



ALAANZ AVIATION BRIEFS

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When the risk lies within



The Germanwings tragedy has prompted questions of what safeguards exist to manage potentially unstable pilots.

Confirmation by officials that the co-pilot of Germanwings Flight 92525 intentionally downed the aircraft has focussed scrutiny on identifying and managing risks which arise within the cockpit.

Officials state that a review of the cockpit voice recorder of the Germanwings flight indicates the co-pilot intentionally prevented the captain from returning onto the flight deck and deliberately descended the aircraft into the French Alps, ultimately killing all 150 on-board.

On the back of this news, many commercial carriers, including Qantas and Virgin Australia, have quickly moved to update their operating procedures – preventing any pilot being left alone in a cockpit.

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When the risk lies within (from page 1)

Christian Breen

However, questions need to be asked as to whether these procedural changes, as they currently stand, are practical and effective, and whether the aviation industry ought be doing more to address the crux of the issue: pilot mental health.

Instances of pilot breakdown

Although instances of pilots suffering mental health emergencies during flight are rather rare, there have been occurrences prior to the Germanwings tragedy.

In 2012, a JetBlue pilot left the cockpit and commenced running through the cabin shouting irrationally about religion and terrorism. He was ultimately restrained and the co-pilot made an emergency landing. The pilot has recently commenced proceedings against JetBlue for damages in excess of \$16 million, alleging the airline failed to identify the 'warning signs' and recognise his mental illness.

In 1999, officials concluded that the co-pilot of an EgyptAir plane had intentionally downed the aircraft into the ocean shortly after take-off from JFK airport. All 217 onboard perished.

While such occurrences are exceptional, these events can be catastrophic and quickly gather worldwide attention. How the aviation industry manages these risks is therefore a crucial question and one the general public is eager to have answered. As noted by Australian Deputy Prime Minister, Warren Truss:

WHILE THE GERMANWINGS TRAGEDY OCCURRED A LONG WAY FROM AUSTRALIA, IT IS IMPORTANT THAT THE TRAVELLING PUBLIC ARE REASSURED THAT ALL REASONABLE MEASURES ARE BEING TAKEN TO ENSURE THE SAFETY AND SECURITY OF THE AVIATION SECTOR.

The 'Rule of Two'

Following the 9/11 hijackings, procedures and standards were put in place to increase security around the flight deck, including that certain aircraft install an enhanced, hardened flight deck door. Australian regulations also required the door to remain locked for the duration of the flight, except when necessary to allow a person to enter or leave the cockpit. During flight, access to the flight deck had to be authorised by the pilot in command. The regulations though did not require airlines to replace a pilot who temporarily leaves the cockpit.

In the aftermath of the Germanwings tragedy, regulators and carriers around the globe are now amending their policies to require that two members of the operating crew or authorised persons remain in the cockpit at all times in-flight. In Australia, airlines must immediately update their Standard Operating Procedure to adopt this requirement for all regular passenger transport services where the aircraft has a seating capacity of 50 and above.

At this stage, or at least until the effectiveness of these arrangements are reviewed again in 12 months time, the pilot in command of the aircraft retains operational discretion on the application of the 'Rule of Two' requirements which will be dependent on flight crew circumstances. However, one might question the practicality of this requirement.

Mental health of pilots

While the aviation industry has been quick to respond to the Germanwings tragedy, many are still wondering if enough is currently being done to monitor and manage the mental health of our airline pilots.

On the back of Lufthansa admitting it was aware of the Germanwings co-pilot's 'previous episode of severe depression' in 2009, officials are now turning their attention to how (if at all) this was managed post-2009 and whether Lufthansa implemented and followed an appropriate and safe procedure in allowing the co-pilot into the cockpit.

While Australian pilots undergo thorough psychiatric testing during pre-employment recruitment, ongoing assessment of their mental health could be better targeted. Airline pilots under the age of 40 are subject to annual medical reviews, while those over 40 are examined every six months. CASA does require these periodic medical assessments to include review of psychiatric problems and substance abuse. However, the ongoing screening or testing of pilot's mental health is sometimes as simple as completing a form or answering frank and superficial questions from the designated aviation medical examiner such as 'Are you suicidal?' Although there are understandable cautions in rigorously and regularly testing a pilot's mental health, it seems the current system has clear failings.

In addition to employing the 'Rule of Two,' Mr Truss says aviation agencies will continue to work with the aviation industry and airline staff to review the requirements for medical testing, including for mental health. He has not though indicated what such review will entail, nor have any practical changes to the current system been proposed.

Moving forward from Germanwings

While the implementation of the 'Rule of Two' may well reduce the risk of pilot sabotage (or, for instance, a pilot disabling re-entry to the cockpit and then becoming unconscious or incapacitated), it may require monitoring and refining to safeguard against unintended consequences.

It is expected that much will turn on what constitutes an 'authorised' person, as well as the pilot in command's discretion to apply the 'Rule of Two.' While it is certainly a positive step forward, the aviation industry ought be cautious not to overshadow the primary issues at play: pilot mental health. Perhaps the focus should now turn to whether current procedures adequately monitor and manage the mental health of our pilots.

The aviation emissions problem

David Hodgkinson and Rebecca Johnston

This is the second of a two-part article, the first part of which appeared in Volume 65 Q1 2015

Post-Assembly: Inclusion of emission from all flights within EU airspace

Notwithstanding the ICAO Assembly's Resolution, the European Commission later in October 2013 released a proposal on the inclusion in the EU ETS from 2014 of emissions within European airspace from all international flights (EU and non-EU) to and from EU airports.

In response, IATA stated:

FOLLOWING AN HISTORIC AGREEMENT BY ICAO STATES IN OCTOBER TO DEVELOP A MARKET-BASED MEASURE (MBM) AND A REJECTION OF UNILATERALLY-IMPOSED NATIONAL OR REGIONAL SCHEMES, IT WAS WITH DISBELIEF AND SHOCK THAT WE RECEIVED THE NEWS THAT EUROPE IS RETURNING TO ITS MISGUIDED INTENTIONS ... IT [THE EU PROPOSAL] WOULD TAKE US BACK TO THE BRINK OF A TRADE WAR, A SITUATION THE INDUSTRY CERTAINLY WOULD WANT TO AVOID.

We know now, of course, that the EU backed down from their decision to let the clock run out.

Airspace regulation proposed by the U.S.

Regulation of airspace had been proposed and supported by the U.S. at ICAO as a means by which, post-Assembly, the EU could take forward the inclusion of aviation in its ETS. Such support notwithstanding, members of both the U.S. House of Representatives Committee on Transportation and Infrastructure and the Subcommittee on Aviation wrote to the Secretary of the U.S. Department of Transportation in November 2013, stating that such regulation 'violates the spirit and the letter of the ICAO agreement, as it would unilaterally be applied to portions of U.S. flights to and from the EU ... the ETS amendment currently being considered in the EU flouts the agreed upon framework developed by the ICAO.'

The Committee and Subcommittee members also stated that, if the proposed amendment was adopted by the European Parliament and Council, the Secretary should exercise his authority under the *ETS Prohibition Act* and prohibit U.S. aircraft operators from participating in the EU ETS.

As of November 2014, the Secretary had not so exercised that authority.

International climate change agreements – and the ICAO Assembly agreement

‘Agreements to agree’

The ICAO outcome represents an agreement to agree’ – an agreement to proceed with a roadmap towards a decision to be taken on a global MBM to address aviation emissions from international flights at the next ICAO Assembly in 2016, for implementation in 2020 (assuming agreement).

This approach is remarkably similar to the approach taken by the UNFCCC and the Kyoto Protocol in addressing climate change generally.

In terms of the UNFCCC and the Kyoto Protocol, a ‘Platform for Enhanced Action’ on climate change, a non-binding agreement ‘to develop a protocol, another legal instrument or an agreed outcome with legal force’ under the UNFCCC and applicable to all parties – both developed and developing (and, thus, a breach in the traditional ‘firewall’ between developed and developing States, enshrined in the UNFCCC and the Kyoto Protocol) – was launched at the Durban climate change conference in 2011. The Protocol would come into effect in 2020. At Doha the following year, it was agreed that ‘elements’ of a draft negotiating text for such a document would be “considered” no later than the end of 2014, ‘with a view’ to a negotiating text before May 2015, for agreement later that year and then implementation in 2020. In other words, both developed and developing States would have emission reduction targets. For practical purposes, these reduction targets abolish the principle of States having common but differentiated responsibilities and respective capabilities.

In 2007 the non-binding UNFCCC/Kyoto Protocol Bali ‘road map’ was agreed with a view to a post-2012 agreement. In 2011 (at Durban) there was agreement to reach agreement in 2015 on a text with commitments to commence in 2020. In 2012, at Doha, interim procedural steps were agreed, and climate change finance work programmes were extended, or put off. A second commitment period was also agreed which will cover just 15% of global emissions, which includes no major emitter, and with existing targets being reviewed by the end of next year.

It can be argued that this is the illusion of progress, an argument perhaps reinforced when one considers that no new pledge to reduce emissions from a major emitting State was made at either Doha in 2012 or Warsaw in 2013 (there is a conference currently ongoing in Lima, Peru). Unsurprisingly, with every delay, the ambitions for a global climate change agreement increase.

There are clear parallels between the way the global emissions problem and the aviation emissions problem are being addressed. This is perhaps also unsurprising, particularly given that both problems are being addressed under the auspices of, and within a framework created by, the UN. There are, then, challenges for international climate change cooperation and governance. And as Lawrence Summers, a former U.S. Treasury Secretary and Harvard President, has said,

CONSIDERABLE IMAGINATION WILL BE REQUIRED AS TO HOW [GLOBAL] AGREEMENTS CAN BE MADE ATTRACTIVE TO THE MAJOR DEVELOPING COUNTRIES OR MADE TO BE EFFECTIVE WITHOUT THEIR PARTICIPATION.

A ‘Patchwork Quilt:’ Aviation and the international climate change experience

It has been argued that if ICAO cannot implement an effective agreement amongst its members, the laws of a unified approach to emission regulation will not be fruitful.

Chris Lyle of Air Transport Economics says this:

THERE IS A PROSPECT OF A COMPLEX, OVERLAPPING AND POSSIBLY DUPLICATIVE PATCHWORK OF EMISSIONS REGIMES APPLYING TO AIR TRANSPORT ... HOWEVER, SUCH A PATCHWORK, WHILE BY NO MEANS IDEAL, IS NOT UNWORKABLE, AS ILLUSTRATED BY INDUSTRY’S ADMINISTRATIVE ABILITY TO DEAL WITH THE INCREASING PROLIFERATION OF TAXES, CHARGES AND DUTIES IN THE ARCHAIC BILATERAL ECONOMIC REGULATORY FRAMEWORK – WHILE CONTINUING TO AVOID PAYING TAXES ON FUEL FOR INTERNATIONAL FLIGHTS. VARIOUS OTHER ECONOMIC SECTORS ARE ALREADY AND INCREASINGLY COVERED BY DIFFERING CARBON PRICING REGIMES IN PLACE AROUND THE WORLD AND WHICH RELATE TO EACH OTHER WITHOUT AN OVERARCHING GLOBAL ACCORD.

Indeed, the workability of such a ‘patchwork’ approach draws some support from the international climate change experience generally. In terms of that experience, a survey of climate change law and policy at the national, sub-national and city levels reveals significant – and potentially significant – bottom up actions in both developed *and* developing States, and outside the top-down UNFCCC framework. This is in part because of the UN ‘agreement to agree’ approach and because deadlines for agreement keep getting pushed out.

For example, China has emissions trading pilot programs in five cities (including Beijing and Shanghai) and two provinces, and aims to establish a national ETS in the period 2016 – 2020. It also aims to reduce CO₂ per unit of GDP by 40 – 45% relative to 2005. India has an ETS-like “Perform Achieve and Trade” initiative with intensity-based energy targets in a test phase, and a Renewable Energy Certificate System at the sub- national level.

Kazakhstan started a pilot phase ETS program in 2013, and then in January 2014 launched a two-year phase. South Korea’s ETS begins in 2015 with three phases out to 2026, and with caps for facilities covering 60% of its emissions. The Brazilian Development Bank (BNDES) signed an agreement with the state of Rio de Janeiro to stimulate ‘the development of a market for environmental assets.’

California, the world’s ninth-largest economy, has a cap-and-trade ETS which sets a limit on sources responsible for 85% of its emissions, with the aim of achieving an 80% reduction on 1990 levels by 2050.

The U.S. Regional Greenhouse Gas Initiative (RGGI) comprises nine Northeastern and Mid-Atlantic State- level emissions trading schemes.

In Canada, the province of Quebec has a cap-and-trade program, and Alberta has an emissions-intensity based Specified Gas Emitters Regulation covering 45% of total emissions. This regulation is significant, as Alberta emits the highest amount of greenhouse gas emissions of any Canadian province, and accounts for about one-third of Canada’s overall emissions.

None of the countries, states, provinces or cities mentioned above have – or ever will have – Kyoto targets.

And the U.S. – based Climate Policy Initiative (CPI), which charts the acceleration of national climate policy around the world, states that:

[W]ITH GLOBAL NEGOTIATIONS STALLED, WE FOCUS ON NATIONAL AND SUBNATIONAL POLICY, BECAUSE THAT IS WHERE THE ACTION IS ... THE CLIMATE POLICY WORLD OF TODAY IS NATIONAL AND SUB-NATIONAL RATHER THAN GLOBAL.

These examples of subnational, national and international climate change regulations provide the prospect of hope that if ICAO fails to enact a unilateral agreement, the ‘patchwork’ will provide workable coverage.

Design of any MBM

Almost 5 years out from the proposed start date for a global aviation emissions MBM, there are a plethora of design issues to be addressed with regard to such a mechanism. These include mode of implementation, and whether liable entities would be airline corporations, or States, or a curious combination of both.

Another issue, one which is central to international climate change agreements, is that of developed and developing parties having ‘common but differentiated responsibilities and respective capabilities’ in dealing with climate change. Generally this question means developed countries ‘should take the lead in combating climate change’ and its effects.

There are a number of Articles in the Chicago Convention – the 1944 Convention on International Civil Aviation, the primary instrument governing international aviation and to which virtually all States are party – which refer to its provisions having ‘uniform’ application, and being applied ‘without distinction as to nationality’ (Articles 11 and 15 of the Chicago Convention). International climate negotiations have recently dealt with this issue by essentially doing away with it.

The proposed 2020 global climate change treaty will apply equally to developed and developing States. That’s not the case for ICAO which clearly stated in its Assembly Resolution 17/2, adopted by the 38th Assembly on 4 October 2013, that:

[T]HE DIFFERENT CIRCUMSTANCES, RESPECTIVE CAPABILITIES AND CONTRIBUTION OF DEVELOPING AND DEVELOPED STATES TO THE CONCENTRATION OF AVIATION GHG EMISSIONS IN THE ATMOSPHERE WILL DETERMINE HOW EACH STATE CONTRIBUTE[S] TO GLOBAL GOALS ...

In fact, excluding States on the basis of the ‘common but differentiated responsibilities’ principle as set out in the Resolution excludes States with less than a 1% share of total civil international activities (again, a UNFCCC principle but not a Chicago Convention one), and so exempts all but about 20 of the world’s nations from taking part in any aviation ETS.

It will, then, be interesting to see how that issue is resolved, given that each of the 2020 putative global climate change and aviation agreements propose to treat developing States very differently – the former by including such States, the latter by excluding them.

The issue post-ICAO Assembly: Can aviation's emissions really be reduced?

Recently published research shows that, no matter what the aviation industry does to reduce emissions, any such action will be outweighed by growth in air travel, even if significant (and contentious) mitigation measures come into force (and such measures are decades away at best).

In other words, can the aviation industry in the long term really reduce emissions – given that little has been done to date? Indeed, ICAO

LACKS THE LEGAL AUTHORITY TO FORCE COMPLIANCE [WITH MITIGATION MEASURES] ... AND THEREFORE IS HEAVILY RELIANT ON VOLUNTARY COOPERATION AND PIECEMEAL AGREEMENTS.

Reduced aviation emissions outweighed by increasing air travel

Research in the journal *Atmospheric Research* shows that, while some mitigation measures for civil aircraft emissions can be left to market forces, other measures require a more involved oversight. '[T]he current global regulatory-framework does not provide the necessary strength of stewardship.'

The study proposes a global regulator which has 'teeth' – that is, not ICAO. The authors understand the difficulty with such a proposal, however, when they say that providing a global regulator with the requisite level of authority requires an international treaty which 'history would suggest is going to be very difficult.'

According to the research, if all mitigation action is implemented successfully, the rate of air traffic growth will still be greater than the rate of emissions reductions, necessitating a reduction in demand for air travel through human behaviour change. Yet such reduction 'will be strongly resisted by all stakeholders in the [aviation] industry,' and 'the ticket price-increases necessary to induce the required reduction in traffic growth-rates place a monetary-value on CO₂ emissions' at up to 100 times the amount of common valuations – thus a regulator which has teeth.

Civil aviation will therefore become 'an increasingly significant contributor' to greenhouse gas emissions and the aviation industry 'will become more and more of a problem for the climate.'

A lawsuit to force airline emissions reductions

Another problem for airlines is the prospect of a lawsuit against the U.S. Environmental Protection Agency (EPA) from the Center for Biological Diversity and Friends of the Earth. These groups sent notice of intention to file suit under the U.S. Clean Air Act and have 180 days (from the date of their notice) to file suit. They do so based on the EPA's 'unreasonable and unjustifiable delay' in acting on its duty

TO DETERMINE WHETHER GLOBAL WARMING POLLUTANTS FROM AIRCRAFT EMISSIONS CAUSE OR CONTRIBUTE TO AIR POLLUTION THAT MAY REASONABLY BE ANTICIPATED TO ENDANGER THE PUBLIC HEALTH OR WELFARE, AND IF SO, TO REGULATE THOSE EMISSIONS.

The Center for Biological Diversity and Friends of the Earth note that aviation is viewed as the fastest growing source of CO₂ emissions worldwide, increasing at a rate of almost 5% per year.

Airport emissions

At about the same time as the *Atmospheric Environment* study, an EU study found that even the smallest of the 500 airports in the EU's 28 member States 'consumes energy like there's no tomorrow.' At issue are the heating, ventilation and air-conditioning plants which consume 50% of the energy used at airports. And, of course, airports and airport terminals continue to be built across the globe as air travel increases.

The study shows that EU airports together produce as much CO₂ as a city of 50 million people – the emissions of the larger airports alone equal those of a city of 100,000 people. The EU's CASCADE Programme [which ends March 2015] aimed to assist airports to reduce their emissions and energy needs by 20% of the life of the project.

Limits to growth

The aviation industry is representative of all the problems that attend any global climate change regime. Indeed, there's some irony here. In a report to the Club of Rome commemorating the 40th anniversary of the landmark report, *The Limits to Growth*, twenty recommendations are provided to individuals in the absence of any future global climate agreement.

Taking heed of such advice involves air travel.

Conclusion: At the moment even Nobel Prize winners cannot solve the aviation emissions problem

In its Fifth Assessment Report on the Physical Science for Climate Change, the IPCC concluded:

WARMING OF THE CLIMATE SYSTEM IS UNEQUIVOCAL, AND SINCE THE 1950S, MANY OF THE OBSERVED CHANGES ARE UNPRECEDENTED OVER DECADES TO MILLENNIA. THE ATMOSPHERE AND OCEAN HAVE WARMED, THE AMOUNTS OF SNOW AND ICE HAVE DIMINISHED, SEA LEVEL HAS RISEN, AND THE CONCENTRATIONS OF GREENHOUSE GASES HAVE INCREASED ...

HUMAN INFLUENCE ON THE CLIMATE SYSTEM IS CLEAR. THIS IS EVIDENT FROM THE INCREASING GREENHOUSE GAS CONCENTRATIONS IN THE ATMOSPHERE, POSITIVE RADIATIVE FORCING, OBSERVED WARMING, AND UNDERSTANDING OF THE CLIMATE SYSTEM [AND] ...

CONTINUED EMISSIONS OF GREENHOUSE GASES WILL CAUSE FURTHER WARMING AND CHANGES IN ALL COMPONENTS OF THE CLIMATE SYSTEM. LIMITING CLIMATE CHANGE WILL REQUIRE SUBSTANTIAL AND SUSTAINED REDUCTIONS OF GREENHOUSE GAS EMISSIONS.

As the University of Cincinnati's Adrian Parr notes, climate change poses several problems – scientific, economic, social ('[h]ow can human societies change their climate-altering behaviours and adapt to changes in climate?'), cultural and legal. Indeed, '[w]hat regulations can

be introduced to inhibit environmental degradation, promote GHG reductions, and assist the people, species, and ecosystems most vulnerable to environmental change?’

All of these problems are wrapped up in the aviation emissions problem. The difficulties in addressing that aviation problem reflect, in a microcosm, the difficulties in addressing a global climate change problem with which the world is not organised to deal. Climate change is a global problem. Yet, 190 sovereign States, developed and developing, ‘with common but differentiated responsibilities and respective capabilities,’ attempt to address it.

The concerns of those disparate States are very different – as the aviation emissions problem demonstrates and as the UNFCCC and its Kyoto Protocol recognise. It’s clear under the UNFCCC that developed countries ‘should take the lead in combating climate change’ and its effects, and that under the Kyoto Protocol only developed States have emissions reduction targets.

There are other ongoing divides.

In October 2013, a World Wildlife Fund delegate to the ICAO Assembly said that the Assembly saw scenes:

I DON'T THINK ICAO HAS EVER SEEN BEFORE ... THERE WAS JUST AN INCREDIBLE OUTPOURING OF DISLIKE OF THE EU ETS, VERY AGGRESSIVE INTERVENTIONS FROM A LOT OF STATES, AND AN ALMOST OVERWHELMING ANTIPATHY TOWARDS THE [EU'S] ETS. YOU COULD REALLY SMELL BLOOD IN THE ROOM ...

One alternative way to address the climate change problem would be to break the problem up into different pieces, which could involve sectoral agreements, agreements between industry sectors, for example, contemplating decentralised arrangements in which particular issues are discussed and negotiated. But even then, efforts to deal with the aviation sector by way of addressing the climate change problem are themselves problematic – ‘blood in the room,’ as the ICAO delegate said.

In terms of aviation, the Deputy Director of the Center for Climate Change Law at Columbia University said:

COUNTRIES ARE RETREATING TO PROTECTIONISM WHEN FACED WITH THE EU'S ATTEMPT TO SERIOUSLY ADDRESS ONE MAJOR EMITTING SOURCE [AVIATION] IN AN EQUITABLE MANNER ... [THIS] SUGGESTS LITTLE HOPE THAT THESE SAME COUNTRIES MIGHT SOON TAKE BOLD STANCES IN COMMITTING TO THE LONG-TERM, DEEP EMISSIONS REDUCTIONS NECESSARY TO AVOID THE WORST EFFECTS OF CLIMATE CHANGE.

The ICAO outcome does not represent such a ‘bold stance,’ of course, ‘in committing to the long-term, deep emissions reductions necessary.’ Carbon-neutral growth from 2020, even if it is possible, will not be enough (and carbon-neutral growth is a long way ahead of the ICAO position). As the chairperson of the Australian Initiative for Sustainable Aviation Fuels has said, ‘[aviation] will be dependent on the same liquid jet fuel for many decades’ and that ‘while certification allows for up to a 50:50 mix of biofuel and conventional jet fuel, it is likely to be a considerable time before the industry has enough scale to meet even that mix.’

Manchester Metropolitan University research puts the position even more clearly:

AVIATION CURRENTLY USES KEROSENE FOR POWERING AIRCRAFT ENGINES, AND IS LIKELY TO DO SO INTO THE FORESEEABLE FUTURE.

The developed/developing State divide is clearly breaking down in terms of international climate change negotiations generally, but not in terms of international aviation's attempts to address its climate change and emissions problem.

Footnotes have been omitted, and can be supplied on request.

'Unmanned and Uncontrolled:' The legality of UAS operations*

Rowan Kimber

For over a decade Australia has led the world in relation to the regulation of unmanned aircraft. The rapid increase in technology in the unmanned space over the past decade now provides vast potential for commercial Unmanned Aerial System ('UAS') operations. Aviation regulatory authorities worldwide are looking to Australia for guidance as to how to realise this potential. With all eyes on Australia the Commonwealth Government is preparing major amendments to UAS regulation that can provide guidance on a global scale.

Given the pending legislative reform, the release of the final draft of a research paper by Ronald C Bartsch ('Bartsch'), Managing Director of UAS International¹, titled 'Unmanned and Uncontrolled: The commingling theory and the legality of unmanned aircraft systems,' is a timely reminder of the challenges facing the Commonwealth Government in regards to UAS operations. This article provides a brief summary of Bartsch's thesis.

Bartsch's proposition

Inter alia Bartsch's thesis argues that there exists a parcel of airspace, one which is most commonly used by UAS, that does not fall into the definition of 'navigable airspace.' Bartsch proffers that UAS that are constrained to this "non-navigable airspace" are beyond the reach of the Commonwealth Government due to constitutional deficiencies in relation to the commingling theory.

The commingling theory and the Constitution

The ability of the Commonwealth to legislate in relation to Australian aviation activities is constrained greatly by the Australian Constitution (the 'Constitution').² In the absence of a specific head of power in the Constitution in relation to aviation, the Commonwealth Government relies on their powers provided by s 51(i) of the Australian Constitution to legislate for 'trade and commerce with other countries, and among the States.' The primary issue with

reliance on this head of power is that it does not generally facilitate legislating for matters which are purely intrastate. Such was the dilemma in *R v Burgess; Ex parte Henry* ('Burgess')³ which saw Mr Henry, an unlicensed (suspended) pilot, successfully defeat a conviction he received under regulation 6 of the federal Air Navigation Regulations (which prohibited an unlicensed person from flying an aircraft 'within the limits of the Commonwealth'), having flown an aircraft beneath the Sydney Harbour Bridge whilst his licence was suspended. The court noted that Mr Henry had conducted his flights wholly within New South Wales and that intrastate trade and commerce did not fall under the gamut of s 51(i) of the Constitution. The Commonwealth argued the commingling theory, that the 'commingling' of intrastate aircraft with international and/or interstate aircraft on air routes and at airports enabled it to control all aircraft operations. Whilst the High Court conceded that the trade and commerce power could extend to purely intrastate matters where the matter is 'sufficiently connected' to interstate or overseas trade or commerce, on this occasion the court did not accept that the commingling of intrastate and interstate aircraft were of such an extent that the Commonwealth's powers under s 51(i) would extend to legislating intrastate operations.

A rapid increase in air travel saw the commingling argument again submitted by the Commonwealth Government to the High Court in the 1965 case of *Airlines of New South Wales Pty Ltd v New South Wales (No 2)* ('ANSW')⁴. Accepting the Commonwealth's submission, Barwick CJ recognised the significant changes that had taken place in Australia's aviation industry since Goya Henry's historic flight in 1934:

THE SPEEDS AT WHICH AIRCRAFT MOVE IN THE AIR, THE NARROW, AND NARROWING, MARGINS OF TIME IN WHICH CONSEQUENCES OF ERROR OR MALFUNCTION MAY BE AVOIDED OR REDUCED, THE INCREASING DENSITY OF AIR TRAFFIC, THE INTERDEPENDENCE OF SAFETY OF ONE AIRCRAFT UPON THE PERFORMANCE OF OTHER AIRCRAFT, THE HAZARDS OF WEATHER AND THE VARIABLE PERFORMANCE OF AIRCRAFT, LEADING TO DIVERSION AND RE-ROUTING OF AIRCRAFT IN FLIGHT, THE NEED FOR USE OF COMMON FACILITIES . . . ALL COMBINE TO DEMONSTRATE THAT ALL AIR OPERATIONS IRRESPECTIVE OF DESTINATION OR OF THEIR PARTICULAR NATURE MUST BE SUBJECT TO THE SAME CONTROL IF THE AIR IS TO BE SAFE.

The decision in this case represents the current legal position of the Commonwealth Government in relation to their power to regulate aviation activities; however, constitutional limitations remain, thereby restricting the scope to which the Commonwealth Government can legislate in respect to civil aviation operations.

Commingling with UAS

The commingling theory as it relates to s 51(i) of the Constitution relies on the premise that intrastate flights share the same airspace as interstate or international flights. Bartsch calls this airspace 'navigable airspace,' a term which is used in US legislation to describe the airspace at or above the minimum altitudes of flight prescribed by domestic civil aviation regulations, or airspace needed to ensure safety in the take-off and landing of aircraft. Despite the use of this term in the definition of 'air route' in the *Civil Aviation Act 1988* (Cth), which defines 'air route' as 'the navigable airspace between two points and the terrain beneath such airspace identified, to the extent necessary, for application of flight rules,'⁵ it does not have a concrete definition in Australian legislation.

Bartsch argues that in the absence of a statutory definition in Australia, the US definition, which is used by several other countries, is precisely the meaning that was intended by the legislature, where the term has been used in domestic aviation regulations, arguing that '[t]o adopt a significantly different interpretation of the term would lead to a divergence with international civil aviation standards – which is contrary to the objectives of the Chicago Convention and the ICAO and in breach of Australia's obligations as a contracting state.'

In support of this line of reasoning Bartsch notes that in subpart 101.005 of the Civil Aviation Safety Regulations 1998 (Cth), which relates to unmanned aircraft and rockets, the regulations set out the requirements but limit their application 'to the extent that the operation . . . may affect the safety of air navigation.' This subpart further details that in relation to firework rockets, the regulations do not apply to the operation of a firework rocket 'not capable of rising more than 400 feet above ground level.' Bartsch strongly contends that the limiting of the application of this sub-regulation occurred simply because the Commonwealth parliament had 'no authority to regulate in instances where such activities were not capable of flying in or near (allowing for a 100 foot buffer) navigable airspace. In other words such activities of systems were not capable of commingling with other aircraft. The safety of air navigation was not affected and moreover was not capable of being so affected by such activities.'

According to Bartsch, the areas outside of navigable airspace is likely to be the area most used by small UAS and that if these aircraft were limited to operating only within the non-navigable airspace, they could not possibly commingle with interstate and international flights. In absence of commingling, Bartsch argues that the Commonwealth's power to legislate for trade and commerce would not extend to the operation of these UAS.

Whilst Bartsch's proposition is unlikely to affect major commercial UAS operations, which will inevitably require access to navigable airspace, if tested, his proposition could have significant effect on those UAS that are likely to come in closest contact to the Australian populous and those which raise the greatest concerns for privacy and security. There is little doubt that modern technology could limit the operation of a UAS to non-navigable airspace. Geo-fencing is already being used by some manufacturers to limit the ability of UAS to operate in the vicinity of airports and Bartsch contends that it is a simple step to include vertical restrictions to the geo-fencing technology.

Other means of legislating for non-navigable airspace users

Bartsch does concede that there are other mechanisms that facilitate the Commonwealth Government's regulation of UAS operations in non-navigable airspace. He suggests that whilst the external affairs head of power under s 51(xxix) of the Constitution would facilitate legislating to comply with an international convention, at this point there is no international treaty or convention on the topic that could enable the Commonwealth to legislate in this area. Bartsch also considers if the use of state mirroring legislation (which was the Commonwealth's primary means of regulating on intrastate matters after Burgess until ANSW) would be an appropriate means of regulating operations in non-navigable airspace. In his opinion, the use of mirroring legislation would be an overly cumbersome and slow process and one that would be almost impossible to get traction.

Where to from here?

There is little doubt that Bartsch's thesis will provoke significant discussion. In an article published by *The Australian* on 16 January 2005 regarding Bartsch's pending thesis⁶ Bartsch was quoted as stating that his proposition '[is] going to be extremely contentious' and that '[it] is going to open a real Pandora's box'.

The number of UAS that generally occupy the non-navigable airspace now far exceeds the number of registered aircraft in Australia. It is the operation of UAS in this airspace that generally raises concerns in regards to personal privacy, safety and security, and it is likely these concerns will lead to increasing pressure on the Commonwealth Government to protect the Australian populous. Time will tell if the Commonwealth Government has the power to enact the required legislation; according to Bartsch, it lacks jurisdiction.

**This article is a summary of a thesis by Ronald C Bartsch.*

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2. *Commonwealth of Australia Constitution Act 1900* (Cth).

3. (1936) 55 CLR.

4. (1965) 113 CLR 54.

5. *Civil Aviation Act 1988* (Cth), s 3.

6. Steve Creedy, 'CASA may lack power over UAVs', *The Australian* (online), 16 January 2015 <<http://www.theaustralian.com.au/business/aviation/expert-questions-casa-regulatory-powers-over-drones/story-e6frg95x-1227186252581>>

A Texas-sized fight over airport access

Patrick Wilson

Delta Air Lines has operated Atlanta to Dallas Love Field flights for a while now. But, unless Delta comes to an agreement with either Southwest Airlines or Virgin America or a court intervenes, Delta could be kicked out of Love Field on 7 July 2015. This story didn't start here, though; it started nearly 50 years ago, in 1967.

Rivalry between cities and the opening of DFW Airport

Until 1974, the Dallas-Ft. Worth Metroplex had two commercial airports less than 30 miles apart: Love Field in Dallas and Greater Southwest International Airport in Ft. Worth. In 1964, the United States Federal Aviation Administration told the cities that it would no longer support both airports. The government forced a compromise between the cities, which led to Dallas-Ft. Worth International Airport being built.

But an intriguing game was happening in the background. All carriers in existence when the compromise to build DFW was reached signed an agreement to not operate at either Love Field

or Greater Southwest. Southwest Airlines, though, was not party to that agreement. And it planned to operate from Love Field.

Although Air Southwest had been founded in 1967, it faced legal battles from the incumbent carriers that kept it from operating until 1971. It commenced service in 1971 as Southwest Airlines, operating from Love Field—which is still its headquarters.

The Wright Amendment

Southwest survived largely without legal issues until 1978. But Southwest's lack of legal issues came at a price: it confined itself to flying within the State of Texas. In 1978, Southwest announced that it would begin flying to New Orleans in neighbouring Louisiana. The City of Ft. Worth and DFW Airport launched into action. The Speaker of the United States House of Representatives, Representative Jim Wright of Ft. Worth, pushed an amendment to a federal law that would have prevented commercial airline service from Love Field. Southwest fought back and ended up with a compromise: Love Field would remain open, but flights from Love Field could only operate to destinations within Texas or its contiguous states (New Mexico, Oklahoma, Arkansas and Louisiana) unless the aircraft had 56 or less seats.

This placated most incumbent airlines, DFW Airport and Ft. Worth. And the arrangement continued, with minor amendments (the states of Missouri, Kansas, Alabama and Mississippi being added to the list of allowed flights, and one-stop flights being allowed), until 13 October 2014.

Post-Wright Amendment

In 2006, the cities of Dallas and Ft. Worth, along with American Airlines, Continental Airlines, and Southwest Airlines, reached an agreement to open access to Love Field. The agreement stipulated that Love Field could not have more than 20 gates. All gates would be preferential use, with 16 going to Southwest, 2 to American, and 2 to Continental (now United). But, as part of the compromise, American, whose main hub is at DFW, was forced to surrender its two gates at Love Field. The United States Department of Transportation (DOT) oversaw the transaction and awarded both gates to Virgin America.

By this time, United had reduced its operations at Love Field and allowed Delta to use its gates for Delta's proposed five daily flight to Atlanta. But in January 2015, United agreed to sublease both of its Love Field gates to Southwest. Southwest quickly announced plans to fully utilise the subleased gates. And Virgin America added flights to its two gates to their maximum utility. This has the superficial effect of locking Delta—and all other airlines—out of Love Field.

Quick primer on airport law in the US: grant assurances

Airports in the US almost invariably receive money from the federal government to improve the airport in the form of grants. 39 grant assurances exist, but two grant assurances could come into play in this scenario: number 22, economic non-discrimination; and number 39, competitive access.

The prohibition against economic discrimination requires, among other things, airports to:

- be available for public use on reasonable terms and without unjust discrimination to all types, kinds and classes of aeronautical activities; and
- grant each air carrier using the airport non-discriminatory and substantially comparable rules, regulations, conditions, fees, rentals and other charges, subject to reasonable classifications.

But the requirement to grant competitive access could be the sticking point. That grant assurance states that if an airport operator of a medium or large hub airport—which Love Field is—has been unable to accommodate one or more requests by an air carrier for access to gates or other facilities that would enable the air carrier to provide or expand service at the airport, the airport operator must report the requests to the Secretary of Transportation, explain why the requests cannot be accommodated, and provide a time frame in which the airport will be able to accommodate the requests.

The start of the current conflict: the DOT's letter to the City of Dallas

Dallas had likely been informed of the proposed United-Southwest lease for a while. It wrote to the DOT in early December to ask whether the airport would be forced to accommodate flight requests by other airlines or be at risk of breaching its grant assurances. DOT's General Counsel, Kathryn Thompson, wrote to the City of Dallas on 17 December 2014 explaining that the DOT's competition plan policy 'requires airport proprietors to assist requesting carriers seeking access, and we expect that, if a requesting carrier is unable to arrange a voluntary accommodation with a signatory carrier, the City will accommodate the requesting carrier to the extent possible' considering current and announced use. Furthermore, the DOT considers that once an air carrier is accommodated, that carrier is 'entitled to an ongoing similar pattern of service as long as the carrier continues to operate the accommodated flights. Importantly, the accommodated carrier should not be pushed out by incumbent carriers at a later date.' The DOT then puts the onus on the City to force accommodation of the carrier if no agreement between the carriers can be reached.

Southwest strikes back

Southwest signed the sublease with United having seen the letter from DOT to the City. The lease, in fact, acknowledges the DOT's advice and Southwest's disagreement with it. But to clarify its position, Southwest filed a petition for review in the United States Court of Appeal for the District of Columbia Circuit.¹ In its petition, Southwest argues that the DOT's letter is an order and that the order is 'arbitrary and capricious, an abuse of discretion, and otherwise not in accordance with law, in excess of statutory authority, and without observance of procedure required by law.'²

In response, Delta filed a motion to intervene, which Southwest opposed. Delta issued a strong response³ that includes Delta's breakdown of gate usage at Love Field.

What will happen on 7 July?

There are three options that emerge as the most likely to occur:

Option 1: the City grants Delta access to facilities at Love Field on the same or close to the same basis as Delta currently receives and Southwest does not object. This is the most unlikely outcome. Southwest has stated that it will not, and have no ability to, accommodate Delta after 6 July. Both Southwest and Delta have been selling tickets far in advance to destinations from Love Field that would utilise the 2 gates in contention. Accommodating Delta would have economic and competitive consequences for Southwest that it is unlikely to agree to without a court battle. Which leads to...

Option 2: the City grants Delta access to facilities at Love Field, but Southwest files an injunction with the District of Columbia Court of Appeal to prevent the City from implementing its decision. But it is unlikely that a court would intervene to restrict competition in an environment where a hearing on the issue is already scheduled. It is more likely that a court would either dismiss the filing or stay its decision until after the underlying issues are addressed. In this scenario, Southwest will need to accommodate Delta at its gates until at least October, when the first hearing on this matter is scheduled to occur.

Option 3: the City declines to force existing carriers to accommodate Delta and Delta files an injunction with the District of Columbia Court of Appeal to prevent the City from implementing its decision. If the City does not accommodate Delta, it is extremely likely that Delta will challenge that decision in both federal court and the DOT's tribunal. In Delta's case, it is more likely than not that the court would order the City to accommodate Delta until the outcome of the underlying litigation is resolved.

The City is in the worst position: owning an asset that one party wants to retain control of and that another wants access to. No matter what the City decides to do, its decision is likely to be reviewed by a Court of Appeal, costing the City a large amount of money and exposing its processes to increased scrutiny. Considering the options available, it is likely that the City will force the existing carriers to accommodate Delta at Love Field and then go through a long process challenging its decision.

But the issue may not end there: Love Field is artificially being made an anticompetitive environment by the federal government. It would be similar to having the Australian government restrict access at Avalon to only two carriers while permitting full competition at Tullamarine. It is plausible that a challenge could be made to the legality of the compromise that limits Love Field to 20 gates and that artificially limits the amount of competition available. If that occurs, the legal battle over Love Field could stretch over multiple years. And it could call into question the way competitive landscapes are defined: should markets be defined narrowly (single airport or area) or broadly (all airports in the general area, which would include unrestricted DFW)?

Whatever happens, this case will be interesting to watch and could provide insight into competition and regulatory matters that have previously not been considered in depth by courts in the United States. We will provide an update when the outcome of the case is announced.

1. *Southwest Airlines Co. v. U.S. Dep't of Trans.*, Case No. 15-1036, D.C. Cir., Feb. 13, 2015.
2. *Id.*
3. USCA Case #15-1036, Document #1543951, Mar. 24, 2015.

Post traumatic stress disorder as compensable 'bodily injury'?

Maurice Thompson, James Cooper and Merinda Stewart

On 15 May 2015, the Supreme Court of New South Wales handed down its judgment¹ in respect of damages for the nurse and doctor on board the ill-fated CareFlight that ditched into stormy seas off Norfolk Island in November 2009. The decision focused on one of the injuries suffered by the nurse – namely, her post-traumatic stress disorder (PTSD) – and ultimately whether Pel-Air Pty Ltd (Pel-Air), the flight operator, was liable for this injury. In reaching her decision, the key issue considered by Schmidt J was whether PTSD is a 'bodily injury' within the meaning of Art 17(1) of the Montreal Convention.²

Purely mental injury is not sufficient to recover damages under Art 17 of the Montreal Convention, however, at least in Australia, it is settled that psychological injury accompanied by bodily injury is recoverable. Significantly, the Court in this case found that psychological injury is recoverable where it can be proven to be a 'species of bodily injury,' that is, if the condition itself involves a physical change to the brain. Although in this case the plaintiff had suffered extensive bodily injuries, this decision seems to indicate that even in the absence of any other injury, PTSD can be recoverable as a 'bodily injury.'

Background

Pel-Air accepted that the crash had been caused by the negligence of its pilot and co-pilot and had accepted vicarious liability for their actions.

Both the nurse, Ms Casey, and the doctor, Dr Helm, were employees of CareFlight and had received workers compensation from CareFlight and there was a settlement reached under which Pel-Air paid CareFlight a sum in respect of this.

In the present decision, in Dr Helm's case, it was only the assessment of certain damages that was at issue.

For Ms Casey, the parties were generally in agreement that her physical and psychiatric injuries were compensable under the *Civil Aviation (Carriers Liability) Act 1959* (Cth) (the Act).³ However, they disagreed about whether her PTSD was compensable, raising both questions of fact and law.

Pel-Air's claim

Pel-Air claimed that the PTSD was not a 'bodily injury' falling within Art 17(1) of the Montreal Convention and that consequently, it was not compensable under Pt IA of the Act.

In arguing this, Pel-Air contended that Ms Casey's PTSD had not been caused by the physical injuries that she suffered as a result of the crash and she had not suffered physical injury to the brain itself, of which the PTSD was a manifestation.

Ms Casey's claim

Ms Casey argued:

- s 9E of the Act grants passengers a wider right to compensation than under Art 17(1) of the Montreal Convention by providing for 'personal injury' rather than the narrower 'bodily injury'; or
- the PTSD she suffered was a compensable bodily injury under the Montreal Convention; or
- given the nature and complexity of her other injuries, the exclusion of her PTSD as a compensable injury would have no practical effect on the orders handed down by the Court in respect to damages.

Does the *Civil Aviation (Carriers Liability) Act* extend the scope of compensable injury under the Montreal Convention from 'bodily injury' to 'personal injury'?

The Act alters the scheme established by the Montreal Convention in a number of ways. The Court disagreed with Ms Casey though, that s 9E provides such a departure.

Schmidt J concluded that Ms Casey's claim, that s 9E extended a passenger's right to compensation from cases of 'bodily injury' to 'personal injury,' could not stand. In doing so, she considered that this construction:

- does not promote the purpose of the Act;
- is not supported by the structure of s 9E; and
- is not consistent with the legislative history of the Act, or relevant case law, which indicate that no departure from the Montreal Convention was intended in this respect.

In reaching its decision, the Court emphasised that s 9E specifies the liability of carriers, rather than conferring rights on passengers, which is instead provided by s 9B.

The scope of 'bodily injury' is narrower than 'personal injury,' with the latter encompassing both physical and mental injury.⁴

The purpose of the Act

The rules of interpretation require a construction that best achieves the purpose of an Act, whether or not it is expressly stated.⁵ Although the Montreal Convention is not binding in the interpretation of the Act, it has strong persuasive authority. The purpose of the Montreal Convention is to achieve a balance between the rights of passengers and the liability of carriers in the event of an accident causing injury or death. It modernises the previous scheme, which was established by the Warsaw Convention.⁶ The purpose the Act, in addition to enacting the Montreal Convention into Australian law, is to provide for compensation for passengers and to make insurance for carriers mandatory.

In relation to the enactment of s 9E, Schmidt J clearly identified that the intention of Parliament was to confine the liability of carriers to ‘bodily injury’ suffered by a passenger. Section 9E achieves this by imposing the compensation scheme provided under the Montreal Convention to the exclusion of any civil liability of the carrier under any other laws in respect of the bodily injury.

THE ABSOLUTE LIABILITY IMPOSED ON THE CARRIER BY ART 17 OF THE CONVENTION, FOR BODILY INJURY, IS THEREBY PROVIDED TO BE IN SUBSTITUTION FOR THE CIVIL LIABILITY WHICH THE CARRIER HAS TO THE PASSENGER UNDER ANY OTHER LAW, WHICH WOULD OTHERWISE APPLY TO THE CARRIER. [56]

The structure of s 9E

Where sections of the Act involve a departure from the Montreal Convention scheme, it is expressly stated. Schmidt J pointed to s 9C, which deals with Special Drawing Rights (SDRs), as an example of an express departure. Section 9E does not specify a departure suggesting that, absent evidence indicating otherwise, this was not the intention of the drafters.

Legislative history and case law

The previous scheme for compensation in international civil aviation was established by the Warsaw Convention. Liability of the carrier is dealt with under Article 17 of the Warsaw Convention, like the Montreal Convention, and these Articles contain similar terms.

The meaning of bodily injury in relation to the Warsaw Convention has previously arisen for consideration by Australian Courts, as well as by other signatory States. As these discussions are based on the Warsaw Convention rather than the Montreal Convention they are not binding, however Schmidt J emphasised the importance of this jurisprudence and stated that it should be followed and applied in the determination of bodily injury under the Montreal Convention. In doing so, she considered two key Australian cases: *Kotsambasis v Singapore Airlines Ltd*⁷ and *American Airlines v Georgeopoulos [No 2]*.⁸

In *Kotsambasis*, the Court found that ‘bodily’ is a term of limitation and does not include purely psychological injury. In reaching their conclusion, the Court followed the decision of the Supreme Court of the United States in *Eastern Airlines v Floyd*⁹ and, like in *Floyd*, did not answer the question of whether psychological injury accompanied by physical injury could be compensable. This matter was resolved by the New South Wales Court of Appeal in

Georgeopoulos [No 2] where it was concluded, based on Stein JA's observation in *Kotsambasis*, that psychiatric injury is recoverable 'where mental anguish follows and is caused by physical injury [or] if the psychological injury is proven to be a species of bodily injury.' The House of Lords considered these Australian decisions in *King v Bristow Helicopters Ltd; In Re M*,¹⁰ agreeing with the approach of the New South Wales Courts to *Floyd* and their consideration of 'bodily injury.'

Schmidt J noted that 'personal injury' is also used in s 13 of the Act, which is the equivalent to s 9E but in respect to the Warsaw Convention, and that it was previously also included in s 28, in relation to interstate transport. Amendments in 2012, which brought the Act in line with the scheme provided by the Montreal Convention, replaced 'personal injury' with 'bodily injury' in s 28.¹¹ Schmidt J noted that none of the above case law considers personal injury as it appears in s 9E and s 13, the reason being that these articles establish the liability of carriers and not the rights of passengers.

In addition, the use of the term 'bodily injury' in s 9H, which incorporates into Australian law Art 20 of the Montreal Convention in relation to contributory negligence, further supports the view that s 9E does not expand the injuries that a carrier is liable for.

Can PTSD be considered a 'bodily injury' under the Montreal Convention?

The Court concluded that PTSD can be considered compensable bodily injury under the Montreal Convention.

The Court rejected Pel-Air's claims and stated that it gave insufficient attention to the cases of *Floyd* and *King*. Pel-Air relied on a number of US cases, including *Doe v United Airlines, Inc*,¹² which the Court emphasised does not accord with the reasoning in *Georgeopoulos [No 2]*, *Kotsambasis* or *King*.

In respect to the decision in *King*, Schmidt J noted that, although in that case the claims in respect of PTSD failed, the House of Lords accepted that in certain circumstances a claim of PTSD might be considered as compensable bodily injury. Schmidt J considered a number of the observations made by the House of Lords, including those of Lord Hobhouse, in which 'bodily' is defined broadly and simply as 'pertaining to the body.' His Lordship observed that the brain, central nervous system and glands are all as much a part of the body as organs such as the heart and lungs and that bodily injury need not be visible or palpable. His Lordship observed that:

A PSYCHIATRIC ILLNESS MAY OFTEN BE EVIDENCE OF A BODILY INJURY OR THE DESCRIPTION OF A CONDITION WHICH INCLUDES BODILY INJURY. BUT THE PASSENGER MUST BE PREPARED TO PROVE THIS, NOT JUST A PSYCHIATRIC ILLNESS WITHOUT EVIDENCE OF ITS SIGNIFICANCE FOR THE EXISTENCE OF A BODILY INJURY. [143]

On the evidence in this case, can Ms Casey's PTSD be considered bodily injury?

Schmidt J concluded that Ms Casey had met the onus to show that she had received the PTSD at least in part from the bodily injuries that she suffered.

As a result of the accident, Ms Casey suffered serious injuries to her body, including her head, brain, neck, nerves, teeth, spine, knees and shoulder. These injuries have affected the functioning of her body, her brain and other bodily processes necessary for her brain's normal functioning. Parts of her body, including her brain, have not returned to normal functioning and her PTSD is one of three treatment-resistant psychiatric conditions that she has developed.

In determining whether Ms Casey's PTSD satisfied the requirements of 'bodily injury,' Schmidt J referred to expert evidence, which provided that the manifestations of Ms Casey's disorders reflect 'an alteration in a brain function, which was explained to be changed patterns of neurotransmitter activity and chemical changes in the brain.' Whilst the scientific knowledge associated with PTSD is not as advanced as the other psychological disorders from which she suffers, the author was of the opinion that 'the psychological changes overlap between PTSD and the other psychological disorders from which she suffers.' Accordingly, the Court found that the nature and complexity of Ms Casey's injuries meant that it was 'difficult and artificial' to differentiate between their interactions and consequences, as well as to distinguish between the physical and psychological injuries.

Schmidt J concluded that the evidence indicated that the PTSD suffered by Ms Casey had not been caused by emotional trauma alone. She noted the objective evidence that, in addition to the adverse affects to her mind caused by the accident, she had also suffered many bodily injuries which had damaged the ability of her brain to function normally. The resistance to treatment further supported the conclusion that her PTSD was the result of organic damage to her brain. The Court was satisfied that her PTSD 'involves injury to her brain and other parts of her body involved in normal brain functioning.'

Damages awarded

The Court awarded Ms Casey damages of non-economic loss representing 80% of the most extreme case. If her PTSD was found not to be compensable this would have been reduced to represent 70% of the most extreme case. She was also awarded damages for economic loss, treatment and care. If Ms Casey's PTSD had not been compensable there would be no adjustments to the assessment of her past or future earning capacities, although there may have been a 10% reduction, at most, to the assessment of past out of pocket expenses.

The consideration of Dr Helm's damages centred on the ongoing back pain that he suffered and in particular, the restrictions that this imposed on his capacity to work. Dr Helm was awarded damages to reflect his reduced future earning capacity, in addition to damages for non-economic loss, treatment and care.

1. *Casey v Pel-Air Aviation Pty Ltd; Helm v Pel-Air Aviation Pty Ltd* [2015] NSWSC 566.
2. *Convention for the Unification of Certain Rules for International Carriage by Air*, opened for signature 28 May 1999, 2242 UNTS 309 (entered into force 4 November 2003).
3. This is the legislation that enacts the Montreal Convention into Australian law.
4. *South Pacific Air Motive Pty Ltd v Magnus* [1998] FCA 1107; (1998) 87 FCR 301.
5. *Acts Interpretation Act 1901* (Cth) s 15AA.
6. *Convention for the Unification of Certain Rules Relating to International Carriage by Air*, opened for signature 12 October 1929, 137 LNTS 11 (entered into force 13 February 1933).
7. (1997) 42 NSWLR 110.
8. [1998] NSWCA 273.
9. 499 US 530 (1991).
10. [2002] UKHL 7; 2 AC 628.
11. In 2012, the *Aviation Legislation Amendment (Liability and Insurance) Act 2012* (Cth) was introduced, amending the Act and bringing Australia's laws into line with the Montreal Convention.
12. 160 Cal App 4th 1500 (2008).

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