prices might be acceptable in certain situations.¹⁶¹³ Thus the Secretary of Transport may exempt an airline from the application of the antitrust laws where the exemption is in the "public interest."¹⁶¹⁴

In like manner, Canada's Competition Act directs federal authorities to take no enforcement action where "the agreement or arrangement has brought about or is likely to bring about gains in efficiency that will be greater than, and will offset, the effects of any prevention or lessening of competition that will result or is likely to result from the agreement or arrangement".¹⁶¹⁵

The Europeans embraced a similar philosophy. They allow the 'prevention, restriction or distortion of competition' where on balance such activities contribute "to improving the

"Competition & Consumer Protection Authorities Worldwide", online: US Federal Trade Commission <www.ftc.gov/policy/international/competition-consumer-protection-authorities-worldwide> (visited May 7, 2015).

¹⁶⁰⁷ *TFEU*, *supra* note 271 at 89.

¹⁶⁰⁸ *Ibid*, see art 101(1).

¹⁶⁰⁹ *Competition Act*, *supra* note 294, s 90.1(1).

¹⁶¹⁰ The wording of this section is virtually identical to that of the *Sherman Act*, 26 Stat 209 (1890).

¹⁶¹¹ 15 USC Chapter 1 (2012).

¹⁶¹² See Christopher Grandy, "Original Intent and the Sherman Antitrust Act: A Re-examination of the Consumer-Welfare Hypothesis" (1993) 53:2 *The Journal of Economic History* 359 at 362–369 (JSTOR).

¹⁶¹³ *Ibid* at 365. See the amendment to the Bill proposed by Senator Aldrich.

¹⁶¹⁴ 49 USC § 41308 (2011).

¹⁶¹⁵ *Competition Act*, *supra* note 294, s 90.1(4).

production or distribution of goods or to promoting technical or economic progress, while allowing consumers a fair share of the resulting benefit."¹⁶¹⁶ In 2003, the EU adopted Regulation (EC) No 1/2003 to implement these rules,¹⁶¹⁷ which reversed the burden of proof in determining whether an undertaking can be granted ATI.¹⁶¹⁸

All three jurisdictions are quick to waive the application of antitrust laws in the appropriate circumstances. Americans will grant ATI when it is in the "public interest,"¹⁶¹⁹ Canadians offer immunity where an arrangement promises "gains in efficiency"¹⁶²⁰ and Europeans will offer ATI to a transaction which is focused on "improving the production or distribution of goods or ... promoting technical or economic progress."¹⁶²¹ In each case, the terms are either completely undefined or broad enough to encompass a variety of outcomes. For American authorities "public interest" includes a "likelihood that consumers would benefit,"¹⁶²² that "new service options and fare benefits for consumers"¹⁶²³ or that it is "likely to generate substantial public benefits to the traveling and shipping public."¹⁶²⁴ European concerns can be met if the merged entity or joint venture will "provide air passengers with a greater choice of destinations and services without having to pay a higher price on those routes where their presence is the strongest",¹⁶²⁵ and sometimes for Canadian authorities the threshold may be met if there is a "minimum disruption to service, no loss of jobs, no bankruptcy and not a nickel in subsidy."¹⁶²⁶

Antitrust immunity (ATI) is not restricted to the above-mentioned jurisdictions. The Australian Competition and Consumer Commission blessed a Virgin Blue and Delta Air Lines MNJV in 2009, noting that access to the Australia-New Zealand market is important for carriers competing

¹⁶¹⁶ TFEU, *supra* note 271, art 101 (3).

¹⁶¹⁷ EC, *Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty*, [2003] OJ, L 1/1.

¹⁶¹⁸ Felix Müller, "The New Council Regulation (EC) No. 1/2003 on the Implementation of the Rules on Competition" (2004) 5:6 *German Law Journal* 721 at 729 (HeinOnline). The brackets update the section numbers from the TEC (2006) which Müller cited, to the current treaty, the TFEU.

¹⁶¹⁹ 49 USC § 41308 (2011).

¹⁶²⁰ *Competition Act*, *supra* note 294, s 90.1(4).

¹⁶²¹ TFEU, *supra* note 271.

¹⁶²² US, Department of Transportation, Order 2008-5-32 (2008) at 3.

¹⁶²³ US, Department of Transportation, Order 2009-7-10 (2009) at 1.

¹⁶²⁴ US, DOT, Order 2010-7-8 (2010) at 1. Identical language is used in DOT Order 2010-11-10 (2010) at 1.

¹⁶²⁵ European Commission, Press Release, IP/04/194, "Commission clears merger between Air France and KLM subject to conditions" (11 February 2004) online: European Commission <europa.eu/rapid/press-release_IP-04-194_en.htm> (visited May 23, 2014).

¹⁶²⁶ The Hon. David Collenette, Canada's Minister of Transport, addressing legislation (Bill C-26 an *Act to amend the Canada Transportation Act*) to allow Air Canada to acquire financially troubled Canadian Airlines. See *House of Commons Debates*, 36th Parl, 2nd Sess, No 76 (31 March 2000) at 5512 (Hon. David M Collenette).

on the trans-Pacific routes.¹⁶²⁷ Eighteen months later, the US DOT blessed the same MNJV, noting that it covered destinations in Australia, Canada, New Zealand and the United States.¹⁶²⁸ The DOT found that the immunized alliance would offer "substantial public benefits not otherwise obtainable."¹⁶²⁹

While there are clearly a wide variety of possible benefits that can convince authorities to approve a merger or joint venture, at present there are no examples of two or more airlines seeking to justify an endeavor on environmental grounds. Given the increased global preoccupation with the airline industry's connection to climate change, regulators in Australia, Canada, the European Union, New Zealand and the United States should consider including a positive environmental impact in the grounds for ATI relief of any MNJV providing service among these jurisdictions. Those same regulators should also, as a condition for providing ATI relief to an MNJV, require a commitment from the MNJV to up-gauge flights on routes such as those between major hubs in each of the MNJV partners as well as other routes where practicable.¹⁶³⁰

A) Antitrust Immunity leads to up-gauging

In past airline mergers, on routes where two former rivals competed with each other using smaller aircraft, up-gauging was often a result. For example, after the Delta-Northwest merger,¹⁶³¹ in three instances on the Minneapolis-Atlanta route a Delta 65-seat CR7 regional jet and a Northwest 122-seat DC9 were replaced with a single Delta 186-seat Boeing 757.¹⁶³² Comparable up-gauging occurred on the routes from Detroit to Atlanta¹⁶³³ and from Minneapolis to Salt Lake City.¹⁶³⁴ Similar up-gauging is believed to have occurred on routes between United and Continental hubs such as Denver-Newark, Houston-Chicago, Houston-Denver, and Houston-

¹⁶²⁷ See Australian Competition & Consumer Commission, *Determination: Applications for authorisation lodged by Virgin Blue Airlines Pty Ltd & Others in respect of a joint venture between the applicants*, A91151 & A91152 & A91172 & A91173 (10 December 2009) at para 4.68, online: Australian Competition & Consumer Commission <registers.accc.gov.au/content/index.phtml/itemId/881766/fromItemId/401858/display/acccDecision>.

¹⁶²⁸ US, Department of Transportation, Order 2011-6-9 (2011) at 2. The order granted ATI to Delta Air Lines, Virgin Australia, V Australia, Pacific Blue Airlines (NZ), and Pacific Blue Airlines (Aust).

¹⁶²⁹ *Ibid.*

¹⁶³⁰ It is not always practicable. See the discussion of the Los Angeles-Sydney route *supra*, at notes 1649 - 1652.

¹⁶³¹ The merger was completed on October 29, 2008.

¹⁶³² See *SkyGuide*, *supra* note 30 at 271 – 272; *DWT 812*, *supra* note 1509 at 221.

¹⁶³³ Here 10 aircraft with an average capacity of 112 seats were replaced by 5 aircraft with an average capacity of 170 seats. See *SkyGuide*, *supra* note 30 at 146; *DWT 812*, *supra* note 1509 at 115.

¹⁶³⁴ Here two aircraft with an average capacity of 63 seats were replaced by one aircraft with a capacity of 160 seats. See *SkyGuide*, *supra* note 30 at 277; *DWT 812*, *supra* note 1509 at 241.

San Francisco but the difficulty of accessing data impedes confirmation. Canada has seen comparable results. In 1988, on the Edmonton-Toronto route, Canadian Airlines operated 42 weekly flights with 90-seat Boeing 737 jets, while Wardair Canada flew 27 weekly services with a 194-seat Airbus A310. After Canadian's acquisition of Wardair Canada in May 1989, the former's Boeing 737s were withdrawn from the route and the number of weekly A310 flights increased from 27 to 40. Frequency was reduced by 42% but the capacity cut was only 14%.¹⁶³⁵ Similar up-gauging was seen on routes between Toronto and Calgary and Vancouver. Thus ATI has a proven ability to promote up-gauging, and the practice is believed to be more wide-spread than these few examples illustrate.

The actions of American, Delta and United in up-gauging the fleets of their respective regional carriers confirms that an airline may up-gauge on its own account¹⁶³⁶ without the incentive of ATI. However, Delta and Northwest would not have up-gauged on shared routes but for the merger, Canadian's acquisition of Wardair drove its up-gauging strategy on domestic routes in Canada, and Lufthansa's up-gauging of its New York–Frankfurt service is probably due to the DOT's blessing of the A++ MNJV in June 2009. Thus, while ATI is not a precondition for all up-gauging decisions, it is a precondition for many, especially on intercontinental routes, or routes where an aircraft with 150 or more seats would replace two or more aircraft with 72 or fewer seats. It is also a precondition to any attempt by rival airlines to codeshare the same aircraft. Northwest's codeshare agreements with US Air and America West would have attracted regulatory attention as Northwest was in discussions with a major competitor. Absent ATI, the negotiations that preceded the codeshare agreement might not have occurred. Thus, in a market where two rival airlines each flies its own small aircraft, any initiative to cooperate in sharing the capacity of a large aircraft would require ATI.

VIII Antitrust Immunity POLICY CHANGED TO FAVOR UP-GAUGING.

If the "public interest" constitutes grounds to approve ATI for an MMJV, approval should be granted based on environmental or ecological justifications. Clearly, reducing greenhouse gas emissions from aviation is in the "public interest" and if "international connectivity" can be grounds for ATI approval then a reduction in emissions should also qualify. If environmental or

¹⁶³⁵ See Canadian Airlines, *Canadian Airlines Timetable: October 1988*; Wardair Canada, *Wardair Canada Schedule: January 1989*; Canadian Airlines, *Canadian Airlines Timetable: October 1989*.

¹⁶³⁶ See above Part IV C) *Up-Gauging makes business sense*.

ecological considerations are included in the public benefit grounds for granting limited ATI, it will provide an incentive for competing carriers to consider sharing the capacity of a large aircraft rather than each operating its own smaller aircraft.

Already officials have missed opportunities to reduce GHGs from commercial aviation when granting ATI approval to MNJVs. For example, the A++ MNJV partners are the only airlines serving and providing multiple daily flights over routes between Frankfurt and Chicago (4)¹⁶³⁷ San Francisco (3)¹⁶³⁸ Toronto (3)¹⁶³⁹ and Washington (4).¹⁶⁴⁰ American, Canadian and European regulators, while presumably aware that S-Curve considerations do not apply on non-stop routes where carriers face no meaningful competition, did not demand that the MNJV up-gauge operations on these routes as a condition of ATI approval. Regulatory authorities in the future should consider including this requirement where SkyTeam or oneworld partners on opposite sides of the Atlantic codeshare on transatlantic flights between their respective hubs— especially where the codeshare arrangement makes the carriers dominant on the route in question.¹⁶⁴¹

ATI protection should not only be given to MNJVs on condition that the member airlines up-gauge aircraft on certain routes, it also should be offered to rival airlines and rival alliances if they would up-gauge aircraft as a result of ATI protection. This is only a necessary, but not a sufficient condition, to promote inter-rival codeshare agreements that facilitate up-gauging. This is because if the airlines truly are competitors, the idea of sharing a common aircraft, even where it could dramatically reduce GHGs and fuel bills, is a truly alien concept. Major airlines are comfortable codesharing an aircraft with an ally, a subsidiary or a 'neutral' regional carrier such as Alaska Airlines, but as discussed earlier, there are also rare examples of limited and focused

¹⁶³⁷ There are 2 flights each from Lufthansa and United. See *STAR 713*, *supra* note 614 at 216.

¹⁶³⁸ United offers two flights, Lufthansa offers one. See *ibid* at 219. Lufthansa's flies an Airbus A380, and has since 2011. In 2010, Lufthansa's sole flight was operated by a Boeing 747-400. See *STAR 710*, *supra* note 1496 at 131.

¹⁶³⁹ Air Canada offers two flights, Lufthansa offers one. See *STAR 713*, *supra* note 614 at 219.

¹⁶⁴⁰ United and Lufthansa each offer two flights. See *ibid* at 220.

¹⁶⁴¹ For example, American and British Airways offer 16 non-stops daily between New York and London compared to 3 flights by Delta and 5 by the Star Alliance (United). They offer 6 non-stops daily between London and Chicago compared to 3 flights by the Star Alliance (United). Similarly, Delta and Air France/KLM offer 2 flights daily on the routes from Paris to Atlanta and Detroit, and respectively 4 and 3 flights daily on routes from Amsterdam to Detroit and Minneapolis, and they face no competition on these routes. Finally, they offer 6 flights daily on the Paris–New York route and 4 flights daily on the Amsterdam–New York route. On the former, both American and United offer 2 flights each, and on the latter, only United competes and offers 1 daily flight. See *OWT 712*, *supra* note 558; *STAR 712*, *supra* note 557; *DT 812*, *supra* note 1509.

codeshare agreement between competitors in the United States,¹⁶⁴² Mexico¹⁶⁴³ and on transatlantic routes.¹⁶⁴⁴

A) Implementing Up-gauging

Rival carriers might not need to seek ATI protection from authorities in order to conclude a "hard block" space agreement with respect to limited operations on specific routes.¹⁶⁴⁵ This is because ATI protection is only required in situations where competition would be diminished and as the examples discussed earlier illustrate, it is possible to conceive of situations where up-gauging would occur with minimal or no distortion of competition.

The ideal testing ground for up-gauging is the North Atlantic market. For example, on the New York–London route, in July 2012, five airlines— American, British Airways, Delta, Virgin and United— offered 28 daily flights and the average number of seats per flight was 265.¹⁶⁴⁶ There were four instances where at least three flights departed within a 15-minute window.¹⁶⁴⁷ On this type of route, especially since the airlines are competing as members of rival alliances (oneworld, SkyTeam, and Star), it would make sense for authorities in the United States and the United Kingdom to ask that serious consideration be given to reducing the number of departures and up-gauging aircraft size. An immediate target could be set for a four flight reduction and an increase of average aircraft seat capacity to 310 passengers.¹⁶⁴⁸

The feasibility of this step is evidenced by Lufthansa's willingness, discussed earlier, to adopt a similar practice within the A++ joint venture on the Frankfurt-New York route in February 2011. Further, since capacious aircraft such as the Airbus A380 and the Boeing 777-300 are designed for intercontinental flights, their use as up-gauge aircraft will reduce both the demand for airport slots and gates and the GHG emissions per passenger.

¹⁶⁴² See above Part V B) 1) *US examples*.

¹⁶⁴³ See above Part V B) 2) *Mexican examples*.

¹⁶⁴⁴ See Air Canada-Sabena agreement of the early 1990s. See above Part V A) 2) Block Space Agreements.

¹⁶⁴⁵ See "Spectrum of Alliance Cooperation in European Commission & US Department of Transportation", *Transatlantic Airline Alliances: Competitive Issues and Regulatory Approaches*, Report (16 November 2010) at 5, Figure 1, online: European Commission <ec.europa.eu/competition/sectors/transport/reports/joint_alliance_report.pdf>.

¹⁶⁴⁶ The 28 flights had a combined capacity of 7,418 seats.

¹⁶⁴⁷ 9:55, 4 flights, 1,057 seats; 16:00, 4 flights, 1,167 seats; 17:00, 3 flights, 776 seats and 18:00, 3 flights and 590 seats. See *OWT 712*, *supra* note 509; *STAR 712*, *supra* note 557; *DT 812*, *supra* note 1509. See *supra* note 1428.

¹⁶⁴⁸ That represents a 14.3% frequency cut and an up-gauging of 16.667%

Each route must be carefully analyzed and there will be cases where a route initially seems to be a candidate for up-gauging but is disqualified after careful analysis. For example, in July 2012, on the Los Angeles–Sydney route, the three alliances offered southbound flights within a fifteen minute interval¹⁶⁴⁹ and northbound flights within a 45 minute interval.¹⁶⁵⁰ Up-gauging is not appropriate here as no alliance offered more than two daily flights¹⁶⁵¹ and all closely-timed flights were offered by aircraft seating at least 350 passengers.¹⁶⁵² Further, the fact that the flights were coincident was driven by time-zone factors and markets that wanted a late-evening departure from the US and an early morning arrival in Australia.

North American and European authorities would be wise to turn their attention to high-traffic intercontinental routes between major airports in their respective jurisdictions to identify more opportunities to up-gauge aircraft. The A++ MNJV alliance should be encouraged to up-gauge aircraft size on its intra-hub trunk routes, such as those between Lufthansa's Frankfurt hub, United's hubs in Chicago, Newark, San Francisco and Washington and Air Canada's hub in Toronto,¹⁶⁵³ especially on non-stop routes where the MNJV does not face meaningful competition. Up-gauging opportunities will often exist within airline alliances; however if they do not, rival airlines whose flights depart within a short interval should be encouraged to cooperate in an up-gauge initiative unless there are practical impediments.¹⁶⁵⁴ These types of initiatives would be the precursor to the eventual up-gauging of aircraft used on high-traffic domestic routes in North America and Europe. This evolution in practice will in turn spur the development of the LASR, which is so needed to dramatically reduce both GHG emissions per passenger and the growing demand on airport and ATM infrastructure.

¹⁶⁴⁹ Virgin Australia 2 (SkyTeam), Qantas 12 (oneworld) and United 839 (Star Alliance) departed LAX at 22:10, 22:10 and 22:25 respectively. See *OWT 712, supra* note 509; *STAR 712, supra* note 557; *DT 812, supra* note 1509.

¹⁶⁵⁰ Qantas Flight 11 departed Sydney at 13:05 and arrived at LAX at 9:45. Virgin Australia Flight 1 departed Sydney at 13:40 and arrived at LAX at 10:25. United Airlines Flight 840 departed Sydney at 13:50 and arrived at LAX at 10:20. See *OWT 712, supra* note 509; *STAR 712, supra* note 557; *DT 812, supra* note 1509.

¹⁶⁵¹ Qantas (oneworld) offers a second daily flight operate by a Boeing 747-400. Delta (SkyTeam) also operates Boeing 777-300. See *OWT 712, supra* note 509; *STAR 712, supra* note 557; *DT 812, supra* note 1509.

¹⁶⁵² Qantas Flights 11 and 12 were operated by a 484-seat Airbus A380. United Airlines Flights 839 and 840 were operated by a 374-seat Boeing Boeing 747-400. Virgin Australia flights 1 and 2 were operated by a 361-seat Boeing 777-300. See *OWT 712, supra* note 509; *STAR 712, supra* note 557; *DT 812, supra* note 1509.

¹⁶⁵³ These routes have been chosen as each of them is served 3 times daily by A++ flights. See *supra* notes 1637 to 1640. In each of these markets but New York-Frankfurt, the A++ MNJV has a monopoly on non-stop flights.

¹⁶⁵⁴ Impediments might include the route length being beyond the range of the larger aircraft (A 300-passenger Boeing 777-200LR can fly 17,395 km or 9,395 nautical miles, compared to the 525-passenger Airbus A380-800, which can only fly 15,700 km or 8,500 nautical miles); situations where the two airlines do not serve the same airport in a two-airport city; or cases where the conditions favoring the up-gauge only applied to one-leg of a round-trip service.

IX CONCLUSION

Airlines such as Delta, American, United and Lufthansa have concluded that up-gauging makes commercial sense. Up-gauging offers the potential for fewer GHG emissions and fewer demands on airport and ATM infrastructure. Presumably other airlines will follow suit, motivated by the precedent of the airlines mentioned above, by two-part landing fees, and by ever rising fuel prices. If up-gauging is pushed further, and if airlines cooperate with each other to design and build aircraft such as the LASR, real progress on the environmental front is within reach. In a world focused on S-Curve concerns, and aware of the power of over-capacity to depress yields, airlines may be reluctant to adopt this strategy. If regulators in different jurisdictions can encourage rivals to safely share the capacity of an up-gauged aircraft, which in turn promotes two public goods— efficient transportation and a clean environment— the world will be better off.

Implementation of this strategy will not be easy. Few airlines have extensive experience participating in a codeshare arrangement that does not involve either a subordinate partner or an alliance partner. Nonetheless, there are reasons to believe that this strategy is feasible: carefully structured codesharing agreements between rivals have promoted intercontinental travel in Mexico, Canada the United States and Belgium. If such arrangements can be concluded in the furtherance of international relations, how much greater will their potential be when applied to address climate change concerns? Given the potential of up-gauging to reduce congestion, greenhouse gases and fuel consumption per capita, and given that each of these are important elements of the global dialogue on climate change, up-gauging clearly deserves greater support. Regulatory authorities in Australia, Canada, the European Union, New Zealand and the United States which see the potential of rivals to share a more capacious aircraft should find ways to enable such practices through the means identified in this chapter, including hard-block space agreement.

Such policies would encourage the development of aircraft such as the LASR, which have the potential to make a strong contribution towards reducing GHG emissions from aviation and demands on airport infrastructure and air traffic management. If practical ideas such as these are not embraced, and aircraft such as the LASR are never launched, airlines will never reach announced environment targets, because even if intensity-based targets are achieved, the growth

of the airline industry will offset these gains and no significant reduction of GHG emissions will result. It is time for the ongoing environmental debate to end and for committed policy makers to embrace practical ideas such as those presented in this chapter, as continued inaction will inevitably lead to more costly initiatives in the future.

CHAPTER 6 – CREATING THE OPEN SKIES INTERCONTINENTAL AVIATION BLOCK

I INTRODUCTION

Previous chapters of this thesis have described the factors that have profoundly changed the airline industry over the past two decades. These chapters have also highlighted the need for common standards across international boundaries and outlined some of the ways that unaligned policies have resulted in unintentional competitive distortions. These conditions have allowed the emergence and spectacular growth of a new breed of airline, the government-backed mega carrier (GBMC), almost totally disinterested in transporting passengers to or from its home base and focused instead on connecting cities on opposite sides of the globe with each other via the GBMC's hub airport. These carriers are minimally affected by North American, European and Antipodean policies, as these policies usually only apply to carriers based in these regions, or in the case of foreign-based carriers, to those flights that serve the region in question.

Partly in reaction to this phenomenon, large airlines in Europe, North America and the Antipodes have formed metal neutral joint ventures (MNJVs) and sought regulatory blessing of these arrangements. The question arises as to whether something less than a *de facto* fusion of former inter-continental competitors could effectively compete against the GBMCs. In other words, had GBMCs never been created, would the MNJVs have emerged in the first instance? GBMCs and the MNJVs are developments that were not anticipated when international aviation was deregulated in the early 1990s in the EU, North America and the Antipodes. The GBMCs and MNJVs affect international and intercontinental competition and therefore require a regulatory response at a multilateral level.

This thesis proposes a new way of imagining airline regulation that meets the challenges of the past two decades and delivers safe and secure airline service to consumers in an efficient and environmentally optimal way. In brief, it is proposed that Australia, Canada, the European Union, New Zealand and the United States jointly negotiate a treaty to create a multilateral forum, named for the purposes of discussion the Open Skies Intercontinental Aviation Block (OSIAB), loosely based on the administrative structure of a small but powerful international organization, the Organization of the Petroleum Exporting Countries (OPEC). The proposed OSIAB would provide a forum for Member States to discuss all aspects of international commercial aviation from aviation security to emissions trading to passenger rights. The

standards and recommended practices (SARPs) they would adopt would be enacted into local legislation by its members and would apply on all routes between the OSIAB Members¹⁶⁵⁵ and even potentially on routes between them served via third countries. Thus the SARPs could apply to services between OSIAB Members offered by 6th Freedom-based carriers operating from hubs in non-member countries. Given the combined political, economic and market power of the OSIAB Members, the SARPs have the potential to become *de facto* world standards, and thereby improve the operations of civil aviation at a global level and in a manner more responsive to evolving circumstances than might SARPs developed by ICAO, at least as that organization is currently configured. Before outlining the details of the proposed OSIAB, it is important to make the case for its existence, first by showing that international civil aviation faces issues that are not effectively addressed in bilateral air service agreements (BASAs), and then by showing that existing national and international organizations and structures are inadequate to properly address those issues.

II NEED FOR CONCERTED ACTIONS

The type of competitive distortions created by GBMCs and MNJVs are neither limited to a single domestic market nor to the area governed by a single BASA. For example, a casual observer might assume that the Canada-United Arab Emirates BASA is based on the bilateral market between these two countries. In fact, GBMCs are using Toronto–UAE flights to feed their connecting flights from the UAE to over a dozen destinations in South Asia. This practice has had such a strong impact on the Canada-South Asia market that a daily non-stop flight between any point in Canada and any point in South Asia is not commercially viable at the present time.¹⁶⁵⁶ While this might be of immediate concern to Canada,¹⁶⁵⁷ India and Pakistan, it may also be of interest to Bangladesh and Sri Lanka. The practical steps any individual State might take to effectively address this phenomenon are not immediately evident. Given the GBMCs' strong ties to their home governments, any unilateral actions taken by a single State to limit access to its markets might provoke the same reaction that Canada received when it denied

¹⁶⁵⁵ Throughout this chapter, the term "OSIAB member" will be used instead of "potential OSIAB member".

¹⁶⁵⁶ The Delhi-Toronto non-stop route was one of Air India's least profitable in 2012 and has since been cancelled. See Bhattacharya, *supra* note 942. Air Canada served India via London from 1985-1999 and operated Toronto-Delhi from 2003-2005. See *Supra* note 795.

¹⁶⁵⁷ In 2011, roughly 1.5 million Canadians or 4% of the country's population claimed to be South Asians. See Statistics Canada, *The Daily* (8 May 2013) online: Statistics Canada <www.statcan.gc.ca/daily-quotidien/130508/dq130508b-eng.htm> (visited May 23, 2014).

an open skies agreement to the United Arab Emirates (UAE).¹⁶⁵⁸ While Canada was able to withstand the UAE's anger, less prosperous States in South Asia for which the UAE is a very important source of employment may not be able to do so.¹⁶⁵⁹ The existence of the European Union (EU), OPEC, and the North Atlantic Treaty Organization (NATO) all testify to the power of collective action—the idea that multiple States with a common interest acting in concert with each other are more likely to advance that interest than a single State acting alone.

Given the need to address emerging issues in international and intercontinental aviation, is it necessary to create a new organization or can States continue to rely on less complex collective solutions, such as participating in existing international organizations, negotiating new BASAs or through an exchange of diplomatic notes?

Generally in aviation, States have relied heavily on ICAO, the United Nations (UN) body dealing with international civil aviation of which almost all of the world's States are members.¹⁶⁶⁰

Bilateral relationships between States are most often managed through BASAs and diplomatic notes which invariably make reference to the Chicago Convention, the international treaty that created ICAO. Multilateral air agreements other than ICAO-sponsored treaties¹⁶⁶¹ are rarities;¹⁶⁶² the EU considers its open skies agreement with each of Canada and the United States to be BASAs, even though all 27 members of the EU signed each of these agreements. The European Common Aviation Area Agreement¹⁶⁶³ extends the intra-EU open skies regime¹⁶⁶⁴ to select

¹⁶⁵⁸ See above Chapter 3, Part III) GOVERNMENT-BACKED MEGA CARRIERS. See especially sub-part III) B).

¹⁶⁵⁹ See generally "GCC may hire more S Asian workers", *The Financial Express [of Dhaka]* 20:157 (6 October 2013), online: The Financial Express <www.thefinancialexpress-bd.com/index.php?ref=MjBfMTBfMDZfMTNfMV8yXzE4NTk0NA==> (visited May 23, 2014).

¹⁶⁶⁰ 193 States are members of the United Nations. See United Nations, "UN at a Glance", online: United Nations <www.un.org/en/aboutun/index.shtml>. ICAO has 191 Member States. See ICAO, "About ICAO", online: ICAO <www.icao.int/about-icao/Pages/default.aspx> (visited May 23, 2014). The Cook Islands are members of ICAO but not of the UN, and Dominica, Liechtenstein, and Tuvalu are UN members who do not belong to ICAO.

¹⁶⁶¹ Over the years, ICAO has sponsored the creation of various multilateral treaties. Perhaps the best known is the *Montreal Convention 1999*, *supra* note 317. A second well-known treaty is the *Tokyo Convention*, *supra* note 70. A third well-known treaty is the *Convention on International Interests in Mobile Equipment*, 16 November 2001, 2307 UNTS 285, ICAO Doc 9793 (entered into force 1 April 2004) [*Cape Town Convention*]. None of these treaties create a forum for Contracting States to discuss multilateral aviation issues.

¹⁶⁶² See Brian F Havel & Gabriel S Sanchez, "The Emerging Lex Aviatica" (2011) 42:3 Geo J Int'l L 639 at 644.

¹⁶⁶³ See *Multilateral Agreement between the European Community and its Member States, the Republic of Albania, Bosnia and Herzegovina, the Republic of Bulgaria, the Republic of Croatia, the former Yugoslav Republic of Macedonia, the Republic of Iceland, the Republic of Montenegro, the Kingdom of Norway, Romania, the Republic of Serbia and the United Nations Interim Administration Mission in Kosovo on the Establishment of a European Common Aviation Area*, 9 June 2006, [2006] OJ, L 285/3.

¹⁶⁶⁴ *Regulation 2408/92*, *supra* note 121. This was a European Council decision, not a multilateral agreement.

neighbouring countries.¹⁶⁶⁵ However, this is not a multilateral agreement negotiated by multiple States, but rather a previously negotiated agreement to which States have acceded. Possibly the only truly multilateral air agreement is the Multilateral Agreement on the Liberalization of International Air Transportation (MALIAT),¹⁶⁶⁶ which has contracting parties on four continents.¹⁶⁶⁷

The idea of creating a multilateral forum where like-minded States could deal with multilateral issues is not the focus of MALIAT, even though it has the normal BASA clauses on Consultations and Dispute Resolution.¹⁶⁶⁸ Similarly, although the US-EU Open Skies Agreement¹⁶⁶⁹ foresees a Joint Committee consisting of representatives of both parties to ensure the proper implementation of the agreement,¹⁶⁷⁰ this does not appear to involve the creation of a bilateral secretariat. The only true examples of the creation of an international organization to address multilateral aviation issues are related to air traffic management (ATM).

On December 12, 1959, more than a dozen predominately French-speaking African countries created the Agency for the Safety of Air Navigation in Africa and Madagascar, known as ASECNA for the initials of its official name in French, *l'Agence pour la Sécurité de la Navigation Aérienne en Afrique et à Madagascar*.¹⁶⁷¹ Less than three months later, on February 26, 1960, Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua formed the Central American Corporation for Air Navigation Services, known as COCESNA for the initials of its official name in Spanish, *Corporación Centroamericana de Servicios de Navegación*.¹⁶⁷² The

¹⁶⁶⁵ See Havel & Sanchez, *supra* note 1662 at 644. See also European Commission, "External Aviation Policy - A Common Aviation Area with the EU's neighbours", online: European Commission <ec.europa.eu/transport/modes/air/international_aviation/external_aviation_policy/neighbourhood_en.htm> (visited May 23, 2014); Peter Bombay & Máté Gergely, "The 2006 ECAA Agreement: Centrepiece of the European Community's Aviation Policy Towards its Neighbours" (2008) 33:3 Air & Space L 214 (Kluwer Law Online).

¹⁶⁶⁶ MALIAT Agreement, *supra* note 527, was negotiated on October 31-November 2, 2000, and came into force on December 21, 2001. It can be found online: MALIAT <www.maliat.govt.nz/agreement/index.php>.

¹⁶⁶⁷ Among the MALIAT signatories are the United States, Chile, New Zealand and Singapore.

¹⁶⁶⁸ See MALIAT Agreement, *supra* note 527, arts 13, 14.

¹⁶⁶⁹ US-EU Open Skies Agreement, *supra* note 528.

¹⁶⁷⁰ *Ibid* at 13, art 18.

¹⁶⁷¹ ASECNA provides ATM across six flight information regions covering an airspace 1.5 times that of Europe and extending from Antananarivo (Madagascar), to Brazzaville (Congo), Dakar Oceanic and Dakar Terrestrial, Niamey (Niger) and N'djamena (Chad). See ASECNA, "Nos missions: Missions de Base", online: ASECNA <www.asecna.aero/asecna_ac.html> (visited February 23, 2014).

¹⁶⁷² See *Convenio Constitutivo de la Corporación Centroamericana de Servicios de Navegación Aérea*, Guatemala, Honduras, El Salvador, Nicaragua y Costa Rica, 26 February 1960 (Founding Constitution of the Central American Corporation for Air Navigation Services in Spanish), online: Corporación Centroamericana de Servicios de

treaties that created these organizations were duly registered with ICAO and the United Nations. While the establishment of an international organization is more complex than the negotiation of a even a multilateral agreement, the creation of both ASECNA and COCESNA offered the practical advantage of ensuring that efficient and safe air traffic control would not be affected by any internecine disputes that might have affected the delegation of air traffic control authorities by one State to a neighboring State.¹⁶⁷³ The existence of both ASECNA and COCESNA suggest that like-minded States can create a multilateral forum to jointly address multilateral aviation issues.

III POTENTIAL STRUCTURES

It would thus appear that to the extent that States might desire to collectively explore multilateral issues in aviation, there are three potential avenues; conducting negotiations through ICAO, expanding MALIAT, or creating a new small international organization.

A) International Organization: ICAO

As has been indicated above, ICAO has essentially the same membership as the United Nations. Although no State has a veto at ICAO, the breadth of its membership makes reaching consensus on multilateral issues difficult. Nonetheless, over the past seven decades, ICAO has made significant progress on harmonizing safety standards across the world. However its record with respect to environmental and security issues is less illustrious.

1) ICAO's Mandate

The mandate of ICAO is set out in Article 44 of the Chicago Convention and includes promoting safe, regular, efficient and economical transport,¹⁶⁷⁴ non-wasteful and fair competition¹⁶⁷⁵ and the "development of all aspects of international civil aeronautics."¹⁶⁷⁶ *Prima facie*, there is no aspect of international civil aviation that is outside ICAO's jurisdiction. Nonetheless, ICAO is predominantly focused on ensuring a safe commercial aviation industry. Of the 19 Annexes the ICAO has added to the Chicago Convention over the past 50 years, only two— Annex 16

Navegación Aérea <www.cocesna.org/pagina.php?id=54&lng=0>. COCESNA is the exclusive organization responsible for the provision of ATM in the airspace over the contracting States.

¹⁶⁷³ For example, in 1969 there was a brief war between El Salvador and Honduras. See generally Thomas P Anderson, *The War of the Dispossessed: Honduras and El Salvador, 1969* (Lincoln: University of Nebraska Press, 1981). There is no evidence that COCESNA's operations were affected.

¹⁶⁷⁴ *Chicago Convention*, *supra* note 14, art 44 (d).

¹⁶⁷⁵ *Ibid*, art 44 (e), (f) and (g).

¹⁶⁷⁶ *Ibid*, art 44 (i).

Environmental Protection (dealing with aircraft noise and emissions¹⁶⁷⁷ in two different volumes) and Annex 17 Security¹⁶⁷⁸ — are not directly or indirectly related to aviation safety.¹⁶⁷⁹ There is no Annex dealing with competition, airline ownership or mergers or passenger rights. Nonetheless the existence of the Chicago Convention Annexes dealing with environment and aviation security issues makes it appropriate to examine ICAO's achievements in these areas.

2) ICAO on the Environment

The European Union has been pressuring ICAO for over a decade to take "specific actions to reduce greenhouse gas emissions from aviation."¹⁶⁸⁰ In the absence of such action, the EU decided in 2008 to apply its Emissions Trading System (ETS) as of 2012 to all flights which "arrive at or depart from an aerodrome situated in the territory of a Member State to which the Treaty applies."¹⁶⁸¹ The EU Directive¹⁶⁸² to implement this decision has faced legal challenges,¹⁶⁸³ and while the European Court of Justice ruled in favour of it,¹⁶⁸⁴ it has attracted political denunciation¹⁶⁸⁵ and threatened economic reprisals.¹⁶⁸⁶ In 2012, the EU announced that

¹⁶⁷⁷ See ICAO, (1981) 1 *International Standards and Recommended Practices: Annex 16 to the Convention on International Civil Aviation: Volume 2, Aircraft Engine Emissions*.

¹⁶⁷⁸ See ICAO, (1975) 1 *International Standards and Recommended Practices: Annex 17 to the Convention on International Civil Aviation: Security*. The Annex was adopted by the ICAO Council on March 22, 1974.

¹⁶⁷⁹ Obviously aviation security is a component of aviation safety in today's world the latter cannot exist without the former; however most governments and international organizations treat these two areas separately.

¹⁶⁸⁰ See EC, *Decision No 1600/2002/EC of the European Parliament and of the Council of 22 July 2002 laying down the Sixth Community Environment Action Programme*, [2002] OJ, L 242/1 at 7, art 5(2)(iii)(a) [*Decision 1600/2002*]

¹⁶⁸¹ Point 6 of Annex 2 as added by EC, *Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community*, [2009] OJ, L 140/63 at 84.

¹⁶⁸² *Directive 2008/101*, *supra* note 65.

¹⁶⁸³ EC, *Reference for a preliminary ruling from High Court of Justice Queen's Bench Division (Administrative Court) (United Kingdom) made on 22 July 2010 — The Air Transport Association of America, American Airlines, Inc., Continental Airlines, Inc., United Airlines, Inc. v The Secretary of State for Energy and Climate Change (Case C-366/10)*, [2010] OJ, C 260/9.

¹⁶⁸⁴ See *Air Transport Association of America and others v Secretary of State for Energy and Climate Change*, C-366/10, [2011] ECR I-13833. See also *Air Transport Association of America and others v Secretary of State for Energy and Climate Change*, C-366/10, Opinion of Advocate General Kokott, [2011] ECR I-13765.

¹⁶⁸⁵ See India, Ministry of Civil Aviation, Press Release, 76388, "International meeting of ICAO Council and Non-EU Member States on Inclusion of Aviation in EU-ETS held" (30 September 2011) online: Press Information Bureau, Government of India <pib.nic.in/newsite/erelease.aspx?relid=76388>; See further *Joint Declaration of the Moscow Meeting on Inclusion of International Civil Aviation in the EU-ETS*, 22 February 2012, online: GREENAIR <www.greenaironline.com/photos/Moscow_Declaration.pdf> (both visited May 21, 2014)

¹⁶⁸⁶ See Katie Cantle, "Chinese carriers shun EU ETS rules warning; signals retaliation", *Air Transport World* (16 May 2012), online: Air Transport World <atwonline.com/aeropolitics/chinese-carriers-shun-eu-ets-rules-warning-signals-retaliation>; Christina Zander, "Russia Withholds EU Air Traffic Rights in Growing CO2 Trade Spat", *4-traders* (7 June 2012), online: 4-traders <www.4-traders.com/SAS-AB-9058794/news/Russia-Withholds-EU-Air-Traffic-Rights-in-Growing-CO2-Trade-Spat-14361417/>; Dave Keating, "US hosts anti-ETS summit", *European Voice* (2 August 2012), online: European Voice <www.europeanvoice.com/article/2012/august/us-hosts-anti-ets-summit/74966.aspx> (visited May 21, 2014).

it would suspend the application of the Directive to flights to and from non-EU countries¹⁶⁸⁷ until after ICAO's 38th Assembly based on assurances that ICAO was ready to "move towards a Market Based Mechanism (MBM) at a global level."¹⁶⁸⁸

The EU's impatience with ICAO's progress on environmental matters is understandable. ICAO Council's Committee on Aviation Environmental Protection (CAEP) began working on emission-related charges as early as 1996,¹⁶⁸⁹ and the 32nd ICAO Assembly in 1998 passed a resolution calling on the ICAO Council to "pursue the question of emission-related levies with a view to reaching a conclusion" prior to the 33rd ICAO Assembly in 2001.¹⁶⁹⁰ That deadline was not met, and the decade since has only yielded incremental progress.

In 2001, the 33rd Assembly endorsed "the development of an open emissions trading system for international aviation"¹⁶⁹¹ and called on the ICAO Council to develop a "guideline for open emissions trading for international aviation."¹⁶⁹² In 2004, the 35th Assembly adopted Resolution A35-5 which noted "new ICAO . . . studies on market-based measures to limit or reduce greenhouse gases from aviation"¹⁶⁹³ and called for studies and guidance on "Emission – related levies to be provided to the 36th ICAO Assembly to be held in 2007."¹⁶⁹⁴ The 36th Assembly called on the ICAO Council to "continue to study policy options ... develop concrete proposals ... encompassing market based measures"¹⁶⁹⁵ and to "conduct further studies ... of the implementation of emissions trading systems."¹⁶⁹⁶ It urged contracting States not to take unilateral actions and called on the ICAO Council to consider the needs of developing

¹⁶⁸⁷ European Commission, Press Release, Memo/12/854, "Stopping the clock of ETS and aviation emissions following last week's International Civil Aviation Organisation (ICAO) Council" (12 November 2012), online: European Commission <europa.eu/rapid/press-release_MEMO-12-854_en.htm> (visited May 21, 2014)

¹⁶⁸⁸ *Ibid.*

¹⁶⁸⁹ See *Council Resolution on Environmental Charges and Taxes*, ICAO Council, 149th Sess, 16th Meeting (adopted by the Council on 9 December 1996), online: ICAO <www.icao.int/environmental-protection/Pages/Taxes.aspx> (visited May 23, 2014).

¹⁶⁹⁰ *Consolidated statement of continuing ICAO policies and practices related to environmental protection*, ICAO Assembly Res A32-8, 32nd Sess, ICAO Doc 9730, I-9 at 1-26, Appendix H.

¹⁶⁹¹ International Civil Aviation Organization, *Assembly Resolutions in Force* (as of 5 October 2001), *Consolidated statement of continuing ICAO policies and practices related to environmental protection*, ICAO Assembly Res A33-7, 33rd Sess, ICAO Doc 9790, I-36 at I-46, Appendix I, online: ICAO <www.icao.int/publications/Documents/9790_en.pdf> [ICAO Res. A33-7].

¹⁶⁹² *Ibid.*

¹⁶⁹³ ICAO Assembly Res A35-5, 35th Sess, ICAO Doc 9848, I-37, online: ICAO <www.icao.int/publications/Documents/9848_en.pdf>.

¹⁶⁹⁴ *Ibid.* at I-46, Appendix I.

¹⁶⁹⁵ *Consolidated statement of continuing ICAO policies and practices related to environmental protection*, ICAO Assembly Res A36-22, 36th Sess, ICAO Doc 9902, I-54 at I-67, Appendix J, online: ICAO <www.icao.int/publications/Documents/9902_en.pdf>.

¹⁶⁹⁶ *Ibid.* at I-72, Appendix L.

economies.¹⁶⁹⁷ Three years later, in 2010, the 37th Assembly set a deadline for action, calling on the ICAO council to "undertake work to develop a framework for market-based measures (MBMs) in international aviation, including further elaboration of the guiding principles listed in the Annex, for consideration by the 38th Session of the ICAO Assembly."¹⁶⁹⁸ ICAO's 38th Assembly adopted Resolution 17/2, which called on the ICAO Council to:

[F]inalize the work on the technical aspects, environmental and economic impacts and modalities of the possible options for a global MBM scheme, including on its feasibility and practicability, taking into account the need for development of international aviation, the proposal of the aviation industry ... , and without prejudice to the negotiations under the UNFCCC.¹⁶⁹⁹

The resolution called for this work to be reported for decision by the 39th Session of the Assembly, which will be held in 2016,¹⁷⁰⁰ roughly two decades after ICAO first began to express an interest in establishing emission-related charges. This is the third time in nine years that an ICAO Assembly has asked the ICAO Council to report to the next Assembly on market-based measures to reduce greenhouse gas (GHG) emissions from aviation. The Chicago Convention Annex that deals with emissions from aircraft engines does not mention "charges", "trading" or "market-based measures."¹⁷⁰¹ Thus, it is not clear that ICAO's handling of the aviation emissions file has had any impact on reducing emissions beyond what the International Air Transport Association (IATA) and the major airlines would have done on their own in response to political pressure or rising fuel prices.¹⁷⁰²

3) ICAO on Security

ICAO's aviation security activities began after the Dawson's Field Hijackings of September 1970.¹⁷⁰³ Roughly four years passed between the time ICAO started developing Annex 17 to the

¹⁶⁹⁷ *Ibid.*

¹⁶⁹⁸ *Consolidated statement of continuing ICAO policies and practices related to environmental protection – Climate change*, ICAO Assembly Res A37-19, 37th Sess, ICAO Doc 9958, I-67 at I-73, Annex, online: ICAO <www.icao.int/publications/Documents/9958_en.pdf>. The 38th Assembly was scheduled for 2013.

¹⁶⁹⁹ *Consolidated statement of continuing ICAO policies and practices related to environmental protection – Climate change*, ICAO Assembly Res A38-18, 38th Sess, ICAO Doc 10022, I-72, para 19(a), online: ICAO <www.icao.int/publications/Documents/10022_en.pdf> (visited May 24, 2014).

¹⁷⁰⁰ *Ibid.*

¹⁷⁰¹ ICAO, (2008) 3 *International Standards and Recommended Practices: Annex 16 to the Convention on International Civil Aviation: Volume 2, Aircraft Engine Emissions*.

¹⁷⁰² As far back as 2001, IATA with the partnership of airlines, airports, air navigation service providers and manufacturers had prepared an industry-wide commitment on environment with defined targets. See IATA, "Tough Targets and a Global Sectoral Approach -Aviation's Copenhagen Commitment", 1 January 2001, (on file with author). The price of jet fuel has increased by over 300% from US\$ 30.45 to US\$ 122.66 per barrel between 2001 and 2013. See online Airlines for America, "Annual Crude Oil and Jet Fuel Prices", online: Airlines for America <www.airlines.org/Pages/Annual-Crude-Oil-and-Jet-Fuel-Prices.aspx> (visited May 24, 2014).

¹⁷⁰³ See the discussion of this incident above at Chapter 4, Part III) A) The Dawson's Field Hijackings.

Chicago Convention and its publication date.¹⁷⁰⁴ During this period, ICAO held five Assembly sessions,¹⁷⁰⁵ but none of these was focused on significantly advancing the Annex's progress. In this same period, over a dozen flights were hijacked by terrorists, blown up by bombs in-flight or attacked on the ground, killing over 360 people.¹⁷⁰⁶ Such was the frustration of some States at ICAO's seeming inability to deal with the hijacking question that the Group of Seven (G7) Heads of Government negotiated the Bonn Declaration on Hijacking¹⁷⁰⁷ in 1978.

In December 2003, the US issued an emergency aviation amendment that requires foreign airlines serving that country to carry air marshals when required by the TSA.¹⁷⁰⁸ This amendment raised potential multilateral issues, such as the required deployment of an air marshal on a multi-stop international route operated by a foreign carrier, and raised level playing field issues with respect to two different MNJV partners to whom different requirements might apply. For example, Singapore Airlines serves various US cities via Frankfurt, Hong Kong, Moscow, Seoul and Tokyo.¹⁷⁰⁹ If the US were to mandate the deployment of air marshals on routes between it and Frankfurt, the order would apply not only to German and US carriers but also to Singapore Airlines. In 2005, Claudia Serwer, the Alternate US Representative to ICAO, told the ICAO Council that the operation of a US non-stop route to a second country by an airline and aircraft based in a third country would prevent the American government from deploying American federal air marshals on the aircraft because the aircraft might not have any nexus to the United States.¹⁷¹⁰ It is also possible to conceive of situations where a non-stop intercontinental flight to a second country might overfly the territory of a country that objects to the use of air marshals in their skies.¹⁷¹¹ In attempting to deploy air marshals on Qantas' intercontinental

¹⁷⁰⁴ See Akweenda, *supra* note 1037 at 436. See also Buzdugan, *supra* note 1037 at 23–25.

¹⁷⁰⁵ Session 17A was held March 11-12, 1971, in New York; Session 18 was held June 15-July 7, 1971, in Vienna; Session 19 was held February 27 to March 2, 1973 in New York; Session 20 was held August 28 to September 21, 1973, in Rome and Session 21 was held September 24 to October 15, 1974, in Montreal.

¹⁷⁰⁶ See online: Aviation Safety Network <aviation-safety.net/database/>. Figures do not include hijackings by non-terrorists seeking passage into or out of Cuba, or across the Iron Curtain.

¹⁷⁰⁷ *Joint Statement on International Terrorism*, Canada, Federal Republic of Germany, France, Italy, Japan, United Kingdom, United States, 17 July 1978, 17:5 ILM 1285, UKMIL 1978. See also Gerald F FitzGerald, "Unlawful Interference with Civil Aviation" in Arnold Kean, ed, *Essays in Air Law* (The Hague: Nijhoff, 1982) 59 at 66 – 67.

¹⁷⁰⁸ This point is discussed in detail above at Chapter 4 V) D) 2) Air marshals.

¹⁷⁰⁹ See *STAR 713*, *supra* note 614.

¹⁷¹⁰ Claudia Serwer, Alternate US Representative to the ICAO Council, speaking on November 30, 2005 at the 13th meeting of the 176th ICAO Council Session. See ICAO, ICAO Council, 176th Sess, ICAO Doc C-MIN 176/13 (30 November 2005) at 172.

¹⁷¹¹ For example, Lebanon allows the serving of alcohol on board and in their skies, but Saudi Arabia does not. See Sami Shubber, *Jurisdiction Over Crimes on Board Aircraft* (The Hague: Nijhoff, 1973) at 120. If States have views on alcohol on aircraft over-flying them, they may also have opinions on the use of air marshals.

flights, Australian authorities determined it would require "bi-lateral agreements on the carriage of firearms and weapons into other countries"¹⁷¹² and also the "agreement of possible diversion countries."¹⁷¹³

The recent emergence of the MNJVs further complicates matters.

For example, the A++ MNJV can offer a Geneva-bound Bostonian one-stop routings via Frankfurt, Montreal or Newark. If American authorities were to mandate the use of air marshals on Boston–Frankfurt flights, that route might be more costly to operate than the A++'s alternative routings and this could distort the metal neutrality upon which the MNJV is based.

ICAO's new guidance on the deployment of air marshals causes further problems by requiring the permission of "concerned States."¹⁷¹⁴ While this term is not defined, in the case of Singapore Airlines Flights 62 and 61, which offer round-trip service between Singapore and Houston via Moscow, the deployment of air marshals would seem to require the agreement of Singapore, Russia, the United States and possibly all States over-flown. Rather than encouraging States to reach a common understanding, ICAO instead encourages States who wish to use air marshals to reach bilateral agreements with potentially concerns States. It is helpful to contrast this approach with that found in Article 5 of the 1971 Montreal Convention¹⁷¹⁵:

5. 1 Each Contracting State shall take such measures as may be necessary to establish its jurisdiction over the offences in the following cases:
 - (a) when the offence is committed in the territory of that State;
 - (b) when the offence is committed against or on board an aircraft registered in that State;
 - (c) when the aircraft on board which the offence is committed lands in its territory with the alleged offender still on board;
 - (d) when the offence is committed against or on board an aircraft leased without crew to a lessee who has his principal place of business or, if the lessee has no such place of business, his permanent residence, in that State.

Thus, if a Bermudan-registered jet operated by "Monte Carlo Airlines" were hijacked on departure from Tallinn, Article 5(1)(a) of the Convention requires Estonia to exercise jurisdiction as it is the State where the offence was committed; Article 5(1)(b) requires Bermuda to exercise

¹⁷¹² Mick Keelty, Commissioner of the Australian Federal Police, speaking to ABC News in July 2003. See Alison Caldwell, "Australian Government encouraging aviation security measures in the region", *PM [ABC]* (31 July 2003) online: PM, ABC Local Radio <www.abc.net.au/pm/content/2003/s914734.htm> (visited May 23, 2014).

¹⁷¹³ The Honourable Philip Ruddock, Australia's Minister for Justice and Customs speaking in Australia's House of Representatives. See Austl, Commonwealth, House of Representatives, *Parliamentary Debates* (24 November 2003) at 22597 (Hon Philip Maxwell Ruddock on Question 2294).

¹⁷¹⁴ This point is discussed in detail above at Chapter 4 V) D) 2) Air marshals.

¹⁷¹⁵ *Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation*, 23 September 1971, 974 UNTS 177, 24 UST 564, 10 ILM 1151, ICAO Doc 8966 (entered into force 26 January 1973).

jurisdiction as it is the State where the aircraft is registered; and Article 5(1)(c) would require Monaco to exercise jurisdiction in the event that the aircraft returned to Monte Carlo with the hijacker still aboard. Article 5(1)(d) also allows Monaco to exercise jurisdiction if the aircraft is dry-leased from Bermudan financiers, as Monaco is the country where Monte Carlo Airlines is based. Here the Convention makes certain that the perpetrator will be brought to justice by a State with a nexus to the offense. It makes sure that anyone with jurisdiction over the hijacker has prosecutorial authority. The words "shall take such measures" are not permissive - they impose a positive duty on contracting States to prosecute.

If an ICAO-sponsored multilateral treaty can impose an obligation on a State to prosecute a terrorist who is aboard a distressed aircraft that makes an emergency landing in that State, in the time that has elapsed since September 11, 2001, it would have been reasonable to expect that ICAO would negotiate a similar treaty on air marshal. In a parallel form to the 1971 Montreal Convention, such a treaty might require a contracting State to allow the over-flight of its territory by an aircraft carrying an armed in-flight security officer, where the flight is operated by an airline based in another contracting State, and where the carriage of the in-flight security officer is in the security interest of that same contracting State.

ICAO's recent apparent progress on this issue is not impressive. The Montreal Protocol of 2014¹⁷¹⁶ will allegedly provide air marshals "with authorities and protections less than those that they now enjoy as passengers."¹⁷¹⁷ If this is true, the Montreal Protocol is not a significant improvement on the status quo.¹⁷¹⁸

4) ICAO's Efficiency

ICAO and UN have similar membership and comparable problems. Like the UN, ICAO is large, slow moving and plagued by divisions in its membership. There is often a "basic division between the developed and developing world"¹⁷¹⁹ and "the division of views corresponds to the line of political blocks."¹⁷²⁰ These divisions are evident on issues from the environment, where

¹⁷¹⁶ See ICAO, *Protocol to Amend the Convention on on Offences and Certain Other Act Committed on Board Aircraft*, 4 April 2014, (not in force).

¹⁷¹⁷ Michael Jennison, "The Montreal Protocol of 2014 is intended to Modernise the Tokyo Convention of 1963: Can it Succeed?" (2014) *Ann Air & Sp L* 1 at 33.

¹⁷¹⁸ See generally, Chapter 4 V) D) 2) Air marshals. As of the first year anniversary of the Protocol, only a single state, Congo, had ratified it.

¹⁷¹⁹ David MacKenzie, *ICAO: A History of the International Civil Aviation Organization* (Toronto: University of Toronto Press, 2010) at 394.

¹⁷²⁰ Jiefang Huang, *Aviation Safety Through the Rule of Law: ICAO's Mechanisms and Practices* (Alphen aan den Rijn: Kluwer Law International, 2009) at 91.

small developing nations seek an exemption from emissions trading, to liberalization, where developing States seek to protect State-owned carriers, to events such as the Raid on Entebbe which incited divergent reactions among different States.¹⁷²¹ These tensions, and ICAO's track record on the GHG emissions and aviation security files, confirm that ICAO may not always be the ideal multilateral forum for like-minded States to find common solutions to issues of mutual concern.

B) Existing Multilateral Treaty: MALIAT

As noted earlier, there is only one truly multilateral treaty dealing with commercial air rights. This is the Multilateral Agreement on the Liberalization of International Air Transportation (MALIAT),¹⁷²² which is also the world's first multi-continental open skies agreement as it involved both North and South America as well as points in Asia and the South Pacific.

1) Potential

MALIAT fused the open skies agreements between its Contracting Parties. It provides for an open route schedule, with no capacity, frequency or flexibility limits and no restrictions with respect to pricing or tariff filing, and offers carriers unlimited 5th Freedom rights from any airport located in the territory of any of the contracting parties.¹⁷²³ It "provides a coherent, streamlined mechanism for expanding commercial aviation relations. It improves the access of airlines based in economies with small capital markets to broader sources of investment."¹⁷²⁴

New Zealand argues that MALIAT proves that "a group of like-minded countries, taking the widely accepted bilateral air service agreement models as a starting point, can develop a plurilateral alternative to the bilateral system."¹⁷²⁵ It proposes a "new framework to address the issues of market access, and air carrier ownership and control on a multilateral basis that is fit for purpose in the 21st century".¹⁷²⁶ Until that framework is achieved, New Zealand wants States to

¹⁷²¹ Peter Romaniuk, *Multilateral Counter-Terrorism: The Global Politics of Cooperation and Contestation* (London: Routledge, 2010) at 36. See generally MacKenzie, *supra* note 1719; Huang, *ibid*.

¹⁷²² MALIAT Agreement, *supra* note 527, was signed by, *inter alia*, Chile, New Zealand, Singapore and the US

¹⁷²³ Alan Khee-Jin Tan, "Prospects for a Single Aviation Market in Southeast Asia" (2009) 34 Ann Air & Sp L 253 at 260.

¹⁷²⁴ John Kiser, "The Multilateral Agreement on the Liberalization of International Air Transportation" (Remarks delivered at the Preparatory Seminar for the Fifth Worldwide Air Transport Conference, Montreal, 22 March 2003) [unpublished].

¹⁷²⁵ New Zealand, *The Multilateral Agreement on the Liberalization of International Air Transportation: A Basis for the Future Economic Regulation of Air Services*, ICAO Worldwide Air Transport Conference, 6th Meeting, Agenda Items 2, 2.1, 2.2, Working Paper No 34, ICAO Doc ATConf/6-WP/34 (12 February 2013) at 2, online: ICAO <www.icao.int/Meetings/atconf6/Documents/WorkingPapers/ATConf6-wp034_en.pdf>.

¹⁷²⁶ *Ibid*, Recommendation 5.1 (a).

consider "joining the Multilateral Agreement on the Liberalization of International Air Transportation (MALIAT) as an efficient and effective standardised means of exchanging air rights on an open basis."¹⁷²⁷

2) Drawbacks

Unfortunately, MALIAT provides no forum for discussion amongst the members. The various rights, obligations and privileges, including dispute resolution, the conditions of accession as well as the rights of parties with respect to newly acceding members, are all spelled out in the treaty. MALIAT is essentially an expanded open skies agreement and thus, amongst the parties to the agreement, there is little to discuss that goes beyond the contents of the texts of the treaty. Of greater concern is the fact some of the more powerful members of Asia-Pacific Economic Cooperation (APEC), including two potential members of OSIAB, namely Australia and Canada, have not signed MALIAT and are unlikely to do so.¹⁷²⁸ It is believed that MALIAT's unlimited grant of 5th Freedom rights has discouraged greater accession, as new members would be obliged to allow LAN Chile and Singapore Airlines 5th Freedom rights¹⁷²⁹ on routes of those carriers' choosing.¹⁷³⁰ A further impediment to accession to MALIAT is the Agreement's relaxed ownership provisions that might allow a foreign-capitalized airline to fly freely between MALIAT members.¹⁷³¹

Thus, a dozen years after coming into force, MALIAT is little more than an expansive BASA between the United States and each of Brunei Darussalam, Chile, New Zealand and Singapore.¹⁷³² Indeed, with the exception of routes between the United States and each of Chile¹⁷³³ and Singapore,¹⁷³⁴ the routes between MALIAT members are monopoly routes flown by an airline designated by a Member State at one of the ends of the route.¹⁷³⁵ The lack of a more

¹⁷²⁷ *Ibid*, Recommendation 5.1 (b).

¹⁷²⁸ Tan, *supra* note 1723 at 261.

¹⁷²⁹ Both Singapore and the United States have signed MALIAT. Singapore's 5th Freedom routes are Houston-Moscow, Los Angeles-Tokyo, New York-Frankfurt, San Francisco-Hong Kong and San Francisco-Seoul. With the exception of Houston-Moscow, these are some of the most profitable intercontinental routes.

¹⁷³⁰ Tan, *supra* note 1723 at 261.

¹⁷³¹ See Alan Khee-Jin Tan, "Liberalizing Aviation in the Asia-Pacific Region: The Impact of the EU Horizontal Mandate" (2006) 31:6 Air & Space L 432 at 438 – 439 (Kluwer Law Online).

¹⁷³² These are the five founding States, to whose number have been added three acceding States, the Cook Islands, Samoa and Tonga. These last three States have a combined population of less than 350,000.

¹⁷³³ American, Delta and LAN Chile each fly non-stop between the US and Chile. The only route served by two carriers is Miami-Santiago, but both of the competing carriers (American and LAN Chile) are members of oneworld.

¹⁷³⁴ Delta, Singapore Airlines and United offer 1-stop service (via Tokyo) between Singapore and major US cities.

¹⁷³⁵ Brunei-Singapore (Royal Brunei Airlines); Chile-New Zealand (LAN Chile, as part of a Santiago-Auckland-Sydney service); New Zealand-Singapore (Singapore Airlines), and New Zealand-US (Air New Zealand).

robust commercial air service among MALIAT members suggests that they are not the ideal group to improve the state of international civil aviation. Indeed, MALIAT may well "become an example both of what is achievable and what is to be avoided in the formulation of a multilateral approach that will allow every State to sign on to liberalizations in air services."¹⁷³⁶

C) An American-European Joint Committee

The Open Skies Agreement between the European Union and the United States¹⁷³⁷ foresees a Joint Committee consisting of representatives of both parties to ensure the proper implementation of the Agreement.¹⁷³⁸ If the scope of the Joint Committee were expanded, it could potentially deal with some of the competitive distortions resulting from different regulations with respect to antitrust immunity, traffic rights, aviation security, passenger rights, the environment and, possibly, other issues such as airline ownership. Given that the EU and the US have often been able to influence global aviation practices acting unilaterally,¹⁷³⁹ the potential for a collective initiative between them to re-shape international aviation would be significant.

However, the track record of US-EU aviation relations since the signing of the Open Skies Agreement is not encouraging. In reaction to the EU's 2008 decision to include international aviation in its Emissions Trading Scheme,¹⁷⁴⁰ US airlines challenged its legality,¹⁷⁴¹ and both the US Senate¹⁷⁴² and the House of Representatives¹⁷⁴³ passed bills prohibiting "an operator of a civil aircraft of the United States from participating in any emissions trading scheme unilaterally established by the European Union."¹⁷⁴⁴ US President Barack Obama promised to sign the legislation,¹⁷⁴⁵ and in August 2012 American authorities hosted a 16-nation summit opposing the

¹⁷³⁶ Sean McGonigle, "Assessing the APEC Multilateral Agreement after 5 years of Inactivity" (2013) 38 Ann Air & Sp L 429 at 443.

¹⁷³⁷ *US-EU Open Skies Agreement*, *supra* note 528.

¹⁷³⁸ *Ibid* at 13, art 18.

¹⁷³⁹ See the American-influenced global increases in liability for injuries or death cause by aviation accidents, *infra* notes 1841 to 1846 and associated text.

¹⁷⁴⁰ *Directive 2008/101*, *supra* note 65.

¹⁷⁴¹ See *supra* note 1683. The legal action was launched in January 2009.

¹⁷⁴² 2011 S.1956 *European Union Emissions Trading Scheme Prohibition Act of 2011*. The bill was introduced by Sen. John Thune (SD) on December 7, 2011, 14 days prior to the December 21 decision of the European Court of Justice Grand Chamber.

¹⁷⁴³ 2011 H.R.2594 *European Union Emissions Trading Scheme Prohibition Act of 2011*. The bill was introduced by John Mica, (FL-7) on July 20, 2011, and passed by the House of Representative by voice vote on October 24, 2011.

¹⁷⁴⁴ *Ibid*, . s. 3. Section 2 of S. 1956, *supra* note 1742 had similar language.

¹⁷⁴⁵ President Obama promised to sign any such bill submitted to him. It is likely any successor would do the same.

Directive,¹⁷⁴⁶ at which it refused to rule out bringing further challenges against the Directive before competent international organizations.¹⁷⁴⁷

Chapter 1 of this thesis identified a 7-year gap between US and EU ATI approval of the SkyTeam MNJV¹⁷⁴⁸ and Chapter 3 identified a similar 47 month gap with respect to ATI approval of the A++ MNJV.¹⁷⁴⁹ Chapter 4 detailed the protracted and multi-stage dispute between the US and EU with respect to the sharing of passenger APIS/PNR files.¹⁷⁵⁰ In addition, the issue of foreign ownership was left to be deal with in Second Stage Negotiations,¹⁷⁵¹ and the positions of the two jurisdictions could not be further apart: the US limits foreign ownership in its airlines to 25%, whereas the EU limit is 49%.¹⁷⁵²

This difference appears to be provoking further tension between the EU and the US. In April 2014, the EU began to examine Delta's 49% investment in Virgin Atlantic with a view to defining 'foreign control'.¹⁷⁵³ More recently, the EU granted a license to a Norwegian-owned, Dublin-based airline, called Norwegian Air International (NAI), to operate from London Gatwick to the United States. When American unions discovered that NAI's flight attendants were hired under Singaporean contracts and that some crew members were based in Bangkok, they accused NAI of operating under a "flag of convenience."¹⁷⁵⁴

Nonetheless, the EU has granted the carrier a license and under the terms of the Agreement, "decisions to grant permits taken by one EU country's authorities are supposed to be processed without any undue delay by the US authorities and vice versa."¹⁷⁵⁵ The US has not granted the license or given a timeline as to when a decision might be made, a fact that "has incensed the

¹⁷⁴⁶ Dave Keating, "US hosts anti-ETS summit," *European Voice* (2 August 2012), online: *European Voice* <www.europeanvoice.com/article/2012/august/us-hosts-anti-ets-summit/74966.aspx>.

¹⁷⁴⁷ *Ibid.*

¹⁷⁴⁸ The SkyTeam got U.S. ATI on May 22, 2008 See *supra* note 295. The EU granted ATI approval to AF/KL/Delta MNJV on May 11, 2015 see *supra* note 300.

¹⁷⁴⁹ See *supra* note 880 and associated text.

¹⁷⁵⁰ See *supra* notes 1238 to 1248.

¹⁷⁵¹ See *US-EU Open Skies Agreement*, *supra* note 528, art 21 2 (b). The issue remains unresolved.

¹⁷⁵² See *supra* note 293.

¹⁷⁵³ David Knibb "Analysis: Europe faces task of defining foreign 'control'", *Flight Global* (22 April 2014) online: *Flight Global* <www.flightglobal.com/news/articles/analysis-europe-faces-task-of-defining-foreign-control/39398421/>.

¹⁷⁵⁴ See Brian Beary, Future of "Open Skies" in Peril? New Carriers from Norway and Gulf Spark Debate, *Europolitics* (March 2015), online: *European Institute* <www.europeaninstitute.org/index.php/250-european-affairs/ea-march-2015/1997-future-of-open-skies-in-peril-new-carriers-from-norway-and-gulf-spark-debate> (visited April 13, 2015).

¹⁷⁵⁵ *Ibid.* See also *US-EU Open Skies Agreement*, *supra* note 528, art 4.

European Commission, leading it to officially declare the US in breach of the Open Skies agreement by the delay."¹⁷⁵⁶ None of these issues is more than a minor irritant, but they confirm that the potential of a US-EU Joint Committee is limited, especially since the two Parties are often rivals.¹⁷⁵⁷

Indeed, the G7 was formed largely at US insistence, as the G7's predecessor, the G10, was seen by Americans as being too dominated by Europe,¹⁷⁵⁸ and America later insisted that Canada be admitted to the G7.¹⁷⁵⁹ The US has long benefitted from the role Canada has played¹⁷⁶⁰ as a middle power in that Canada's approach to diplomacy is seen to be "geared to mitigating conflict and building consensus and cooperation".¹⁷⁶¹ Even though the middle power nomenclature may no longer apply to Canada, the country's recent role in facilitating US–Cuba rapprochement strongly underscores the ability and potential of third countries to broker long-standing bilateral disputes.¹⁷⁶²

While it is true that the American-European Joint Committee proposed by the US-EU Open Skies Agreement would have the political and economic force to take action on any aviation matter on which the two jurisdictions might agree, in the eight years since the Joint Committee was proposed, the two jurisdictions have had strong disagreements on passenger rights, aviation security, airline ownership and GHGs emitted by aviation. Left to themselves, there is little likelihood that they would act collectively to address the issues identified in this thesis. A small multilateral forum, whose membership is slightly broader than the European Union and the

¹⁷⁵⁶ *Ibid.*

¹⁷⁵⁷ See generally, Matthew Evangelista, *Partners Or Rivals?: European-American Relations After Iraq* (Cornell, Cornell University Press, 2005). See Ambrose Evans-Pritchard "I enjoy EU rivalry, says the President", *The Telegraph* (15 June 2001) online: [The Telegraph <www.telegraph.co.uk/news/worldnews/1311978/I-enjoy-EU-rivalry-says-the-President.html>](http://www.telegraph.co.uk/news/worldnews/1311978/I-enjoy-EU-rivalry-says-the-President.html). The article claims that EU's officially stated ambition was to displace the US as the world's leading economy by 2010.

¹⁷⁵⁸ See Andrew Baker, "The Group of Seven", (2008) 13:1 *New Political Economy* 103 at 104. Indeed, seven of the ten members were European: Belgium, France, Germany, Italy, the Netherlands, Sweden and the United Kingdom. The other three members were Canada, Japan and the US.

¹⁷⁵⁹ Canada was admitted on the invitation of the American President in 1976, the previous year France had vetoed Canada's participation. See Marek Rewizorski, "From G7 to L29: Goba Governance Evolution", (2014) *Przegląd Zachodni* 209 at 211.

¹⁷⁶⁰ For many years, Canada facilitated US-Soviet Union travel via Montreal. This explains the inauguration of Aeroflot's Moscow–Montreal route in 1967. See Aeroflot, "Aeroflot History, Chronicle of events: 1960-1968", online: Aeroflot <www.aeroflot.ru/cms/en/about/history_60-68> (visited May 7, 2015).

¹⁷⁶¹ See Mark Neufeld, "Hegemony and Foreign Policy Analysis: The Case of Canada as Middle Power" (1995) 48 *Studies in Political Economy* 7 at 9.

¹⁷⁶² See Campbell Clark, "Facilitating dialogue: Canada plays host to secret US, Cuban meetings" *The Globe and Mail* (17 December 2014), online: [The Globe and Mail <www.theglobeandmail.com/news/world/facilitating-dialogue-canada-plays-host-to-secret-us-cuban-meetings/article22137559/>](http://www.theglobeandmail.com/news/world/facilitating-dialogue-canada-plays-host-to-secret-us-cuban-meetings/article22137559/) (visited April 13, 2015).

United States, would not only have more legitimacy, but it might also have the effect of facilitating the settlement of relatively minor difference between the EU and the US with respect to international aviation matters.

D) A new creation: Open Skies Intercontinental Aviation Block (OSIAB)

This thesis proposes that a small international organization named the Open Skies Intercontinental Aviation Block (OSIAB) be jointly founded by the United States, the European Union, Australia, New Zealand and Canada.

1) Proposed Founding Members

As the United States and the European Union are the two jurisdictions which negotiated the 2007 US-EU Open Skies Agreement creating the American-European Joint Committee, it follows that both should be founding members of OSIAB.

Having the EU as one of the members of OSIAB is not free of problems. It would be the only member of OSIAB that is not a sovereign State. Perhaps it would be better to instead include leading EU aviation states instead. However, in a recent important decision, the European Court of Justice confirmed that in questions of aviation it is the EU, and not individual European states, that regulates the industry. In *Air Transport Association of America and others v Secretary of State for Energy and Climate Change*¹⁷⁶³ the Court, in determining whether the EU was bound by the Chicago Convention,¹⁷⁶⁴ provided a very comprehensive overview of the areas of aviation regulation within the competence of the EU as opposed to its member States.¹⁷⁶⁵ At the same time, the Court found that the EU did not have "exclusive competence in the entire field of international civil aviation as covered by that [Chicago] convention";¹⁷⁶⁶ some EU members had retained certain powers related to the "award of traffic rights, to the setting of airport charges and to the determination of prohibited areas in their territory which may not be flown over."¹⁷⁶⁷

Nonetheless, the ECJ decision confirms that the EU, and not Member States, which is the preferable participant in the OSIAB given its regulatory competence over the potential issues to

¹⁷⁶³ See *Air Transport Association of America and others v Secretary of State for Energy and Climate Change*, C-366/10, [2011] ECR I-13833.

¹⁷⁶⁴ See *Chicago Convention*, *supra* note 14.

¹⁷⁶⁵ *Ibid* at paras 64 to 68.

¹⁷⁶⁶ *Ibid* at para 69.

¹⁷⁶⁷ *Ibid* at para 70.

be addressed by the OSIAB. The EU has the responsibility to approve MNJVs,¹⁷⁶⁸ investigate airline ownership and control,¹⁷⁶⁹ and set airfare advertising regulations.¹⁷⁷⁰ It regulates passenger rights¹⁷⁷¹ and the rights of disabled passengers.¹⁷⁷² It bans dangerous airlines¹⁷⁷³ and tries to reduce GHGs from aviation.¹⁷⁷⁴ It negotiates open skies agreements,¹⁷⁷⁵ and provides guidelines in attracting carriers to regional airports.¹⁷⁷⁶ It also deals with aviation security matters ranging from body scanners¹⁷⁷⁷ to the sharing of passenger information.¹⁷⁷⁸ Thus, the EU would not need to ask its members to implement regulations pursuant to any commitments that it might make as a member of the OSIAB. In almost every case, the EU has the mandate to regulate, and is responsible for the current regulation of, any subject matter that OSIAB might reasonably be expected to address.²⁷⁴

Australia should also be a founding member of the proposed OSIAB as it is a middle power¹⁷⁷⁹ that spearheaded the Cairns Group, a multi-State coalition,¹⁷⁸⁰ and is familiar, through its flag carrier, Qantas, with the impact on nationally based airlines which rely primarily on 6th Freedom traffic. By extension, New Zealand would have to be included as it forms a Single Air Market with Australia.

Finally, Canada should also be involved. In addition to its past experience in mediating differences between the EU and the US noted earlier, it uniquely has broad trade¹⁷⁸¹ and open

¹⁷⁶⁸ See *supra* note 299.

¹⁷⁶⁹ See *supra* note 1753.

¹⁷⁷⁰ See *supra* note 305.

¹⁷⁷¹ See *supra* note 47.

¹⁷⁷² See *supra* note 334.

¹⁷⁷³ See *supra* note 68.

¹⁷⁷⁴ See *supra* note 65.

¹⁷⁷⁵ See EU aviation deregulation, *supra* note 121 and open skies agreements with Canada and the US, *supra* note 528.

¹⁷⁷⁶ See *supra* note 274.

¹⁷⁷⁷ See *supra* note 1306.

¹⁷⁷⁸ See *supra* note 1240.

¹⁷⁷⁹ See Mark Beeson, "Can Australia save the world? The limits and possibilities of middle power diplomacy" (2011) 65:5 Australian Journal of International Affairs 563-577.

¹⁷⁸⁰ The coalition promotes free trade in agriculture. See Cairns Group, "Communiqué, 38th Cairns Group Ministerial Meeting" (2 December 2013), online: Cairns Group <cairnsgroup.org/Pages/131202-communicue.aspx>. The Cairns Group has 20 members including Australia, Canada and New Zealand.

¹⁷⁸¹ Canada is in the process of finalizing a Free Trade Agreement with the European Union and the draft consolidated text has been made public. See EC "Consolidated CETA Text" (26 September 2014) online: European Commission <trade.ec.europa.eu/doclib/docs/2014/september/tradoc_152806.pdf> (visited April 13, 2015). The Canada–US Free Trade Agreement was concluded in 1988 and superceded by the *North American Free Trade Agreement*, 32 ILM 289, 605 (1993) in 1994.

skies¹⁷⁸² relationships with both the EU and the US,¹⁷⁸³ and also has an open skies agreement with New Zealand. It is also the country in which one of the founding carriers of the first MNJV with EU and US partners is based.

The potential parties also share other important commonalities, including the power¹⁷⁸⁴ and maturity of their airline¹⁷⁸⁵ and aviation industries,¹⁷⁸⁶ and the fact that their airlines' stocks are publicly traded.¹⁷⁸⁷ They are also united by the depth of their aviation expertise,¹⁷⁸⁸ and the fact that almost all¹⁷⁸⁹ have open skies agreements with each other. They are all rule-of-law based participatory democracies with commitments to open government.¹⁷⁹⁰ Each has similar market-based philosophies, similar positions on competition issues and compatible views on the role of

¹⁷⁸² See *US-EU Open Skies Agreement* and *Canada-EU Open Skies Agreement*, *supra* note 528.

¹⁷⁸³ The European Commission is currently promoting the "Consolidated CETA Text", *supra* note 1781, as an example of a "recently completed EU trade agreement" on the site explaining its Transatlantic Trade and Investment Partnership (TTIP) negotiations with the US. See European Commission, "Now online - EU negotiating texts in TTIP" (10 February 2015), online: European Commission <trade.ec.europa.eu/doclib/press/index.cfm?id=1230> (visited April 13, 2015).

¹⁷⁸⁴ Statistics reveal that carriers based in these economies transported roughly 51% of all airline passengers in 2012. See World Bank, "Air transport, passengers carried", online: World Bank <data.worldbank.org/indicator/IS.AIR.PSGR>.

¹⁷⁸⁵ Scheduled carriers in all five regions can trace their history back to the 1930s.

¹⁷⁸⁶ Airbus, Boeing and Bombardier are based respectively in Europe, the United States and Canada. Each has a very high level of regulatory expertise in order to facilitate and supervise the aircraft certification process.

¹⁷⁸⁷ Of the major carriers based in Australia, Canada, the European Union, New Zealand and the United States, only Air New Zealand still has government ownership. In November 2013, the New Zealand Government privatized 20% of the carrier and its stock is traded on the New Zealand Stock Market under the symbol NZX. See Lucy Craymer, "New Zealand Raises \$304 Million from Air New Zealand Stake Sale", *Wall Street Journal* (18 November 2013) online: Wall Street Journal

<blogs.wsj.com/moneybeat/2013/11/18/new-zealand-raises-304-million-from-air-new-zealand-stake-sale/>. See also, Air New Zealand, "Annual Shareholder Review 2013" at 2, online: Air New Zealand <www.airnewzealand.co.nz/assets/PDFs/Air-NZ-Annual-Shareholder-Review-2013.pdf>.

¹⁷⁸⁸ Canada and France provided assistance into the investigation of a Kenya Airways crash in the Ivory Coast. See République de Côte d'Ivoire, Ministère des Transports, Commission d'Enquête « Rapport Final sur l'accident survenue le 30 janvier 2000 en mer près de l'aéroport d'Abidjan à l'Airbus A310-304 immatriculé 5Y-BEN et exploité par la compagnie Kenya Airways » at 10 – 11. Australia and the United States provided assistance into the investigation of a domestic crash in Indonesia. See Indonesia, National Transportation Safety Committee, *Aircraft Accident Investigation Report: Boeing 737-497 PK-GZC Adi Sucipto Airport, Yogyakarta Indonesia 7 March 2007*, KNKT/07.06/07.02.35 (Jakarta, Indonesia: National Transportation Safety Committee, 2007) at 27.

¹⁷⁸⁹ The sole exception is Australia, which does not have an open skies agreement with either Canada or the European Union. Open skies talks between Australia and the European Union began on July 10, 2008, but no agreement has been reached. See "A Joint Statement, by Australian Minister for Infrastructure and Transport, Anthony Albanese, and Vice President of the European Commission and Commissioner for Transport Antonio Tajani, Brussels" (10 July 2008), online: European Commission <ec.europa.eu/transport/modes/air/international_aviation/country_index/doc/australia_2008_07_10_joint_statement.pdf>.

¹⁷⁹⁰ See online: Open Government Partnership <www.opengovpartnership.org/>. In addition Australia, Canada, New Zealand, the United States and most leading members of the European Union are perceived as "clean" by the Transparency International: see "Corruption Perceptions Index 2012: Frequently Asked Questions", online: Transparency International <cpi.transparency.org/cpi2012/in_detail/> (visited May 23, 2014).

commercial civil aviation; they often take similar positions on issues before ICAO.¹⁷⁹¹ All have advanced economies and compatible levels of social development and infrastructure. They waive visa requirements for their respective citizens, and in certain cases even provide consular services for each other's citizens.¹⁷⁹²

2) *Reasons why this group has potential*

As noted earlier, Australia, Canada, New Zealand, United Kingdom and the United States are the only members of the "Five Eyes", or more formally the Technical Cooperation Program (TCCP). The TCCP is "an international organization that collaborates in defence; scientific and technical information exchange; program harmonization and alignment; and shared research activities for the five nations."¹⁷⁹³ It is an ultra-secretive intelligence gathering network where the five partners share all information with each other and where the level of cooperation between their intelligence agencies is said to be so "complete that the national product is often indistinguishable."¹⁷⁹⁴ This suggests that these five States share a deep level of reciprocal trust. The Five Eyes also are members of an alliance, called the "14 Eyes", which includes with nine EU-member countries: Belgium, Denmark, France, Germany, Italy, the Netherlands, Spain and Sweden.¹⁷⁹⁵

All five prospective parties are also members of one of more of the G20,¹⁷⁹⁶ the Commonwealth,¹⁷⁹⁷ the OECD,¹⁷⁹⁸ or mutual defense agreements such as NATO¹⁷⁹⁹ and

¹⁷⁹¹ For example, at ICAO's 38th Assembly, a working paper entitled "Aviation Security for the next Triennium" was presented by a group of countries including Australia, Canada, many EU members, New Zealand and the United States. See Australia, *Aviation Security*, *supra* note 1419.

¹⁷⁹² See *Exchange of Notes between the Government of Canada and the Government of Australia constituting an Agreement concerning the sharing of consular services abroad*, 7 August 1986, see: Government of Canada, Canada-Australia Consular Services Sharing Agreement, "Canada-Australia Consular Services Sharing Agreement", online: Government of Canada <travel.gc.ca/assistance/emergency-info/consular/framework/canada-australia> (visited May 23, 2014). In 2012, former UK Foreign Secretary William Hague announced joint UK-Canada diplomatic missions, and hoped Australia and NZ would join: See "Canada, U.K. to cut costs by sharing embassies abroad", CBC News (23 September 2012), online: CBC News <<http://www.cbc.ca/news/politics/canada-u-k-to-cut-costs-by-sharing-embassies-abroad-1.1248873>>.

¹⁷⁹³ See "The Technical Cooperation Program", online: Office of the Under Secretary of Defense for Acquisition, Technology and Logistics <www.acq.osd.mil/ttcp/> (visited May 23, 2014).

¹⁷⁹⁴ See "Five Eyes Fact", *supra* note 1251.

¹⁷⁹⁵ *Ibid.*

¹⁷⁹⁶ Only New Zealand is not a member of the G20. See G20, "About G20", online: G20 <www.g20.org/about_G20>.

¹⁷⁹⁷ Only the US is not a member of the Commonwealth. In the EU, the U.K. is a member. See "Member countries", online: The Commonwealth <thecommonwealth.org/member-countries> (visited May 23, 2014).

¹⁷⁹⁸ Only the EU is not a member of the Organisation for Economic Co-operation and Development (OECD), but most of its Member States are. See Organisation for Economic Co-operation and Development, "List of OECD

ANZUS,¹⁸⁰⁰ and therefore the intergovernmental relationships between each of them are wide-ranging and deep.¹⁸⁰¹ As such, they have the experience to negotiate a common approach to the regulation of international airlines providing service among them.

The size of their combined markets¹⁸⁰² is globally significant. OSIAB residents spend roughly a third of global tourism dollars.¹⁸⁰³ Inter-OSIAB international travel¹⁸⁰⁴ is significant for each of Australia,¹⁸⁰⁵ Canada,¹⁸⁰⁶ the EU¹⁸⁰⁷ New Zealand,¹⁸⁰⁸ and the United States.¹⁸⁰⁹ Thus even if the influence of the OSIAB were limited to the regulation of routes between OSIAB Members, its regulations would apply to a critical mass of international civil aviation so as to potentially influence regulatory standards in other markets..

a) Exclusion of other countries

Member countries - Ratification of the Convention on the OECD", online: OECD <www.oecd.org/about/membersandpartners/list-oecd-member-countries.htm>.

¹⁷⁹⁹ Canada, the US and most EU Member States are member of the North Atlantic Treaty Organization. See NATO, "NATO Member Countries", online: NATO <www.nato.int/cps/en/SID-9E221A61-7BDCF90E/natolive/nato_countries.htm>.

¹⁸⁰⁰ Australia, New Zealand and the United States signed this mutual defense agreement in 1951. See John Bruni, "ANZUS and the Asia Pivot: A Fork in the Road?", *ISN ETH Zurich* (18 February 2013) online: The International Relations and Security Network, ISN ETH Zurich <www.isn.ethz.ch/Digital-Library/Articles/Special-Feature/Detail/?lng=en&id=159134&contextid774=159134&contextid775=159107&tabid=1453521731>.

¹⁸⁰¹ The various treaties between Canada and New Zealand deal with such issues as the "Avoidance of Double Taxation", "Film and Video Relations", "Social Security" and "Trade and Economic Co-operation." See generally online: Canada Treaty Information <www.treaty-accord.gc.ca/index.aspx>.

¹⁸⁰² They account for roughly 56% of the planet's GDP. See "Real GDP (2005 dollars) Historical", online: United States Department of Agriculture <www.ers.usda.gov/data-products/international-macroeconomic-data-set.aspx>.

¹⁸⁰³ See World Tourism Organization, *UNWTO Tourism Highlights*, 2013 ed, at 13, online: UNWTO <mkt.unwto.org/publication/unwto-tourism-highlights-2013-edition>.

¹⁸⁰⁴ For North America–Europe air traffic, see NATS, "North Atlantic Skies", online: Vimeo <vimeo.com/98941796>.

¹⁸⁰⁵ 47% of visitors to Australia are from the other potential OSIAB Member States. See online: "Visitor Arrivals Data, Statistics", online: Tourism Australia <www.tourism.australia.com/statistics/arrivals.aspx>.

¹⁸⁰⁶ 80% of visitors to Canada by air start in an OSIAB country. See "Table 1: Travel between Canada and other countries – Seasonally adjusted" in Statistics Canada, *The Daily* (17 October 2013), online: Statistics Canada <www.statcan.gc.ca/daily-quotidien/131017/dq131017c-eng.htm>.

¹⁸⁰⁷ Roughly 66% of visitors to the UK are from other countries in the EU. Another 15% are from the US, Canada, Australia and New Zealand. See "Table 2.10: Number of visits to UK: by country of residence 2008 to 2012" in UK, Office for National Statistics, Release, "Travel Trends 2012" (19 April 2013), online: Office for National Statistics <www.ons.gov.uk/ons/rel/ott/travel-trends/2012/index.html>.

¹⁸⁰⁸ 69% of visitors to New Zealand are from Australia, the EU, the US or Canada. See "Table 4: Country of residence of visitors Year ended September 2009–13" in NZ, Statistics New Zealand, *International Visitor Arrivals to New Zealand: September 2013* (Wellington: Statistics New Zealand, 2013) at 11, online: Statistics New Zealand <www.stats.govt.nz/browse_for_stats/population/Migration/international-visitor-arrivals-sep-13.aspx>.

¹⁸⁰⁹ Up to 45% of all US departing passengers on non-stop flights are destined for OSIAB countries. See "Table 2 : US-International Nonstop Data By World Area 1/ Passengers, Available Seats, Departures and Freight Totals By Month" in US, Office of the Assistant Secretary for Aviation and International Affairs, *US International Air Passenger and Freight Statistics: June 2013*, online: US Department of Transportation <www.dot.gov/office-policy/aviation-policy/us-international-air-passenger-and-freight-statistics-report-june-2013>.

The breadth and depth of the political, economic, cultural, diplomatic and military relationships among the potential OSIAB Members is such that no other country is an obvious immediate candidate for membership. After all, in order for the proposed OSIAB to be successful, its members must be able to reach consensus on difficult and complex issues. If its members are politically, economically, culturally, diplomatically and philosophically compatible they will be better placed to resolve any differences that may arise between them.¹⁸¹⁰ Thus, in order for any other country to be admitted OSIAB's constitution should specify that it must have fundamentally similar interests to those of OSIAB Members, have publicly-traded or non-State-owned airlines, have open skies agreements with at least three¹⁸¹¹ OSIAB Members and be accepted by all OSIAB Members.¹⁸¹² These conditions minimize the likelihood that OSIAB's harmonization goals will be defeated by countries whose views are incompatible. The proposed guidelines are loosely based on the membership guidelines for Asia-Pacific Economic Cooperation (APEC) as outlined in the 1997 APEC Ministerial Statement on Membership:

- an applicant economy should be located in the Asia-Pacific region;
- an applicant economy should have substantial and broad-based economic linkages with the existing APEC members; in particular, the value of the applicant's trade with APEC members, as a percentage of its international trade, should be relatively high;
- an applicant economy should be pursuing externally oriented, market-driven economic policies;
- an applicant economy will need to accept the basic objectives and principles set out in the various APEC declarations, especially those from the Economic Leaders' meetings;
- a successful applicant will be required to produce an Individual Action Plan (IAP) for implementation and to commence participation in the Collective Action Plans across the APEC work programme from the time of its joining APEC.

Decisions on the admission of additional members to APEC require a consensus of all existing members.¹⁸¹³

The Ministerial Statement further declares that APEC "will remain limited in size both on account of its Asia-Pacific regional character and because of the need for the group to remain

¹⁸¹⁰ The fact that OSIAB's membership is aligned with the Five Eyes, assures compatability. See *supra* note 1251.

¹⁸¹¹ The number 3 has been chosen because it is the average number of open skies agreements between the potential OSIAB candidate countries: Australia (2: NZ, US); Canada (3: EU, NZ, US); European Union (2: CA, US); New Zealand (3: AU, CA, US); and the United States (4: AU, CA, EU, NZ).

¹⁸¹² See ARTICLE 6 OSIAB Constitution, *below*.

¹⁸¹³ Asia-Pacific Economic Cooperation, "APEC Ministerial Statement on Membership", Ninth APEC Ministerial Meeting (21-22 November 1997), online: APEC <www.apec.org/Meeting-Papers/Ministerial-Statements/Annual/1997/1997_amm/statement_on_membership.aspx> (visited May 7, 2015).

manageable and effective."¹⁸¹⁴ OSIAB would have a similar philosophy in that the characteristics shared by its founding members, and its relatively limited membership, have the potential to enable members to quickly reach consensus on the international aviation regulatory issues just as the shared characteristics and limited size of the G7 allowed that group to have tremendous influence on the global economy.¹⁸¹⁵ Indeed, the initial composition of the OSIAB membership is an attempt to re-create at the aviation level "the close bonds and dense interconnections that existed between members of the G7."¹⁸¹⁶ It is also based on lessons learned from the relative success of the G7 as compared to the relatively lackluster results to date of the G20:

The G7 member States could all be said to be part of a wider Western community with a shared sense of understanding concerning the general structure of their societies and geopolitical interests. The same cannot be said for the G20, which brings together rivals with widely varying levels of economic strength. Integrating the members of the G20 would be a Herculean task at the best of times; in circumstances of global economic deterioration, the task may well be impossible.¹⁸¹⁷

Nonetheless, the emergence of the G20 shows that a multilateral organization, whose membership is limited to relatively wealthier nations rooted in western culture, can also provoke resentment from non-member States and a backlash against its initiatives. Therefore, the OSIAB should be structured so as to be open, once constituted, to including other States as members where they share many of the same characteristics as the founding members and demonstrate a commitment to advancing a consensus-based common solution to the regulatory issues on the OSIAB agenda.

b) Potential Candidate countries

Chile, Japan and South Korea are three strong potential members. Although they do not share 'inter-OSIAB bond ties and bonds'¹⁸¹⁸ with all of the OSIAB founding members, all three are

¹⁸¹⁴ *Ibid.*

¹⁸¹⁵ See generally, Matthew Morgan, "Consensus Formation in the Global Economy: The Success of the G7 and the Failure of the G20" (2012) 90 *Studies in Political Economy*, 115 - 131.

¹⁸¹⁶ See *ibid* at 129.

¹⁸¹⁷ *Ibid* at 131. For an overview of some of the issues in reforming the G7, now the G8, into a more representative organization without sacrificing the cohesion and efficiency which makes it powerful, see Peter I Hajnal, "Summitry from G5 to L20: A Review of Reform Initiatives" (Waterloo: The Centre for International Governance Innovation, March 2007).

¹⁸¹⁸ See *supra*, notes 1794 to 1809.

market-based democracies,¹⁸¹⁹ with strong anti-monopoly laws¹⁸²⁰ and all are members of both the Asia-Pacific Economic Cooperation (APEC)¹⁸²¹ and the Organisation for Economic Co-operation and Development (OECD).¹⁸²² Both Japan and South Korea are also members of the G20.¹⁸²³ Chile has free trade agreements with Canada¹⁸²⁴ and the United States¹⁸²⁵ and an open skies agreement with both New Zealand and the United States.¹⁸²⁶ Its major airline, LAN Chile,¹⁸²⁷ is non-government-owned and its stock is publicly traded. Japan has an Economic Partnership Agreement with Australia¹⁸²⁸ and open skies agreements with both Australia¹⁸²⁹ and the United States,¹⁸³⁰ as well as a newly-liberalized albeit not fully open skies agreement with Canada.¹⁸³¹ Its two major international airlines, All Nippon Airways¹⁸³² and Japan Airlines,¹⁸³³ each participate in an immunized joint venture with a US airline,¹⁸³⁴ and both carriers are private

¹⁸¹⁹ See *Transparency International*, *supra* note 1790. Chile, Japan and South Korea are seen as "cleaner" than some of members of the EU.

¹⁸²⁰ See *supra* note 1606.

¹⁸²¹ Asia-Pacific Economic Cooperation, "Member Economies", online: APEC <www.apec.org/About-Us/About-APEC/Member-Economies.aspx>. Canada and the US are also members.

¹⁸²² See *supra* note 1798.

¹⁸²³ See G20, "Information Centre", online: G20 <www.g20.utoronto.ca/members.html> (visited May 7, 2015). In fact, Japan is a member of the G7, see *supra* note 1758.

¹⁸²⁴ *Agreement to amend the Free Trade Agreement between the Government of Canada and the Government of the Republic of Chile, done at Santiago on 5 December 1996, as amended, between the Government of Canada and the Government of the Republic of Chile*, 16 April 2012, Can TS 2013 No 32 (entered into force 16 April 2012).

¹⁸²⁵ *Free Trade Agreement*, United States and Chile, 6 June 2003, 42 ILM 1026.

¹⁸²⁶ See *MALAT* *supra* note 527.

¹⁸²⁷ LAN Chile is fully owned by LATAM Airlines Group S.A., shares of which are traded in Santiago, on the New York Stock Exchange and the Sao Paulo Stock Exchange. See LATAM Airlines Group, "Company Information", online: Latam Airlines Group <www.latamairlinesgroup.net/phoenix.zhtml?c=81136&p=irol-homeProfile2> (visited May 7, 2015).

¹⁸²⁸ See Rob Taylor "Australia, Japan sign open skies aviation agreement", *Reuters* (30 September 2011) online: Reuters <www.reuters.com/article/2011/09/30/australia-japan-aviation-idUSL3E7KU0BT20110930>.

¹⁸²⁹ Japan, Ministry of Foreign Affairs "Joint Statement on the Entry into Force of the Agreement between Japan and Australia for an Economic Partnership" (15 January 2015), online: Japan Ministry of Foreign Affairs <www.mofa.go.jp/page3e_000283.html>.

¹⁸³⁰ US, Department of State, *US-Japan Memorandum of Understanding of October 25, 2010* (26 October 2010), online: US Department of State <www.state.gov/documents/organization/150284.pdf> .

¹⁸³¹ See Transport Canada, News Release, "Canada and Japan expand air transport relationship - en route for new, convenient flights to Tokyo" (2 October 2013) online: Government of Canada <news.gc.ca/web/article-en.do?nid=837369&_ga=1.156870781.790272241.1398170420> .

¹⁸³² All Nippon Airways is wholly owned by ANA Holdings Inc., stocks of which are traded on the Tokyo Stock Exchange. See online: ANA Holdings <www.anahd.co.jp/en/> (visited May 7, 2015).

¹⁸³³ The stocks of Japan Airlines Co. Ltd. are traded on the Tokyo Stock Exchange. See Tokyo Stock Exchange, "Stock Data Search, Japan Airlines", online: Tokyo Stock Exchange <quote.tse.or.jp/tse_n/quote.cgi?F=listing%2FEDetail1&MKTN=T&QCODE=9201> (visited May 7, 2015).

¹⁸³⁴ All Nippon Airways has a joint venture with United, and Japan Airlines has a joint venture with American Airlines. See US, Department of Transportation, *US-Japan Alliance Case*, Order 2010-11-10 (2010).

corporations whose stock is publicly traded. South Korea has an open skies¹⁸³⁵ and a free trade agreement with Canada,¹⁸³⁶ and an open skies agreement¹⁸³⁷ and a free trade agreement with the United States.¹⁸³⁸ The stocks of its two major airlines, Asiana¹⁸³⁹ and Korean Airlines,¹⁸⁴⁰ are publicly traded. All three States are thus strong potential candidate countries to join OSIAB once constituted.

3) Defining New Global Standards

If the OSIAB were to be created, it would have the power to potentially establish global standards in almost every area of international civil aviation. Any regulatory approach commonly adopted by them has the potential to become a de facto international standard and to inspire parallel de jure initiatives by multilateral organizations such as ICAO. By way of analogy, the 1966 Montreal Agreement¹⁸⁴¹ made the waiver of liability limitations in the Warsaw Convention¹⁸⁴² among airline participants a condition of providing international air service to points in the United States¹⁸⁴³ — a strategy that ultimately facilitated ICAO's adoption of the Montreal Convention of 1999.¹⁸⁴⁴ Similarly, Europe's 1999 Hushkit Regulation¹⁸⁴⁵ forbade the operation at EU airports of "recertificated civil subsonic jet aeroplanes" — a move which led

¹⁸³⁵ See Prime Minister of Canada, "Open Skies Air Transport Agreement with the Republic of Korea", online: Office of the Prime Minister <pm.gc.ca/eng/news/2014/09/22/open-skies-air-transport-agreement-republic-korea> (visited May 7, 2015).

¹⁸³⁶ See Foreign Affairs, Trade and Development Canada, "Canada-Korea Free Trade Agreement (CKFTA)" online: Foreign Affairs, Trade and Development Canada <www.international.gc.ca/trade-agreements-accords-commerciaux/agr-acc/korea-coree/index.aspx?lang=eng>

¹⁸³⁷ See also *Air Transport Agreement Between the Government of the United States of America and the Government of the Republic of Korea*, 9 June 1998, TIAS 12961 (entered into force 9 June 1998).

¹⁸³⁸ The United States-Korea Free Trade Agreement entered into force on March 15, 2012. See "The US—Korea Free Trade Agreement (KORUS)", online: export.gov <http://export.gov/%5C/FTA/korea/index.asp> (visited May 7, 2015).

¹⁸³⁹ Asiana is traded on the Korean Stock Exchange. See online: Korean Stock Exchange, "Asiana Airlines", online: Korean Stock Exchange <eng.krx.co.kr/por_eng/m2/m2_1/m2_1_1/JHPENG02001_01.jsp?isu_cd=020560> (visited May 7, 2015).

¹⁸⁴⁰ Korean Air is traded on the Korean Stock Exchange. See online: Korean Exchange, "KAL", online: Korean Stock Exchange <eng.krx.co.kr/por_eng/m2/m2_1/m2_1_1/JHPENG02001_01.jsp?isu_cd=A003490> (visited May 7, 2015).

¹⁸⁴¹ The 1966 *Montreal Agreement*, *supra* note 53, was a "voluntary" waiver of passenger liability limits and certain carrier defenses in the Warsaw Convention by US and foreign carriers. See 14 CFR Part 203 (2014)

¹⁸⁴² *Warsaw Convention*, *supra* note 166. It entered into effect on February 13, 1933, and has 152 parties.

¹⁸⁴³ See 14 CFR § 203.5 (2014). See also Andreas F Lowenfeld & Allan I Mendelsohn, "The United States and the Warsaw Convention" (1967) 80:3 Harv L Rev 497 at 533, 534, 563–578 (JSTOR)

¹⁸⁴⁴ *Montreal Convention 1999*, *supra* note 317.

¹⁸⁴⁵ EC, *Council Regulation (EC) 925/1999 of 29 April 1999 on the registration and operation within the Community of certain types of civil subsonic jet aeroplanes which have been modified and recertificated as meeting the standards of volume I, Part II, Chapter 3 of Annex 16 to the Convention on International Civil Aviation, third edition (July 1993)*, [1999] OJ, L 115/1.

ICAO to ultimately adopt new noise global policies for civil jet aircraft in 2001.¹⁸⁴⁶ Affected parties made diplomatic protests at the outset, but the development of an agreed standard by an entity with global economic and political influence ultimately led to the adoption of a de jure global standard. Absent these initially more limited initiatives, it is unlikely that ICAO's diverse 191 Member States would have adopted them as global standards so quickly.

Both of the above examples involved regulatory initiatives led by a single OSIAB Member, the US and the EU respectively. Any regulatory initiatives agreed to by OSIAB members would have an even greater likelihood of inspiring global agreement. In addition to the power to ban from their airspace any carrier which does not meet their requirements,¹⁸⁴⁷ States also have the power to impose conditions on any aircraft that overfly their territories.¹⁸⁴⁸ The impact of this in the context of initiatives agreed to by OSIAB members cannot be overstated. While it is true that an airline may operate profitably while confining its operations to the very heavily populated part of the world that lies east of the Curzon Line and north of the Antipodes,¹⁸⁴⁹ most of that region's larger carriers serve at least one major airport in the territory of an OSIAB Member. Moreover, in addition to regulating flights among OSIAB Members, OSIAB's initiatives could also regulate flights between OSIAB Members and non-member countries, thus regulating indirectly the operations of 6th Freedom-based carriers that route intra-OSIAB traffic through hubs in non-member countries.

In order to achieve this level of influence, OSIAB's members would have to cede some of their individual jurisdiction over international civil aviation in their territory in order to form part of a larger collective regulation process with the ability to shape global aviation policy. Here, the European Union offers examples of tools that may make the harmonization process more palatable to members. The members of the European Union are bound by the Treaty on the Functioning of the European Union,¹⁸⁵⁰ which contains articles on the "Approximation of

¹⁸⁴⁶ See *ICAO Res. A33-7*, *supra* note 1691 at I-38, Appendix C.

¹⁸⁴⁷ For the EU, see *Regulation 474/2006*, *supra* note 68. For the US, see 14 CFR Part 129 (2014).

¹⁸⁴⁸ See *Secure Flight Program*, *supra* note 1172 (amending 49 CFR § 1560.3).

¹⁸⁴⁹ It has roughly 55% of the world's population. See Simon Rogers, "World Population by country: UN guesses the shape of the world by 2100", *The Guardian* (26 October 2011), online: *The Guardian* <www.theguardian.com/news/datablog/2011/may/06/world-population-country-un#data>. This region includes China, India, Indonesia, Pakistan, Russia, Bangladesh, Japan, Viet Nam, the Philippines, Iran and Thailand.

¹⁸⁵⁰ *TFEU*, *supra* note 271.

Laws."¹⁸⁵¹ Under this concept, Member States do not have to pass identical laws but they must ensure that their laws yield compatible outcomes.¹⁸⁵² Alternatively, OSIAB could choose to follow the even less formal APEC model of agreeing on policy frameworks but allowing individual members to develop their own compatible legislation.¹⁸⁵³

While these approaches offer the potential for some flexibility, OSIAB membership would nonetheless require a genuine effort by members to work together to arrive at common solutions to common concerns. While this does require a cession of sovereignty, the benefits of a collective solution might well overcome concerns with ceding sovereignty. After all, this willingness to recognize the benefits to be gained by cooperation is what has led to the successful implementation of many treaties and indeed military alliances.¹⁸⁵⁴

IV OSIAB'S STRUCTURE AND CREATION

It is imperative to its success that OSIAB's objectives not be undermined by an unwieldy bureaucratic structure. What is proposed here is a small, focused international organization with a Council, a small Secretariat and the ability to create *ad hoc* Panels and Working Groups as may be necessary. It is helpful to critically compare existing multilateral organizations such as the Commonwealth, the Organization of American States, and *L'Organisation internationale de la Francophonie*. In each case, the size of their membership has led to a large bureaucracy.¹⁸⁵⁵ Moreover, none of these organizations has had an impact on global policy in proportion to the economic and political clout of its collective membership. Thus, OSIAB should be based on an entity with a small membership and bureaucracy and whose global influence at least matches or exceeds the combined political and economic clout of its members.

¹⁸⁵¹ *Ibid*, art 114(1). Similar concepts are present in Article 100 of the *Treaty Establishing the European Economic Community*. See *TEEEEC*, *supra* note 270, art 100.

¹⁸⁵² See *Commission v United Kingdom*, C-300/95, [1997] ECR I-2663.

¹⁸⁵³ See Asia-Pacific Economic Cooperation, "APEC Privacy Framework" (December 2005), online: APEC <publications.apec.org/publication-detail.php?pub_id=390> at 33 (paragraph 39).

¹⁸⁵⁴ Thus on September 11, 2001, NORAD's reaction to the terrorist events, including the launch of US Air Force jets, was directed by Canadian Major Gen. Rick Findley, NORAD's deputy commander, the highest ranking NORAD official then on duty. See Joseph T Jockel, "Should Ottawa Seize the Obama Moment?" (2009) 39/2 SPP Briefing Papers (Calgary: The University of Calgary School of Public Policy, September 2009), online: University of Calgary <www.policyschool.ucalgary.ca/sites/default/files/research/jockel-final-web.pdf> at 2.

¹⁸⁵⁵ The *Francophonie*, the Commonwealth and the Organization of American States have respectively 75, 53 and 35 Member States and respectively 300, 380 and more than 700 staff.

In 1960, five countries on two continents— Iran, Iraq, Kuwait, Saudi Arabia and Venezuela – created the Organization of Oil Producing Countries (OPEC) to stabilize oil prices. Today, OPEC's 12 members¹⁸⁵⁶ produce about 40% of the world's oil supply¹⁸⁵⁷ and the organization's activities are "an important factor that affects oil prices."¹⁸⁵⁸ Yet, the bureaucracy that supports OPEC is tiny. Twenty years after its foundation, it had a staff of 39 people and an annual budget of US\$ 14 million.¹⁸⁵⁹

A) OSIAB would not be a Cartel

OPEC was established to enable a group of oil producing countries, through a strong collective vision and discipline, to influence the price of oil through consensus decisions on controlling supply.¹⁸⁶⁰ OPEC offers a possible administrative structure on which to base OSIAB as it seems to show that if the State Members of an international organization are part of a cohesive unified group, a large secretariat is not necessary in order for those States' collective power to influence change on a global level. It is of course not proposed that OSIAB Members would conspire to fix prices or divide up the inter-OSIAB market among their airlines. Nonetheless, using the bureaucratic structure of OPEC as a model for OSIAB raises the potential for OSIAB to be criticized as a cartel.¹⁸⁶¹ This issue deserves further exploration and refutation.

Cartels focus on restraining competition and consequently raising prices for the collective benefit of their members. The EU defines a cartel as:

[A] group of similar, **independent companies** which join together to fix prices, to limit production or to share markets or customers between them. Instead of competing with each other, cartel members rely on each other's agreed course of action, which **reduces their incentives** to

¹⁸⁵⁶ These are Algeria, Angola, Ecuador, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates and Venezuela.

¹⁸⁵⁷ See "Table 1.SF.2. Global Oil Supply and Demand by Region" in International Monetary Fund, *World Economic Outlook Database October 2012*, online: IMF <www.imf.org/external/pubs/ft/weo/2012/02/weodata/index.aspx> (visited May 24, 2014).

¹⁸⁵⁸ "Energy & Financial Markets: What Drives Crude Oil Prices? An analysis of 7 factors that influence oil markets, with chart data updated monthly and quarterly", US Energy Information Administration, online: US Energy Information Administration <www.eia.gov/finance/markets/supply-opece.cfm> (visited May 24, 2014).

¹⁸⁵⁹ Edward Jay Epstein, "The Cartel That Never Was: Saudi Arabia finds in the perceived unity and power of OPEC a convenient illusion", *The Atlantic Monthly* (March 1983) online: *The Atlantic Monthly* <www.theatlantic.com/past/issues/83mar/epstein.htm> (visited May 24, 2014). More recent figures are not available.

¹⁸⁶⁰ See Jahangir Amuzegar, *Managing the Oil Wealth: OPEC's Windfalls and Pitfalls* (London: IBTauris, 1999) at 45–46.

¹⁸⁶¹ OPEC is a cartel. See Andrew C. Udin, "Slaying Goliath: The Extraterritorial Application of US Antitrust Law to OPEC" (2001) 50:5 *American University Law Review* 1321-1374.

provide new or better products and services at competitive prices. As a consequence, their clients (consumers or other businesses) end up paying more for less quality.¹⁸⁶²

An international cartel¹⁸⁶³ is defined as one that minimally involves more than one producer from more than one country, and it must have attempted to set prices or allocate markets.¹⁸⁶⁴

Both this definition and the EU definition focus on private sector companies as the members of a cartel.

While OPEC is composed of sovereign States as opposed to private companies, it satisfies the above definitions of a cartel: its goal is to maintain the stability and prosperity of the petroleum market of member states¹⁸⁶⁵ by recognizing that they can earn a higher price by acting collectively to control supply.¹⁸⁶⁶

Unless member States of a multilateral organization are the owners or producers of the commodity or service they seek to collectively regulate, it is difficult to see how the mere establishment of that organization constitutes a cartel. Absent a specific intent to control prices or allocate markets, the presumption must be that a group of States acting collectively to regulate an activity is not a cartel.

It is a proposed condition of OSAIB membership that members may not own their national airlines, and the explicit intent of OSIAB is to "[coordinate and harmonize] the commercial aviation policies of the Parties and [to create] a level playing field for airlines based in the Parties and operating on intercontinental routes within or without the collective territories of the Parties."¹⁸⁶⁷ The mere promotion of common regulatory standards does not imply a cartel. Thus the Asia-Pacific Economic Cooperation (APEC) seeks to promote regional integration, economic

¹⁸⁶² See European Commission, "Cartels", online: European Commission <ec.europa.eu/competition/cartels/overview/index_en.html> [emphasis in original].

¹⁸⁶³ In the world of diamond, De Beers is seen as a cartel. See MJ Montpelier "Diamonds are Forever? Implications of United States Antitrust Statutes on International Trade and the De Beers Diamond Cartel" (1993) 24:2 California Western International Law Journal 277 344.

¹⁸⁶⁴ See Margaret Levenstein, Valerie Y Suslow, and Lynda J Oswald, "Contemporary International Cartels And Developing Countries: Economic Effects And Implications For Competition Policy", Working Papers Series (St. Paul: International Agricultural Trade Research Consortium, December 2003) at 7.

¹⁸⁶⁵ See Udin, *supra* note 1861 at 1326.

¹⁸⁶⁶ See Udin, *supra* note 1861 at 1323.

¹⁸⁶⁷ See *infra* Annex: The Constitution of the Open Skies Intercontinental Aviation Block, Article 2.

and technical cooperation and "a favorable and sustainable business environment"¹⁸⁶⁸ and to "turn policy goals into concrete results and agreements into tangible benefits."¹⁸⁶⁹

An example of this goal is the APEC Privacy Framework. The Foreword reads in part:

Ministers have endorsed the APEC Privacy Framework, recognizing the importance of the development of effective privacy protections that avoid barriers to information flows, ensure continued trade, and economic growth in the APEC region.¹⁸⁷⁰

The Framework is designed to enable multinational corporations that "collect, access, use or process data in APEC Member Economies to develop and implement uniform approaches within their organizations for global access to and use of personal information."¹⁸⁷¹ In other words, APEC is trying to create common standards across member States, with respect to the protection and use of personal information, so that a bank will have similar minimum obligations whether it is based in Halifax, Hartford, Hobart, or Hong Kong. Yet nobody considers APEC to be a cartel merely because it promotes common regulatory standards among member States so as to facilitate a level competitive playing field.

APEC does not itself have the power to enact legislation; it acts merely as a forum for the development of common regulatory standards and thus any Framework agreed to by members is not binding per se on them. The actual harmonization only occurs if and when the Member states indicate to APEC that the legislation recommended in the Framework has been adopted.¹⁸⁷²

In contrast to APEC, the European Union has the competence to adopt legislation that binds all of its Members¹⁸⁷³ (and in matters where it does not have this power, EU Members are bound by TFEU articles on the "Approximation of Laws"¹⁸⁷⁴). Where the adopts binding rules regulating the EU aviation market according to a harmonized regime, could one plausibly argue that the impact on airlines not based in the EU who seek access to that market is a *de facto* restraint of competition, and that since this may result in higher prices than would otherwise be the case, the

¹⁸⁶⁸ Asia-Pacific Economic Cooperation, "Mission Statement", online: APEC <www.apec.org/About-Us/About-APEC/Mission-Statement.aspx> (visited May 7, 2015).

¹⁸⁶⁹ *Ibid.*

¹⁸⁷⁰ See *supra* note 1853 at i.

¹⁸⁷¹ *Ibid.*, at 4.

¹⁸⁷² For example, the "Mechanism for Reporting Domestic Implementation of the APEC Privacy Framework", reads as follows: Member economies should make known to APEC domestic implementation of the Framework through the completion of and periodic updates to the Individual Action Plan (IAP) on Information Privacy. *Ibid.*, at 4.

¹⁸⁷³ As noted earlier, the EU has jurisdiction over most areas of aviation law. See *supra* notes 1763 to 1778 and associated text.

¹⁸⁷⁴ TFEU, *supra* note 271, art 114(1)

EU is a cartel. For example, could a China-based airline that wishes to operate flights within the EU argue that since it would be able to offer lower fares than EU carriers if it were able to operate according to the regulatory conditions imposed by its home state, the EU is effectively operating as cartel?.

The answer is no is partially because there the Chinese carrier can obtain access to the EU market through the negotiation of an open skies agreement with the EU or through the negotiation of a free trade agreement. More to the point, it is because the conditions for access faced by the would-be Chinese competitor are no more onerous than those to which EU member states are subject and therefore the EU cannot be accused of manipulating its regulatory standards so as to restrict the supply capable of being offered by non EU airlines and enhance the supply side market for EU based carriers. Similarly, the central distinction between a cartel and the types of common regulatory standards to be developed by OSIAB, is that they would apply equally to all carriers operating in the aviation market among OSIAB Members, regardless of whether the carriers are based in OSIAB members states or not.

The extant strong competition policies of OSIAB's members, and the BSAs to which they are committed, would of course prevent them from conspiring to set prices or to limit capacity on routes between them. But what if they were to collectively agree that no more than a specified percentage – for example, 40% - of the passengers on a flight could continue to a third destination (6th Freedom traffic), and to repudiate BSAs that do not conform to this condition. While this is a condition that would largely codify the *status quo* for the major airlines based in OSIAB states,¹⁸⁷⁵ it would likely have an impact on the market share enjoyed by the GBMCs. Would this be seen as cartel type action or at least the promotion of anti-competitive policies by the OSIAB so as to favour their national airlines?

In order to be fair to airlines based in countries with very small territories or populations, the characterization of the 'third destination' for the purposes of any restriction of 6th Freedom traffic adopted by the OSIAB would need to exclude connections to States that are economically allied with the State in which the carrier's hub is based. For example, three of the GBMCs are based in States which are Members of the Gulf Cooperation Council (GCC),¹⁸⁷⁶ whose

¹⁸⁷⁵ See supra note 649.

¹⁸⁷⁶ The Gulf Cooperation Council is a political and economic union of six States bordering the Persian Gulf. Its members collectively implemented a Customs Union in January 2015. See "GCC customs union fully operational",

membership¹⁸⁷⁷ has a combined population of roughly 46 million.¹⁸⁷⁸ Thus for the purposes of any potential constraint on 6th Freedom traffic, traffic between a GCC-based MNJV's hub and a final destination in another GCC Member State should not be counted. It is expected that this qualification would not impose higher requirements on carriers that are not based OSIAB states than it would on carriers based in OSIAB states.¹⁸⁷⁹

More importantly, such a policy should not be adopted by the OSIAB unless its members agree that a BASA by definition is intended to principally support only bilateral air traffic between its two signatories and not to enable partner airlines to base their targeted market primarily on 6th freedom rights. Insisting that the parties to a BIA respect the terms to which they agreed cannot be seen an attempt to limit international traffic or distort competition. Absent this conclusion, the OSIAB should not limit 6th freedom traffic by GBMCs or other carriers unless it concludes that the market share enjoyed by the relevant carrier is the result of an anti-competitive subsidy by its home State (or possibly that this step is necessary to achieve other clearly articulated and internationally recognized accepted public policies of member states). Otherwise, the OSIAB could well come under legitimate criticism for attempting to give its members a pricing advantage through the guise of adopting a common regulatory standard.

Finally, it should be noted that that, since its members are sovereign States, anti-competition and anti-cartel laws would not apply to the actions of the OSIAB.¹⁸⁸⁰ However, if the OSIAB wishes to become the de facto setter of new global regulatory standards, it would not wish to have to resort to that technical distinction to defend itself against allegations that its regulatory standards, while supposedly aimed at promoting a level playing field, are themselves anti-competitive.

Editorial, *The Peninsula* (3 January 2015) online: The Peninsula <thepeninsulaqatar.com/news/middle-east/314466/gcc-customs-union-fully-operational>.

¹⁸⁷⁷ See Gulf Cooperation Council, "GCC Member States", online: GCC <www.gcc-sg.org/eng/indexc64c.html?action=GCC> (visited May 15, 2015). The members are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.

¹⁸⁷⁸ See Gulf Cooperation Council, "GCC Population", online: GCC <sites.gcc-sg.org/Statistics/> (visited May 15, 2015).

¹⁸⁷⁹ See generally *supra* Chapter 3 II C) Sixth Freedom Traffic is incidental to a BASA.

¹⁸⁸⁰ See *Int'l Ass'n of Machinists & Aerospace Workers v. Org. of Petroleum Exporting Countries*, 477 F Supp 553, 566-567. The Court found that the alleged price fixing was an act of sovereign governments rather than of private corporations. See further, *Fenin v Commission*, C-205/03, [2006] ECR I-6295.

B) Structural Weakness of OPEC

OPEC's members have disparate economic interests¹⁸⁸¹ and, given that they all export oil, are natural competitors. Oil prices are not in practice determined through a consensus of OPEC members but by price setters (usually Saudi Arabia and its neighbors on the Arabian Peninsula) and price followers (the other OPEC members).¹⁸⁸² While the existence of OPEC may indicate that the collective actions of the member states of a small multilateral organization may set the global agenda, OPEC has serious design flaws. Members are united in their interest in maximizing profits from oil but divided on almost everything else.¹⁸⁸³ Article 11(c) of the OPEC Statute¹⁸⁸⁴ states that all Conference Decisions must be unanimous but "[r]arely are the members unanimous on an issue."¹⁸⁸⁵

These caveats aside the basic elements of the OPEC constituting instrument, when combined with certain elements of the Chicago Convention, could form the basis of an organization with the power and structure to re-shape global commercial aviation.

C) Designing OSIAB

As explained below, OSIAB's administrative structure should be loosely based on that of OPEC in that it should have three organs: a Council, a Board of Directors, and a small Secretariat. (A more detailed version of the structure summarized below is found in the annex to this chapter entitled "*ANNEX: 'OSIAB Constitution'*".)

1) The Council

The Council would be OSIAB's main decision-making and policy organ. It would approve documents submitted by the Board of Directors and would set joint policy for the OSIAB Members. It would meet yearly, or more often at the request of two or more members. Each OSIAB Member would be represented by a delegation at Council meetings. Delegations would

¹⁸⁸¹ Indonesia pulled out in 2008 and complained about high oil prices as it became a net importer of oil. See John Aglionby, "Indonesia pulls out of OPEC", *Financial Times* (28 May 2008), online: www.ft.com/cms/s/0/d0e346fe-2c87-11dd-88c6-000077b07658.html#axzz2IAf1Qe6w (subscription).

¹⁸⁸² Steven E Plaut, "OPEC is not a Cartel", *Challenge* 24:5 (November/December 1981) 18 at 21.

¹⁸⁸³ See "Are the objectives of OPEC statute still valid?— the Iranian I.I.E.S view – part One" *Albawaba* (16 November 2000), online: www.albawaba.com/business/are-objectives-pec-statute-still-valid%E2%80%93iranian-iies-view-%E2%80%93part-one; "Are the Objectives of OPEC Statute Still Valid?", Editorial, *IIES* (27 September 2000) online: [IIES <www.iies.net/OLD_Site/english/news/news/lopec.html>](http://www.iies.net/OLD_Site/english/news/news/lopec.html).

¹⁸⁸⁴ *Agreement concerning the creation of the Organization of Petroleum Exporting Countries (OPEC)*, Iran, Iraq, Kuwait, Saudi Arabia, Venezuela, etc, 14 September 1960, 443 UNTS 247, 4 ILM 1175 (entered into force 1 October 1960) [*OPEC Statute*]. See Organisation of the Petroleum Exporting Countries, "OPEC Statute", online: [OPEC <www.opec.org/opec_web/static_files_project/media/downloads/publications/OPEC_Statute.pdf>](http://www.opec.org/opec_web/static_files_project/media/downloads/publications/OPEC_Statute.pdf).

¹⁸⁸⁵ *Supra* note 1883.

normally be led by the member's Minister or Secretary of Transportation. The Council would have powers such as those in the Chicago Convention to adopt international standards and recommended practices (SARPs).¹⁸⁸⁶ The adoption of SARPs would be done through consensus. However, unlike OPEC's unanimity requirement, OSIAB would use a different decision-making process.

a) The Consensus Safety Valve

Consensus-driven organizations can become veto-driven organizations as a lack of support by even a small minority of members may cause an otherwise widely supported initiative to fail. Whether this is the case depends on the extent of political contentiousness of the issue under consideration and whether the support of the voices raised in opposition is perceived as essential to the ultimate global success of the proposed initiative. For example, in line with most United Nations organizations, the United Nations Committee on the Peaceful Use of Outer Space (UNCOPUOS), which today has 74 members,¹⁸⁸⁷ utilizes a consensus procedure for decision making. "Consensus in COPUOS is conceived as the search for the common ground in a debate by scientific discussion of the problem until an agreement is reached."¹⁸⁸⁸ Partly as a result of the need to seek consensus, but primarily because of the novel and corresponding contentious nature of the subject matter, and the need to obtain the support of the states most invested in that issue, the UNCOPUOS has been unable over the past six decades to set a legal boundary between air and space.¹⁸⁸⁹

Given OSIAB's objectives, it should be consensus-based as much as possible, but procedures should be incorporated to ensure that consensus is actually achievable if at all possible.

Therefore, where a proposed policy or proposed Standard and Recommended Practice (SARP) is supported by most of OSIAB's members, it is proposed that a simple majority vote would be sufficient to send the issue to an *ad hoc* Working Committee. This idea is based on the "Congressional Conference" procedure of the US Congress. America's Constitution requires both the Senate and the House of Representatives to be 'of one mind' and adopt identical

¹⁸⁸⁶ *Chicago Convention*, *supra* note 14, art 54 (l) gives these powers to the 36-member council not to the Assembly.

¹⁸⁸⁷ United Nations Committee on the Peaceful Uses of Outer Space, "Members", online: United Nations Office for Outer Space Affairs <www.oosa.unvienna.org/oosa/en/COPUOS/members.html>.

¹⁸⁸⁸ Julian Hermida, *Legal Basis for a National Space Legislation*, Space Regulations Library, vol 3 (New York: Kluwer Academic Publishers, 2004) at xvi.

¹⁸⁸⁹ The importance of defining this boundary is growing. See generally Fitzgerald, "Inner Space", *supra* note 45.

legislation.¹⁸⁹⁰ The Congressional Conference procedure seeks to overcome the potential roadblock that the unanimity requirement might otherwise constitute.

Conference committees are created by the two Houses of Congress to resolve the differences in the respective versions of any item of legislation which they both pass. . . . [B]ills and resolutions on the same general subject, especially controversial ones, are regularly passed or adopted by the two bodies in different forms. Before any such single measure can become law, however, any differences in the two passed versions must be compromised. Both Houses must eventually pass every measure in an identical form before any such measure may be enrolled or become law.¹⁸⁹¹

The language of any measure which has been approved by both Houses is never in conference, nor may the conferees amend any part of a bill which has been approved by both Houses. All that goes to conference is the amendment or amendments in disagreement.¹⁸⁹²

In a procedure similar to the American "Conference" approach, it is proposed that a majority of OSIAB Members could vote to send a policy or SARP on which consensus has not been achieved to an *ad hoc* Working Committee. That committee would be composed of both a proponent and an opponent of the policy or SARP. It would examine the precise point of discord to identify whether a compromise is possible, and if so, report the results of the compromise and any suggested amendments for a vote at the next meeting of the Council. In this manner, consensus could be sought even in areas where one or more clauses of a policy or SARP might initially raise concerns on the part of a single OSIAB Member or a minority of OSIAB Members.

2) The Board of Directors

Under the proposed structure, a Board of Directors would direct the management of the affairs of OSIAB and the implementation of the decisions of its Council. The Board would facilitate the holding of Council meetings and the operation of Working Groups. It would handle any reputational issues relating to OSIAB. The Board would also oversee the Secretariat and perform administrative functions such as hiring senior staff, appointing auditors and managing the organization's finances. Each member would nominate one person to the Board. A simple majority vote of attending Directors would be required for decisions of the Board.

3) The Secretariat

The Secretariat would be a small administrative and clerical unit that would provide logistical, policy, legal and clerical support to the Council and the Board of Directors as required. It would

¹⁸⁹⁰ US Const, art I, § 2, cl. 3. See also *Immigration and Naturalization Service v Chadha*, 462 US 919 at 955 – 956, 103 S Ct 2764 (1983) (available on QL).

¹⁸⁹¹ Riddick, *supra*, note 1085 at 449.

¹⁸⁹² *Ibid* at 450.

handle all documentation related to OSIAB business and would coordinate the distribution of any materials submitted for Council consideration by a Member. It would act as an information clearing centre for OSIAB's Members, ensuring that each Member was aware of pending regulations of any other Member that could affect international civil aviation. The Secretariat would be led by a Secretary General based at OSIAB's headquarters.

D) Mandate and Jurisdiction

In the treaty establishing its existence, OSIAB should be mandated to adopt any measures its Members consider appropriate to ensure safe, regular, efficient and sustainable civil air transportation, to promote non-wasteful and fair competition on all routes among members, and generally to foster the development of all aspects of international civil aviation and to address any civil aviation issue proposed by a Member.

OSIAB would normally not be expected to involve itself in those areas of aviation law where there is a workable global standard. Examples of such standards are those Annexes to the Chicago Convention which deal with the safety of international civil aviation and international treaties such as the 2010 Beijing Convention,¹⁸⁹³ the Montreal Convention of 1999¹⁸⁹⁴ or the 1952 Rome Convention.¹⁸⁹⁵ However, where no worldwide standard exists, or where a current standard is seen as lacking, OSIAB Members would be mandated to seek to establish a common standard.

The proposed OSIAB would be member-driven and would encourage Members that are contemplating regulations that could have a potential impact on international civil aviation to submit these proposals to the Secretariat. The Secretary General would then take steps to ensure that the proposed regulation would not be incompatible with the current or proposed policies of other OSIAB Members. This would include a reference to the Council and possibly the creation of a multi-member Working Group to study the proposal in greater depth. The OSIAB Council would be encouraged to issue SARPs in the areas of antitrust immunity, traffic rights, aviation security, passenger rights, environmental issues, and on other topics as may be requested by its members. These SARPS would set out the consensus of OSIAB with respect to the relevant

¹⁸⁹³ *Convention for the Suppression of Unlawful Acts Relating to International Civil Aviation*, 10 September 2010, ICAO Doc 9960 (not yet in force.)

¹⁸⁹⁴ *Montreal Convention 1999*, *supra* note 317.

¹⁸⁹⁵ *Rome Convention 1952*, *supra* note 963.

issue, with the result that a level playing field would exist for the airlines of all OSIAB Members with respect to international routes between those Members, whether non-stop or operated by airlines in third countries using 6th Freedom rights. SARPs in other areas of aviation law could be introduced in the future as required to address new or evolving airline industry issues.

1) Antitrust Immunity

Harmonized or compatible regulation with respect to ATI is so important that it was addressed in the 2007 Open Skies Agreement between the United States and the European Union. The Agreement states that the European Commission and the US DOT *must* cooperate in order to be more "consistent with their respective functions in addressing competition issues."¹⁸⁹⁶ They are encouraged to "consult on specific cases"¹⁸⁹⁷ and must give each other notice of "proceedings or matters, which in the judgment of the notifying Participant may have significant implications for the competition interests of the other Participant."¹⁸⁹⁸ Obviously a situation where an MNJV has ATI in the jurisdiction of one of the participating airlines but not in that of its partner(s) is unacceptable. Thus this harmonization needs to occur in all the territories where the MNJV is commercially active. Addressing this issue is complicated by the fact that different OSIAB Members use different tools to address ATI issues in the airline industry. In Australia, Canada, the European Union and New Zealand, competition issues in the airline industry fall within the jurisdiction of competition regulators,¹⁸⁹⁹ whereas in the United States, the approval of MNJVs and alliances is primarily within the jurisdiction of the US Department of Transport but mergers are principally within the jurisdiction of the Department of Justice.¹⁹⁰⁰ In Canada, a merger that involves an airline requires giving notice to the Minister of Transport as well as to the Canadian Transportation Agency.¹⁹⁰¹ Nonetheless, to the extent that competition law in the OSIAB jurisdictions is generally based on similar principles, progress should be possible, if only to ensure that the relevant authorities in the different jurisdictions deal with airline ATI applications at the same time and in consultation with each other.

¹⁸⁹⁶ *US-EU Open Skies Agreement*, *supra* note 528, Annex 2, arts 1, 2(3).

¹⁸⁹⁷ *Ibid*, Annex 2, art 4(2).

¹⁸⁹⁸ *Ibid*, Annex 2, art 4(4).

¹⁸⁹⁹ The Australian Competition and Consumer Commission, Canada's Competition Bureau, the European Commission and the Commerce Commission of New Zealand all handle competition files for all industries, not just aviation.

¹⁹⁰⁰ See US, Government Accountability Office, *Airline Competition* (GAO-14-515) (2014), especially at 8–9. In 2009, Congressman James Oberstar failed to get the US Comptroller General to second-guess the US DOT's blessing of international alliances in the airline industry. See Bill, *FAA Act*, *supra* note 301.

¹⁹⁰¹ See *Canada Transportation Act*, *supra* note 292, s 53.1.

2) *Traffic Rights*

Based on the outcomes of the EU and US review of "competition from Gulf-based airlines"¹⁹⁰² it is possible that OSIAB Members would be asked to agree on a common interpretative approach to the various BASAs that each has signed. In particular, they might be asked to agree on the issue of whether, unless a BASA explicitly grants unlimited 6th Freedom rights to carriers, the use of such freedoms should be restricted. For example Canada's 2001 BASA with the United Arab Emirates¹⁹⁰³ and the now-replaced 1998 US – Japan MOU¹⁹⁰⁴ both limited the exercise of 5th Freedom traffic rights. Therefore agreement might be sought to impose similar restrictions¹⁹⁰⁵ on the exercise of 6th Freedom traffic.

Similarly, Australia's 2002 BASA with the United Arab Emirates grants UAE carriers traffic rights between Australia and the UAE, with optional stops in South or Southeast Asia¹⁹⁰⁶ but no mention is made of 6th Freedom rights. Australia's Department of Trade made Australia's Parliament aware that Emirates was a major player in the Australia-United Kingdom market¹⁹⁰⁷ but stated: "Over the past 10 years the Australia-UAE yearly origin destination passenger market has grown from a base of just over 8,000 in 1993 to nearly 65,000 in 2003, an average annual growth rate of 23 per cent."¹⁹⁰⁸ Given that Australia's Parliament was told that the BASA would be based on growing bilateral traffic, it presumably granted additional traffic rights on that basis. In any event, OSIAB's Members, using their collective political and economic weight, may be able to renegotiate BASAs with third countries to ensure the BASA is based on 3rd and 4th Freedom bilateral traffic between the two contracting parties, assuming that members agree that the discouragement of international carriage primarily based on 6th freedom traffic should be reduced on the basis of competition or other internationally shared public policy concerns.

¹⁹⁰² See *supra* notes 1 and 2.

¹⁹⁰³ *Agreement Between the Government of Canada and the Government of the United Arab Emirates on Air Transport*, 17 June 2001, Can TS 2001 No 22, Annex, s I, note 1.

¹⁹⁰⁴ See *supra* note 683. The MOU was replaced by an Open Skies Agreement in 2010. See *supra* note 1830.

¹⁹⁰⁵ A 40% target was proposed earlier in this thesis, see *supra* note 648. It would be achievable for any airline not principally based on 6th Freedom traffic. See also above "In order".

¹⁹⁰⁶ *Agreement Between the Government of Australia and the Government of the United Arab Emirates Relating to Air Services*, 8 September 2002, [2005] ATS 8, Route Annex, s 1 (entered into force 24 January 2005). The Route Annex also allows continuing flights beyond Australia, presumably to New Zealand.

¹⁹⁰⁷ "Air Services Agreement with the United Arab Emirates" in Austl, Commonwealth, House of Representatives Joint Standing Committee on Treaties, *Treaties tabled on 7 December 2004* (Report No 63) (Canberra: Australian Government Publishing Service, 2004) 64 at 64, online: Parliament of Australia <www.aph.gov.au/Parliamentary_Business/Committees/House_of_Representatives_Committees?url=jsct/12may2004/report.htm> (visited May 24, 2014).

¹⁹⁰⁸ *Ibid.*

3) Aviation Security

All five proposed OSIAB Members are very interested in aviation security and have already taken steps to harmonize their procedures. In 2008, the US Transportation Security Administration announced that the European Union would accept liquids and gels (LAGs) contained in a prescribed Security Tamper Evident Bag (STEB) issued by duty-free shops at US airports.¹⁹⁰⁹ Thus EU authorities now accept, subject to certain conditions, LAGs in STEBs carried by in-transit passengers arriving from Canada and the United States.¹⁹¹⁰ In reciprocal fashion, Canadian authorities announced they would accept LAGs contained in a STEB issued by a duty-free shop at an airport in the European Union.¹⁹¹¹ However, in addition to working on receiving transfer passengers from each other jurisdictions, Australia, Canada, the European Union and the United States are working with "screening authorities, airlines and airports to screen a limited amount of liquids to determine to what extent the restrictions can be lifted."¹⁹¹² They are already "in the process of implementing a multi-phase technology based LAGs screening approach and intend progressively to relax LAGs restrictions at airports in their respective jurisdictions. The LAGs screening technologies to be used will meet standards agreed to amongst Australia, Canada, the United States and the European Union."¹⁹¹³ That four OSIAB Members are thinking in terms of "standards agreed to" suggests that they see a need for harmonization of security standards among them. The challenge is to agree that a passenger who has been screened at an airport in one OSIAB country does not have to be screened again at an airport in a second OSIAB country. Thus, a Dallas-departing traveler destined for Delhi would only be screened once, whether connecting in Frankfurt, London, New York, Paris or Dubai. This may seem trite, but families with young children as well as mobility-challenged persons and

¹⁹⁰⁹ US Transportation Security Administration, Press Release, "TSA approves use of Tamper-Evident Bags for Duty Free Liquids for Flights leaving the US" (1 May 2008), online: Transportation Security Administration <www.tsa.gov/press/releases/2008/05/01/tsa-approves-use-tamper-evident-bags-duty-free-liquids-flights-leaving-us> (visited May 24, 2014).

¹⁹¹⁰ Zurich Airport, "Tips for a smooth journey", Doc 1000-319, 1st ed (November 2011), online: Zurich Airport <www.zurich-airport.com/~media/FlughafenZH/Dokumente/Passagiere_und_Besucher/Abflug_und_Ankunft/Flyer_Tips_for_a_smooth_journey.pdf>.

¹⁹¹¹ See "Security Tamper-Evident Bags" (October 16, 2013) formerly online: Government of Canada <travel.gc.ca/travelling/air/liquids/duty-free-bags> (visited October 27, 2013) (on file with author).

¹⁹¹² "Airport security liquid restrictions to be eased", *CBC News* (25 September 2013) online: CBC News <www.cbc.ca/news/technology/airport-security-liquid-restrictions-to-be-eased-1.1868229> (visited May 24, 2014).

¹⁹¹³ ICAO Assembly, 38th Sess, Agenda Item 13, Working Paper No 136, ICAO Doc A38-WP/136/Ex/52 (19 August 2013) at 2, online: ICAO <www.icao.int/Meetings/a38/Documents/WP/wp136_en.pdf> (visited May 24, 2014).

purchasers of duty-free products often want to minimize the number of security screenings on a given itinerary,¹⁹¹⁴ and this often gives GBMCs a competitive advantage over EU and North American airlines.

4) Passenger Rights

OSIAB's Members have a strong interest in passenger rights but do not have fully compatible positions. Given the distinct weather and infrastructure congestion conditions prevailing in different countries, the politics involved in addressing passenger rights with respect to such issues as flight cancellations and delays has often yielded very disparate results. ICAO has noted the "fragmentation of regulatory responses taken by different States"¹⁹¹⁵ and sees the possible conflicts between the US and EU passenger rights regimes as detrimental to the airline industry:

An example of possible overlap or conflict between regulations would be a passenger on an EU carrier's flight in-bound from the US to the EU, who could be tempted to take advantage of both sets of regulations. Carriers have a compelling need to know which rules apply to their operations and concern has been voiced with respect to overlapping regulatory requirements.¹⁹¹⁶

This is more than a theoretical concern. Every day roughly 80 trans-Atlantic flights¹⁹¹⁷ find themselves in the same legal quagmire as Lufthansa Flight 431. That flight is a Chicago-Frankfurt service also operates as AC 9458 and UA 8837 for Air Canada and United Airlines respectively, as both of these carriers are Lufthansa's partners in the A++ MMNJV. In the case of a pre-departure delay, both American and European laws would apply with respect to compensation: America's compensation regime applies to all international flights departing the US¹⁹¹⁸ and European law applies to any flight operated by an EU carrier.¹⁹¹⁹ In the case of three passengers, a Canadian traveling on an Air Canada ticket, a European traveling on a Lufthansa ticket, and an American traveling on a United Airlines ticket, three different compensation regimes might apply. An MNJV is based on the idea that it should not matter which carrier operates the flight. Yet if compensation levels vary based on the nationality of the carrier

¹⁹¹⁴ This author was screened three times during a trip from San Salvador to Ottawa. See *supra* note 960.

¹⁹¹⁵ ICAO Secretariat, *Consumer Protection and Definition of Passenger Rights in Different Contexts*, ICAO Worldwide Air Transport Conference, 6th Meeting, Agenda Items 2, 2.3, Working Paper No 5, ICAO Doc ATConf/6-WP/5 (7 December 2012) at 3, online: ICAO <www.icao.int/Meetings/atconf6/Documents/WorkingPapers/ATConf6-wp005_en.pdf>.

¹⁹¹⁶ *Ibid.*

¹⁹¹⁷ As of December 1, 2013 there were 16 Air France/Delta codeshare flights, 34 British Airways/American codeshare flights, 8 KLM/Delta codeshare flights and 22 Lufthansa/United code-share flights, serving EU-US routes.

¹⁹¹⁸ 14 CFR 250.9 (b) (2013).

¹⁹¹⁹ See *Regulation 261/2004*, *supra* note 47.

operating the flight, overlapping and non-identical regulations could distort the operating assumptions of the MNJV. Indeed the level of complexity with respect to passenger compensation is such that a new computer program is offered to help passengers deal with the conflicting maze of compensation regulations.¹⁹²⁰ This underscores the need for OSIAB Members to consider creating a consistent and uniform passenger rights regime applicable to international flights among them.

5) The Environment

OSIAB has the potential to lead the way in reducing emissions from aviation. First, the Members of OSIAB have similar levels of economic development. None of them can credibly claim to be a "developing States whose share of international civil aviation activities is below the threshold of 1% of total revenue ton kilometres of international civil aviation activities"¹⁹²¹ so as to be deserving of an exemption. Thus it seems likely that OSIAB's Members could agree on an emissions trading scheme (ETS) that would apply to international flights between them. Given that the international airlines based in the various OSIAB Members tend to operate with modern state-of-the-art aircraft which are equipped with the latest most environmentally friendly engines, it can be assumed that no OSIAB Member would be at a competitive advantage or disadvantage by agreeing to participate in an intra-OSIAB ETS. The ETS would potentially apply to all flights, including intra-OSIAB 6th Freedom flights operated by airlines based in third countries. This would ensure that there is a level playing field with respect to both non-stop and indirect routes among OSIAB's Members.

The OSIAB could also reduce situations where competing aircraft follow each other across the sky by encouraging MNJVs operating among Member States to up-gauge aircraft on non-stop routes where the MNJV does not face meaningful competition.¹⁹²² As explained earlier, replacing two smaller aircraft by a single larger aircraft is known as up-gauging and permits the more efficient use of airport infrastructure and ATM systems as well as reduces emissions from aircraft. If OSIAB were to link ATI approval to up-gauging, this would not only reduce the demand on ATM services and airport infrastructure in crowded skies and congested hub airports; it would also reduce aircraft emissions.

¹⁹²⁰ See Air Help, online: <www.getairhelp.com/>.

¹⁹²¹ See paragraph 16(b) of ICAO Resolution A38-18. See *ICAO Res. A38-18, supra* note 1699 at I-72.

¹⁹²² See above Chapter 5 Part VIII) A) Implementing Up-gauging.

6) Aviation Safety

Recent events suggest that there is even a role for the proposed OSIAB in bringing about common regulatory approaches to aviation safety. While this is traditionally an area of ICAO's strength, the cumbersome nature of that organization occasionally impedes the development of appropriate SARPs. The disappearance of Malaysian Airlines (MH) Flight 370 while flying from Kuala Lumpur to Beijing on March 8, 2014,¹⁹²³ underscores the need for actions outside ICAO. Unbelievable as its disappearance was, it was the second time in five years that a long-range twin-engine wide-body aircraft had vanished while overflying an ocean. In both cases, the depth of the water impeded the recovery of the wreckage and the start of the investigation. On June 1, 2009, Air France Flight 447 crashed in the Atlantic Ocean, roughly 565 km away from Natal, Brazil, while flying from Rio de Janeiro to Paris.¹⁹²⁴ Given the inaccessible location of the crash site,¹⁹²⁵ it was not until May 2011 that the cockpit voice recorder was recovered.¹⁹²⁶ Due to the difficulty of finding the recorders, in December 2009, France's *Bureau d'Enquêtes et d'Analyses* (BEA) produced an interim report in which it called on ICAO to ensure that commercial aircraft would transmit basic flight parameters and would be equipped with an underwater location beacon (ULB) with a 90-day battery life.¹⁹²⁷ In its final report, issued in 2012, the BEA repeated its 2009 recommendations with respect to ULBs and called on ICAO to:

make mandatory as quickly as possible, for [airlines flying] over maritime or remote areas, triggering of data transmission to facilitate localisation as soon as an emergency situation is detected on board; [and] study the possibility of making mandatory, for aeroplanes making public transport flights with passengers over maritime or remote areas, the activation of the emergency locator transmitter (ELT), as soon as an emergency situation is detected on board.¹⁹²⁸

Had ICAO reacted to the BEA's December 2009 interim recommendations, and had the aircraft which operated Malaysian Airlines Flight 370 on March 8, 2014, been equipped with the recommended ULBs, it is unlikely that the search for it would have been fruitless after the "most

¹⁹²³ See online: Aviation Safety Network <aviation-safety.net/database/record.php?id=20140308-0> (visited May 24, 2014). The aircraft was a Boeing 777-200ER.

¹⁹²⁴ See online: Aviation Safety Network <aviation-safety.net/database/record.php?id=20090601-0> (visited May 24, 2014). The aircraft was an Airbus A330-200.

¹⁹²⁵ The search area was 2–4 days sail from ports such as Praia (Cape Verde), Natal (Brazil) or Dakar (Senegal).

¹⁹²⁶ Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile, "Final Report On the accident on 1st June 2009 to the Airbus A330-203 registered F-GZCP operated by Air France flight AF 447 Rio de Janeiro – Paris" (June 2012) at 20.

¹⁹²⁷ See Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile, "Interim Report n°2 on the accident on 1st June 2009 to the Airbus A330-203 registered F-GZCP operated by Air France flight AF 447 Rio de Janeiro – Paris" (17 December 2009) at 71. Basic flight parameters include position, altitude, speed and heading.

¹⁹²⁸ See *Final Report*, *supra* note 1926 at 207.

expensive aviation hunt in history."¹⁹²⁹ Indeed, on April 9, 2014, Malaysia's Chief Inspector of Air Accidents, after just one month of futile searching, called on ICAO to "examine the safety benefits of introducing a standard for real time tracking of commercial air transport aircraft."¹⁹³⁰ Two days later, IATA's Director General and CEO, Tony Tyler, announced that IATA would convene an "expert task force to examine all of the options available for tracking commercial aircraft" and report the results to ICAO in December 2014.¹⁹³¹ A month later, in May 2014, ICAO held a meeting on the issues of tracking commercial aircraft and announced it had "forged a consensus among its Member States and the international air transport industry sector to make the tracking of airline flights a near-term priority."¹⁹³²

ICAO's reaction comes three years after a 23-month search for the voice and data recorders for Air France Flight 447 confirmed the difficulty of investigating air crashes in the oceans. It implicitly acknowledges the growing number of twin-engine, long-haul wide-body flights over remote areas and the necessity for accurate tracking of these flights to facilitate both search and rescue and accident investigation in the event of any mishap. It comes after tremendous political pressure to act after the second big jet in five years mysteriously disappeared into the ocean.

Given that France would be represented by the EU in the proposed OSIAB, there is every reason to believe that OSIAB, had it been in existence already, would have reacted more quickly to the BEA's 2009 recommendations. Moreover, given the structure of the insurance industry, the airline finance industry, the aircraft and engine manufacturing industry and the airline industry, it is very probable that companies and governments in OSIAB countries will end up paying the majority of the MH 370 investigation costs, presently estimated at "hundreds of millions of pounds."¹⁹³³ The MH 370 case underscores the need for the OSIAB. The organization has the

¹⁹²⁹ See, Jonathan Pearlman, "MH370 search becomes most expensive aviation hunt in history, yet still no clues", *The Telegraph*, (29 May 2014) online: The Telegraph <www.telegraph.co.uk/news/worldnews/asia/malaysia/10863605/MH370-search-becomes-most-expensive-aviation-hunt-in-history-yet-still-no-clues.html> (visited May 29, 2014).

¹⁹³⁰ Office of the Chief Inspector of Air Accidents, Ministry of Transport Malaysia, "MH 370 Preliminary Report" (9 April 2014) at 5.

¹⁹³¹ International Air Transport Association, "Challenges After the Disappearance of Flight MH370 - Commentary by Tony Tyler; IATA's Director General & CEO" (12 April 2014), online: IATA <www.iata.org/pressroom/Documents/OpEd-Challenges-After-the-Disappearance-of-Flight-MH370-April2014.pdf> (visited May 24, 2014).

¹⁹³² Linda Blachly, "ICAO makes global flight tracking a priority in MH370 aftermath", *Air Transport World* (14 May 2014) online: Air Transport World <atwonline.com/safety/icao-makes-global-flight-tracking-priority-mh370-aftermath> (visited May 24, 2014).

¹⁹³³ See Pearlman, *supra* note 1929.

potential to react much more quickly than ICAO can, and it will be aware of the economic consequences of its decisions in a manner that ICAO cannot match. Thus, even in the area of aviation safety, where ICAO has traditionally been strong, there will be circumstances such as these where OSIAB would have the potential to set a worldwide standard much more rapidly than ICAO.

V CONCLUSION

The proposed Open Skies Intercontinental Aviation Block (OSIAB) seeks to provide an effective international forum to address the regulatory disharmonies that currently exist among different states across a broad spectrum of regulatory issues. Given that the GATT does not apply to commercial aviation, and ICAO may be too large to quickly and efficiently address an evolving regulatory environment, there is no other forum currently mandated to or capable of responding to the harmonization challenge.

As demonstrated in this and earlier chapters of this thesis, the potential for regulatory conflicts abound. To offer yet one more example, consider Air Canada's argument that it should not be bound by a Canadian rule requiring it to separate passengers with service dogs from passengers who are allergic to dogs because it was required by US law to carry persons "travelling with a service or emotional support/psychiatric service dog on flights to and from the United States of America"¹⁹³⁴ Conversely, it may only be a matter of time before an obese or disabled Canadian seeks to extend to international flights the legal requirement imposed on Canadian airlines to give the passenger a free second seat in certain circumstances.¹⁹³⁵ Conflicts between state-based passenger rights regimes are now at a point that ICAO is calling for common standards¹⁹³⁶ and a computer is needed to help passengers determine the compensation to which they are entitled for defined events.¹⁹³⁷ As has been demonstrated, there is no current forum to deal with these and other issues on which a collective response is needed such as efforts to reduce GHGs from aviation, or improve aviation security or deal with some of the competition issues being explored by US and EU authorities.

¹⁹³⁴ See *Application by Marley Greenglass against Air Canada* (22 August 2013), 303-AT-A-2013, online: Canadian Transportation Agency <www.otc-cta.gc.ca/eng/ruling/303-at-a-2013>. The US law is 14 CFR Part 382.

¹⁹³⁵ See *supra* note 61. No effort to expand this policy has yet resulted in a public decision.

¹⁹³⁶ See *supra* note 1915.

¹⁹³⁷ See *supra* note 1920. The computer calculates compensation by applying the appropriate regulatory regime which may depend on airline flow, departure city or carrier that issued the ticket.

The goal of establishing an effective forum that can efficiently achieve consensus on issues which have not been resolved in other fora have shaped the proposals for OSIAB's administrative structure, membership and constitution set out in this chapter. While its proposed administrative structure borrows from OPEC because of that organization's small bureaucracy, the proposed initial membership list is inspired by the cohesion and success of the G7 and then draws on APEC for expansion criteria. OSIAB's proposed constitution features a "Consensus Safety Valve"¹⁹³⁸ in order to avoid the deadlock that has sometimes hampered consensus decision making in other international organizations.

Comfort in the likelihood that OSIAB is likely to successfully achieve consensus can be found in the fact that both the US and the EU are currently both reviewing anticompetitive allegations in relation to GBMCs¹⁹³⁹ and that Australia, Canada, the EU and the US are currently working together on aviation security issues,¹⁹⁴⁰ These actions confirm that cooperative action among the proposed founding members is possible.

However, in the absence of the establishment of a multilateral entity like OSIAB, there are limits to what jurisdictions can achieve unilaterally. At present, even if the EU and the US were both to conclude that GBMCs are distorting competition, there is little either could do short of repudiating its BASAs with the GBMC's home State. If either the EU or the US were to do this, the GBMC would likely cancel orders of aircraft manufactured in that jurisdiction.¹⁹⁴¹ Given that the GATT does not apply to commercial aviation, and that a unilateral repudiation would likely result in cancelled aircraft orders, neither the EU nor the US would be likely to take this step unless they agreed to act collectively. This is because 100% of the long-haul aircraft¹⁹⁴² used the GBMCs is made in either the U.S. or the EU and therefore if a GBMC were to cancel

¹⁹³⁸ See *infra* Annex: The Constitution of the Open Skies Intercontinental Aviation Block, Art. 10(c)(2).

¹⁹³⁹ See *supra* notes 1 and 2.

¹⁹⁴⁰ See *supra* note 1912.

¹⁹⁴¹ See *supra* notes 7, 8 and 9.

¹⁹⁴² The fleets of the GBMCs comprised exclusively of Airbus (EU) and Boeing (US) jets mostly Boeing 777s, Airbus A330s, A340s and A380s. Russia and China are planning to cooperate on the building of a long-haul passenger aircraft to reduce their dependence on Airbus and Boeing. Emirates claims that its Airbus purchases support over 14,000 jobs in Germany.

orders from both Airbus and Boeing, it would have no alternate supplier of long-range aircraft.¹⁹⁴³

The establishment of the OSIAB would enable the US and the EU to address not just competition concerns collectively but also the many other regulatory issues identified throughout this thesis. By recognizing the relative lack of success that has characterized cooperation between the EU and the US on aviation matters since the 2007 US-EU Open Skies Agreement, and the relative success they often have achieved when they work with third countries such as Australia and Canada,¹⁹⁴⁴ there is reason to hope that the prospects of achieving agreement are greater if these matters were instead addressed in a multilateral forum such as OSIAB.

The proposed OSIAB would allow its members to collectively address emerging issues in commercial aviation and to set international standards pro-actively rather than reactively. The collective market share of OSIAB members would mean that OSIAB policies applied to routes among members would inevitably also affect routes among OSIAB members via airlines based in third countries using 6th Freedom rights. In this way, OSIAB-issued policies eventually would become *de facto* global standards providing the impetus for their *de jure* implementation by ICAO. Just as the G7 Heads of State tackled hijacking when ICAO failed to arrive at a timely response, so too could the proposed OSIAB respond efficiently to the critical issues covered in this thesis which ICAO has often placed on its agenda for discussion but on which it has failed to act decisively to date.

OSIAB's five founding members have a tremendous amount in common and a strong track record of working together on a wide variety of issues, including, but not restricted to, international civil aviation. The one criticism that might be made against the proposed members is the absence of sufficiently wide spread regional representation. The addition of the further countries proposed in this chapter would respond to that potential criticism and would give OSIAB a global span as it would then include members from the Americas, Asia, Australia and Europe.

¹⁹⁴³ Russia and China are planning to cooperate on the building of a long-haul passenger aircraft to reduce their dependence on Airbus and Boeing. See "Russia and China to design passenger aircraft together", online < www.wantchinatimes.com/news-subclass-cnt.aspx?id=20150210000052&cid=1101 > (visited April 13, 2015). Emirates claims that its Airbus purchases support over 14,000 jobs in Germany.

¹⁹⁴⁴ See *supra* note 1912.

For the reasons summarized above, and documented in this chapter, there is every reason to believe that if OSIAB is created, its members will be able collectively to successfully tackle the long-standing and yet still unaddressed regulatory disharmony and competition issues that confront international civil aviation.

ANNEX: THE CONSTITUTION OF THE OPEN SKIES INTERCONTINENTAL AVIATION BLOCK

CHAPTER I¹⁹⁴⁵

Organization and Objectives

Article 1

Open Skies Intercontinental Aviation Block (OSIAB), hereinafter referred to as "the Organization", is created as a permanent intergovernmental organization in conformity with the Resolutions of the Convention attended by Representatives of the European Commission and of the Governments of Australia, Canada, New Zealand and the United States of America, held in LOCATION in MONTH in YEAR. It shall carry out its functions in accordance with the provisions set forth hereunder.

Article 2

The principal aim of the Organization shall be the coordination and harmonization of the commercial aviation policies of the Parties and the creation of a level playing field for airlines based in the Parties and operating on intercontinental routes within or without the collective territories of the Parties.

Article 3

The Organization shall be guided by the principle of the sovereign equality of its Parties. Parties shall fulfill, in good faith, the obligations assumed by them in accordance with this Constitution.

Article 4

The Organization shall have its Headquarters at a place chosen by the Council.

Article 5

English shall be the official language of the Organization.

CHAPTER II

Membership

Article 6

- A. Parties of the Organization are those Parties which were represented at the Conference held in LOCATION in MONTH in YEAR, and which signed the original agreement of the establishment of the Organization.

¹⁹⁴⁵ This document borrows very heavily from the *OPEC Statute*, *supra* note 1884. Many changes and updates have been made as appropriate, especially with respect to decision-making, membership qualifications, the length of the President's term, and to the role of the Council, which in OSIAB's case is more policy-driven and less procedure-driven than the OPEC Conference.

- B. Any other democratic country which has fundamentally similar interests to those of Parties and whose airlines are non-government owned, who has open skies agreements with at least three OSIAB Parties, and is willing to adopt all current OSIAB policies and SARPs, may become a Party if accepted by all other Parties.

Article 7

- A. No Party of the Organization may withdraw from membership without giving notice of its intention to do so to the Council. Such notice shall take effect at the beginning of the next calendar year after the date of its receipt by the Council.
- B. In the event of any Party having ceased to be a Party of the Organization, its readmission to membership shall be made in accordance with Article 6, paragraph B

CHAPTER III

Organs

Article 8

The Organization shall have three organs:

- I. The Council;
- II. The Board of Directors; and
- III. The Secretariat.

I The Council

Article 9

The Council shall be the supreme authority of the Organization.

Article 10

- A. The Council shall consist of delegations representing the Parties. A delegation may consist of one or more delegates, as well as advisers and observers. When a delegation consists of more than one person, the appointing party shall nominate one person as the Head of the Delegation.
- B. Each Party should be represented at all Councils; however, a quorum of three-quarters of the Parties shall be necessary for holding a Council.
- C. Each Party shall have one vote.
 - 1. All non-policy decisions of the Council shall require the support of 75% of the Parties.
 - 2. All policy decisions of the Council shall require the unanimous agreement of all Parties.

- a. Where a proposed policy only receives the support of a majority of the Parties, it shall be referred to an ad hoc committee comprised of a proponent Party and an opponent Party with a view to seeing whether a compromise is possible; and if so, such result shall be reported for a vote at the next meeting of the Council.
 - b. Where the *ad hoc* committee finds a compromise, it shall amend the proposed policy and report the amended proposed policy back to the Council for a final vote.
- D. The Council may recommend Standards and Recommended Practices (SARPs) to be implanted in the domestic law of Member States.. Such decisions of the Council require the unanimous support of all Parties.
- E. The Council Resolutions shall become effective after 30 days from the conclusion of the Meeting, or after such period as the Council may decide unless, within the said period, the Secretariat receives notification from Parties to the contrary. In the case of a Party being absent from the Meeting of the Council, the Resolutions of the Council shall become effective unless the Secretariat receives a notification to the contrary from the said Member, at least ten days before the date fixed for publication of the Resolutions.

Article 11

The Council shall hold one Ordinary Meeting a year. However, an Extraordinary Meeting of the Council may be convened at the request of a Party by the Secretary General, after consultation with the President and approval by a simple majority of the Parties. In the absence of unanimity among Parties approving the convening of such a Meeting, as to the date and venue of the Meeting, they shall be fixed by the Secretary General in consultation with the President.

Article 12

The Council shall normally be held at the Headquarters of the Organization, but it may meet in the territory of any of the Parties, or elsewhere as may be advisable.

Article 13

- A. The Council shall elect a President and an Alternate President at its first Preliminary Meeting. The Alternate President shall exercise the responsibilities of the President during his/her absence, or when s/he is unable to carry out his responsibilities.
- B. The President shall hold office for a period of 3 years, and a vote on the President's successor will be held at the last Council meeting prior to the expiration of the President's term.
- C. The Secretary General shall be the Secretary of the Council.

Article 14

The Council shall:

- A. formulate the general policy of the Organization and determine the appropriate ways and means of its implementation;
- B. call a Consultative Meeting for such Parties, for such purposes, and in such places, as the Council deems fit;
- C. create *ad hoc* Working Groups to examine specific or general issues and report back to the Council.
- D. approve any amendments to this Constitution;
- E. direct the Board of Directors to submit reports or make recommendations on any matters of interest to the Organization;
- F. consider, or decide upon, the reports and recommendations submitted by the Board of Directors on the affairs of the Organization;
- G. consider and decide upon the Organization's budget, Statement of Accounts and Auditor's Report as submitted by the Board of Directors; and
- H. appoint the Secretary General.

Article 15

All matters that are not expressly assigned to other organs of the Organization shall fall within the competence of the Council.

II The Board of Directors

Article 16

- A. The Board of Directors shall be composed of Directors nominated by the Parties.
- B. Each Party should be represented at all Meetings of the Board of Directors; however, a quorum of two-thirds shall be necessary for the holding of a Meeting.
- C. When, for any reason, a Director is prevented from attending a Meeting of the Board of Directors, a substitute *ad hoc* Director shall be nominated by the corresponding Party. At the Meetings which s/he attends, the *ad hoc* Director shall have the same status as the other Directors, except as regards qualifications for Chairpersonship of the Board of Directors.
- D. Each Director shall have one vote. A simple majority vote of attending Directors shall be required for decisions of the Board of Directors.
- E. The term of office of each Director will be determined by the Director's nominating Party.

- F. At the first meeting of the Board of Directors in each calendar year, the Directors will elect a Chairperson and a Vice-Chairperson from among their ranks.
- G. The Secretary General shall be the Secretary of the Board of Directors

Article 17

- A. The Board of Directors shall meet no less than twice each year, at suitable intervals to be determined by the Chairperson of the Board, after consultation with the Secretary General.
- B. An Extraordinary Meeting of the Board of Directors may be convened at the request of the Chairperson of the Board, the Secretary General, or two-thirds of the Directors.

Article 18

The Meetings of the Board of Directors shall normally be held at the Headquarters of the Organization, but they may also be held in any of the Parties, or elsewhere as may be advisable.

Article 19

- A. The Board of Directors shall:
- B. direct the management of the affairs of the Organization and the implementation of the decisions of the Council;
- C. consider and decide upon any reports submitted by the Secretary General;
- D. submit reports and make recommendations to the Council on the affairs of the Organization;
- E. draw up the Budget of the Organization for each calendar year and submit it to the Council for approval;
- F. nominate the Auditor of the Organization for a duration of one year;
- G. consider the Statement of Accounts and the Auditor's Report and submit them to the Council for approval;
- H. approve the appointment of the Secretariat's Directors of Divisions and Heads of Departments, upon nomination by Parties, with due consideration being given to the recommendations of the Secretary General;
- I. convene an Extraordinary Meeting of the Council; and
- J. prepare the Agenda for the Council.

Article 20

The Chairperson of the Board of Directors and the Vice-Chairperson, who shall assume all the responsibilities of the Chairperson whenever the Chairperson is absent or unable to exercise his

or her responsibilities, shall be appointed by the Council from among the Directors for a period of one year, in accordance with the principle of alphabetical rotation.

Article 21

The Chairperson of the Board of Directors shall:

- A. preside over the Meetings of the Board of Directors;
- B. attend the Headquarters of the Organization in preparation for each Meeting of the Board of Directors; and
- C. represent the Board of Directors at Councils and Consultative Meetings.

Article 22

Should a Director, for any reason, be precluded from continuing in the performance of his functions on the Board of Directors, the corresponding Party shall nominate a replacement.

III The Secretariat

Article 23

The Secretariat shall carry out the executive functions of the Organization in accordance with the provisions of this Treaty under the direction of the Board of Directors.

Article 24

The Secretariat of the Organization shall consist of the Secretary General and such Staff as may be required. It shall function at the Headquarters of the Organization.

Article 25

- A. The Secretary General shall be the legally-authorized representative of the Organization.
- B. The Secretary General shall be the Chief Officer of the Secretariat, and, in that capacity, shall have the authority to direct the affairs of the Organization in accordance with directions of the Board of Directors.
- C. The Secretary General will be the Secretary of the Council and of the Board of Directors. The Secretary General will not vote on matters before the Council or the Board of Directors.

Article 26

- A. The Council shall appoint, the Secretary General for a period of four years, which term of office may be renewed once for the same period of time. This appointment shall take place upon the nomination by Parties and after a comparative study of the nominees' qualifications.
- B. The minimum personal requirements for the position of the Secretary General shall be as follows:

1. a degree from a recognised university in Law, Economics or Business Administration;
 2. 15 years of experience, of which at least 10 years should have been spent in positions directly related to the airline industry, and five years in highly responsible executive or managerial positions. Experience in Government-Company relations and in the international aspects civil aviation is desirable.
- C. The Secretary General shall reside near the Headquarters of the Organization.
- D. The Secretary General shall be responsible to the Board of Directors for all activities of the Secretariat.
- E. The Secretary General shall attend all Meetings of the Board of Directors. Should the Secretary General be unable to attend any Meeting of the Board of Directors, a Senior member of the Secretariat shall attend such Meeting, representing the Secretary General.

Article 27

The Secretary General shall:

- A. organize and administer the work of the Organization;
- B. ensure that the functions and duties assigned to the Secretariat are carried out;
- C. prepare reports for submission to each Meeting of the Board of Directors concerning matters which call for consideration and decision;
- D. inform the Chairperson and other Members of the Board of Directors of all activities of the Secretariat and of the progress of the implementation of the Resolutions of the Council; and
- E. ensure the due performance of the duties which may be assigned to the Secretariat by the Council or the Board of Directors.

CONCLUSION

The initial impetus for this thesis goes back to the announcement by Emirates of the first ever nonstop flight from Dubai in the Middle East to Brazil in South America in October 2007. The route was nearly as long as that between Chicago and Hong Kong¹⁹⁴⁶ and it by-passed traditional stopping points in North America and Europe. Moreover the flight overflowed Egypt, the region's most populous nation. It quickly became apparent that the target market was not based on typical origin-destination traffic, in that there were not enough Dubai-bound Brazilians or enough Brazil-bound Emirates to make the flight commercially viable on a daily basis. Rather, the route was based on 6th Freedom traffic and later research revealed that it was merely one example of others. Initially this seemed to be an expansion of a practice pioneered by Icelandair which had carried passengers between North America and Europe via its hub in Reykjavik for many years.¹⁹⁴⁷ However further research, much of which ultimately informed Chapter 3 of this thesis, confirmed the need to examine Emirates 6th Freedom operations more thoroughly.

A second factor contributing to the decision to undertake this thesis also goes back to 2007, when the delays occasioned by a Christmas snow storm in St. John's Newfoundland provoked the first Canadian campaign for air passenger rights.¹⁹⁴⁸ The promoters of the campaign proposed legislation¹⁹⁴⁹ "to create a passenger bill of rights similar to ones used in New York State and in the European Union."¹⁹⁵⁰ The Bill's proponents and their advisors were apparently unaware that the New York State Bill¹⁹⁵¹ and the European Union regulation¹⁹⁵² were incompatible.¹⁹⁵³ Further research identified incompatibilities in many more areas of international aviation regulation.

¹⁹⁴⁶ See *supra* note 697.

¹⁹⁴⁷ See Paul Proctor, "Icelandair sees opportunity in the North Atlantic", *Aviation Week & Space Technology* 149:3 (20 July 1998) 48 at 48 (EBSCO HOST). In 1998 Icelandair offered flights from Reykjavik to six destinations in North America and 17 in Europe.

¹⁹⁴⁸ See Fitzgerald, "Air Passenger", *supra* note 42 at 34 – 35.

¹⁹⁴⁹ See Bill C-310, *An Act to Provide Certain Rights to Air Passengers*, 2nd Sess, 40th Parl, 2009.

¹⁹⁵⁰ See Greg Knott, "Mayors want passengers' bill of rights", *The Telegram* (13 January 2008) A3.

¹⁹⁵¹ See *supra* note 60. The Bill was struck down as expressly preempted by federal law. See *Air Transport Ass'n of America, Inc. v. Cuomo*, 520 F.3d 218 (2d Cir. 2008)

¹⁹⁵² See EC 261/2004, *supra* note 47.

¹⁹⁵³ See Fitzgerald, "Air Passenger", *supra* note 42 at 87.

Conclusion

The Proposal for this thesis identified regulatory incompatibilities in the aviation security, antitrust, environmental and passenger rights regimes enacted by different jurisdictions as potential obstacles to achieving the full benefits of Open Sky policies¹⁹⁵⁴

The failure of the Doha Round of WTO negotiations to include international aviation in the GATS¹⁹⁵⁵ inspired the second theme of the thesis proposal: the idea that a new forum might be needed to enable the effective harmonization of international aviation regulatory issues unrelated to aviation safety. This insight informed the idea of OSIAB with its five founding members: Australia, Canada, the European Union, New Zealand and the United States. It was thought that since the founding members shared a similar philosophy, market maturity and level of development they might be able to reach a consensus on regulatory issues that had resisted harmonization in other venues.

The recognition of regulatory incompatibilities, of the new phenomenon of expanded 6th Freedom airline business models, and of the consequent need for OSIAB or something like it, provoked a deeper comprehensive inquiry into the evolution of the airline industry that had produced the contemporary landscape.

Chapter 1 of this thesis presented an overview of the depth and breadth of regulation of the international airline industry in five principal areas: economic, security, safety, social and environmental. It also explained the concept of the airline industry as a public good, and the relationship between that proposition and State ownership, government subsidies and various State regulatory initiatives. It was shown that when a former State-owned carrier is privatized, regulation inevitably follows and it is typically rooted in perceptions of market failure. It was also shown that, given the international nature of airline industry, the public role it plays in many States, and the fact that different States may often arrive at different regulatory outcomes, state-based regulatory policies are often overlapping and potentially incompatible.

Chapter 2 reviewed the evolution of the airline industry over the two decades roughly bookended by the last landing of a Pan Am Boeing 747 at New York JFK on December 3, 1991,¹⁹⁵⁶ and the launch of Emirates' second daily Airbus A380 service to that same airport on January 1.

¹⁹⁵⁴ See, P Paul Fitzgerald, *Freeing "Open Skies" the Need for Consistent and Harmonized Regulation of Aviation* (Thesis Proposal, Faculty of Law, McGill University, Montreal, 2010) [np].

¹⁹⁵⁵ See Rigas Doganis, *The Airline Business*, (London: Routledge, 2005) at 62.

¹⁹⁵⁶ This was Pan Am's last revenue in-bound service from Rio de Janeiro. The aircraft landed at 6:26 A.M. Source, former Pan Am employees.

2013.¹⁹⁵⁷ It briefly explored the history of the industry and then detailed nine intervening developments that collectively re-shaped the industry into its current form. Particular emphasis was placed on the emergence of the 6th Freedom-based government backed mega carriers (GBMCs), and metal neutral joint ventures (MNJVs). Tables 1 and 2 at the end of Chapter 2 set out comparisons of airlines and airports in 1992 and 2012, and illustrate the dramatic growth of GBMCs and their hub airports over the two decades.

Chapter 3 examined the nature of the BASA as being between its two signature countries, observed how the commercial value of the various freedoms of the air have evolved over the past two decades and demonstrated how GBMCs and MNJVs have come to dominate inter-continental aviation. It was explained why GBMCs are sometimes alleged to be implicitly backed by their governments in ways that may distort global competition and why MNJVs arguably constitute *de facto* airline mergers or pooling arrangements and may thereby further diminish competition. It was also shown that the emergence of the MNJVs has had the further result of exposing and highlighting the existence of disharmonious and often incompatible aviation regulations between jurisdictions at either end of international routes, thus creating legal uncertainty and contributing potentially to further competitive distortions.

In chapter 3, it was argued that the emergence of GBMCs and MNJVs had not been anticipated by regulators, and that it must then be assumed that the possible competitive distortions and public policy implications caused by their emergence had not yet been addressed by regulators at either the national or multilateral level. It was noted that this situation only very recently begun to change with the decision in April 2015 of both the EU and the US to begin a review of anti-competitive allegations made against GBMCs.¹⁹⁵⁸

Chapter 4 examined airline security issues and highlighted how the different experiences of different jurisdictions may influence their regulatory responses. In particular, this chapter highlighted regulatory tensions between Israel and the US with respect to passenger screening, and between the EU and the US with respect to the sharing of passenger information. These examples show that even though all of the regulators involved may be seeking a compatible if

¹⁹⁵⁷ Emirate, "Emirates to fly A380 twice daily to New York JFK" (27 June 2012), online: Emirates <www.emirates.com/english/flying/our_fleet/emirates_a380/news_and_events/emirates-to-fly-a380-twice-a-day-to-new-york-jfk.aspx> (visited May 24, 2014).

¹⁹⁵⁸ See *supra* notes 1 and 2.

not identical outcome, there is often a lack of agreement or even strong disagreement over how to best achieve that outcome. Chapter 4 also demonstrated the reactive nature of aviation security regulation and posited that smarter, less intrusive security measures might be more effective in terms both of deterring terrorists and increasing public confidence. Finally, Chapter 4 suggested the need to harmonize aviation security practices, so that, for example, a passenger flying from Sydney to Los Angeles and on to Toronto and then to Frankfurt, is not subjected to more frequent or intensive screening procedures than if he or she were to take a different routing via the hub of a GBMC. Absent harmonization, it was argued that something as apparently minor as having to undergo fewer screenings on an intercontinental journey might result in a small competitive advantage for a GBMC (especially with respect to passengers travelling with young children or suffering from disabilities).

Chapter 5 focused on the need to reduce Greenhouse Gases in absolute rather than intensity-based terms. It proposed that one of the most effective ways to achieve this target would be to up-gauge aircraft so that fewer larger planes carry the same number of passengers on a particular route as a greater number of smaller aircraft do today. It was shown that this initiative would have the advantage of also reducing Air Traffic Management (ATM) and airport infrastructure congestion, just as encouraging people to take public transit in land transportation reduces both traffic and pollution. Recognizing that in the airline industry the S-Curve theory encourages greater frequency of flights, it was proposed that a strategy for achieving the S-Curve benefits while also reducing GHGs would be to facilitate the sharing of a larger than normal aircraft by two competitors in a hard block codeshare. As an example of the feasibility of this strategy, Chapter 5 identified several examples of fierce competitors sharing a common aircraft where this served the interest of their passengers in enhanced connectivity. It was asked whether the same approach might also be justified in the interests of reducing GHGs and congestion in the skies and at airports. Chapter 5 further argued that when competition authorities are considering approving an MNJV, approval should be conditioned on progress in reducing GHGs. Chapter 5 concluded by observing that given the potential for up-gauging to reduce congestion, greenhouse gases and fuel consumption per capita, and given that each of these are important elements of advancing the global agenda on addressing climate change, up-gauging clearly deserves greater regulatory support. It was observed that adoption of this policy would in turn encourage the

Conclusion

development of aircraft such as the Large Aircraft for Short Ranges (LASR), which have the potential to significantly reduce GHG emissions.

Chapter 6 proposed the creation of the OSIAB, setting out the reasons why a small multilateral forum along the lines proposed would likely be successful in achieving consensus on the major regulatory issues affecting the international airline industry and in defining common standards. The chapter also set out the proposed details of OSIAB's administrative structure, its founding membership, its constitution and mandate. Chapter 6 sought to complete the circle of the initial 2010 proposal for this thesis which argued:

"Unless and until a block such as OSIAB is created, the regulatory inconsistencies which impede airline efficiency will continue and grow."¹⁹⁵⁹

As explained in detail in Chapter 6, it was proposed in this thesis that OSIAB's administrative structure be based on that of OPEC, which has probably one of the leanest and most efficient bureaucracies of any multilateral forum.¹⁹⁶⁰ At the same time, Chapter 6 also proposed a "Consensus Safety Valve"¹⁹⁶¹ in order to ensure that the deadlock that has sometimes hampered decision making at OPEC¹⁹⁶² and in other multilateral fora such UNCOPUOS¹⁹⁶³ does not afflict OSIAB. The proposed membership criteria for the OSIAB borrowed in part from the membership criteria for APEC and the proposed list of founding members was based in part on the membership of the G7. It was argued that the collective political and economic weight of OSIAB's members would be sufficient to ensure de facto global harmonization of aviation regulatory standards in any sphere of aviation in which it might choose to act and could well trigger the adoption of de jure standards by ICAO or other global fora.

The need for harmonized international regulations governing the airline industry is broadly acknowledged; for example: senior officials in Canada, the United States and Mexico have met on several occasions to discuss the harmonization of screening and inspection protocols and prohibited items lists;¹⁹⁶⁴ ICAO has called for the alignment of passenger rights regimes;¹⁹⁶⁵ the

¹⁹⁵⁹ See, P Paul Fitzgerald, *Freeing "Open Skies" the Need for Consistent and Harmonized Regulation of Aviation* (Thesis Proposal, Faculty of Law, McGill University, Montreal, 2010) [np].

¹⁹⁶⁰ See *supra* note 1859.

¹⁹⁶¹ See *infra* Annex: The Constitution of the Open Skies Intercontinental Aviation Block, Art. 10(c)(2).

¹⁹⁶² See B) Structural Weakness of OPEC.

¹⁹⁶³ See generally Fitzgerald, "Inner Space", *supra* note 45.

¹⁹⁶⁴ See *supra* note 1270.

¹⁹⁶⁵ See *supra* note 1915.

Conclusion

EU and the US have recognized the need to cooperate with respect to the consideration of antitrust immunity for airlines;¹⁹⁶⁶ and Australia, Canada, the EU and United States are working on a common approach to the regulation of prohibited carryon items on airlines.¹⁹⁶⁷ These initiatives underscore the perceived benefits of international regulatory harmony and the valuable role that OSIAB could potentially play in achieving that goal.

There is no multilateral forum currently mandated to deal with competition in the airline industry, notwithstanding that effective regulation of competition issues is almost certainly beyond the powers of any single State. Assuming it were shown, for example, that GBMCs (or MNJVs) were predicated on an anti-competitive model, most States would not want to single-handedly attempt to oppose their expansion for fear of reprisals, whereas a group of States acting collectively through an entity such as OSIAB would more likely be prepared to respond and to respond successfully..

This thesis has documented the multiple ways in which the airline industry has evolved over the past two decades. It has provided examples of potential competitive distortions and significant regulatory disharmony and shown that the current structure of the international airline industry is very different from that which regulators faced twenty years ago. It has also shown that as a result of this difference, the state-based model of regulation is no longer, if it ever was, capable of resolving regulatory differences among different jurisdictions or adequately responding to competition issues in a manner that will be effective to ensure a level playing field in international markets. A multilateral forum is necessary along the lines of the OSIAB proposed in this thesis.

The OSIAB proposed in this thesis would be small, inexpensive, focused and designed to address current and future multilateral regulatory issues affecting the international airline industry. Its founding members have been carefully selected in order to ensure consensus within OSIAB and practical influence beyond OSIAB. Potential issues identified in this thesis that would be most effectively addressed in a multilateral forum such as OSIAB, and for which the OSIAB would have the potential to define a worldwide standard, include: passenger screening, passenger rights, up-gauging of aircraft, the nature and role of bilateral air service agreements, whether MNJVs

¹⁹⁶⁶ See *supra* notes 1896-1898.

¹⁹⁶⁷ See *supra* note 1913.

Conclusion

are necessary or whether they constitute *de facto* mergers and the appropriate reaction to anti-competitive allegations relating to GBMCs.

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