



COMMITTEE ON AERONAUTICS NEWSLETTER

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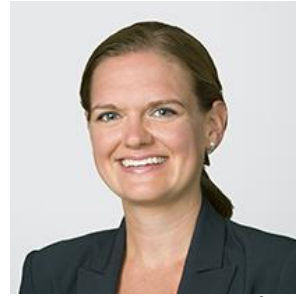
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The views and opinions expressed in these articles are those of the authors and do not necessarily reflect the views of the New York City Bar Association.

From the Committee Chair and Committee Secretary:



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We are very pleased to present this eleventh issue of our Committee's Newsletter. The prior issues are posted (by year) on the Committee's section of the New York City Bar's public website (click on the "News & Media" button): <http://www.nycbar.org/member-and-career-services/committees/aeronautics-committee>. We hope that our Committee Members and Alumni (and other readers accessing this Newsletter on the Bar's website) continue to find each issue very interesting.

Our Committee focuses on a wide variety of aerospace issues, including topics covered in our 22 subcommittees (see p. 3). The Committee usually meets monthly from September through June, with guest speakers on legal and/or technical aerospace issues. It is a vibrant group, and membership has grown substantially over the last few years.

Please stay tuned for more information about activities of the Committee on Aeronautics.

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Subcommittee on Rotary-Wing Aviation	Jonathan Callaway
Technical Advances in Aviation Subcommittee	Jenny A. Urban

ARTICLES

Cloudy with A Chance of Tragedy: Navigating the Risks and Liabilities of “Scud Running”

Jonathan Callaway¹

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Chair, Subcommittee on Rotary-Wing Aviation



Hindsight is a clear blue sky canvassed over a bright green world. It's the warm breeze that gently nudges damp fog out of the valley between cascading mountains. It's a bird's eye view of an impenetrable maze, or even a fan in the nosebleeds yelling at the quarterback to throw left. While the benefit of this vantage point is beyond measure, its undeniable fallacy is the presumption that those without its advantage have all the facts and information on hand when determining their course of action. In the era of investigation and fact finding, all too often we conclude what caused a mishap and place liability without considering how much information the acting parties had at the time, let alone if their actions were reasonable with respect to the information they had on hand. In aviation it seems that pilot actions are scrutinized under a stronger microscope than ever before despite a pilot's limited vantage point at the time of the incident. While the cure for this problem is far from human trials, a common symptom is reactive legislation that is drafted with haste, or worse, with a false perception of what really happened.

Less than a month into 2020, the sports world was devastated when a helicopter flying in poor visibility caused the loss of NBA legend Kobe Bryant. The crash also claimed the lives of several others leaving families torn in half with nothing but questions. Even as emergency responders were still trying to get to the scene, media personalities and news anchors were discussing what had happened and what likely caused the tragedy. These reports and conversations led to the misreporting of who had been involved, the surrounding circumstances and conclusory statements as if the investigation had already occurred. Consequently, I shall decline to comment or speculate on the incident itself as the National Transportation Safety Board (NTSB) has publicly announced the formal investigation will likely take more than a year to complete.² Instead, in this article I'd like to discuss the proposed legislation resulting from the incident as well as other recent incidents that involved less than desirable visibility conditions.

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² Almas, S. & Watt, N. (2020). *NTSB Releases New Photos and Says No Evidence of Engine Failure in Kobe Bryant Helicopter Crash*. New York: CNN. Available at: <https://www.cnn.com/2020/02/07/us/kobe-bryant-helicopter-crash-ntsb-report/index.html>

A mere four days after the Bryant crash, a congressional representative from California announced he will be introducing legislation that “likely” could have prevented the tragedy from happening.³ The content of this bill has not yet been publicly disclosed, but in Congressman Sherman’s announcement, he makes it clear that the primary purpose of the bill would be to require the use of terrain awareness and warning systems on helicopters, the cost of which would be in the range of \$25,000 to \$40,000 per aircraft.⁴ Presumably, The Kobe Bryant and Gianna Bryant Helicopter Safety Act will “direct the FAA to adopt new helicopter safety standards in coordination with the [NTSB]... and establish a commission on helicopter safety and require a report to Congress on best practices for helicopters in cases of low visibility.”⁵

Congressional attention directed to the needs of the rotary-wing community is favorable, but my concern is the presumption that a terrain avoidance system could have saved anyone’s life this early in a difficult investigation. Further to that end is the concern of demanding costly upgrades as a solution when the problem has yet to be defined beyond that same presumption. Looking beyond Kobe Bryant’s crash, our recent history is riddled with examples of helicopters crashing due to circumstances involving poor visibility and fog. In most of these cases, a terrain awareness system would have been irrelevant to the survival of those on board.

Last summer, a helicopter crashed into a building just off Times Square because the pilot “did not know where he was” after taking off in low visibility conditions.⁶ It sounds ridiculous, from a hindsight perspective, to think a pilot could become so disoriented after taking off just minutes prior. One must ask, how could a plan of action fall apart so quickly? Per NTSB’s report, the pilot hadn’t filed a flight plan despite the poor weather conditions warranting instrument flight plans due to an incredibly low ceiling.⁷ This cloud layer, absent an instrument flight plan, infers the pilot intended to “scud run” his way to the Linden Airport.

“Scud Running” is the act of flying just below the cloud layer to avoid terrain and obstacles. This is predominantly used when cloud layers are incredibly low, but a pilot, either by preference or necessity, chooses not to fly on an instrument flight plan and instead uses the shallow space between the ground and the bottom of the low clouds. A key reason pilots “scud run” is because using an instrument flight plan takes longer and therefore costs more money. It is also much simpler to just fly under visual conditions rather than planning an entire instrument route. The result: several pilots will defer filing an instrument flight plan and try to squeeze as much out of the weather available as they can. In this case, a “20-minute window to make it out” cost the pilot his life when he opted to narrowly avoid bad weather rather than filing an instrument flight plan.⁸

³ Sherman Oaks District Office. (2020). *Congressman Sherman Introducing the Kobe Bryant & Gianna Bryant Helicopter Safety Act*. Sherman Oaks: Sherman Oaks District Office. Available at: <https://sherman.house.gov/media-center/press-releases/congressman-sherman-introduces-the-kobe-bryant-gianna-bryant-helicopter>

⁴ *Id.*

⁵ *Id.*

⁶ Associated Press. (2019). *Pilot Killed in NYC Helicopter Crash ‘Did Not Know Where He Was’ Say Investigators*. New York: Associated Press. Available at: <https://www.nbcnews.com/news/us-news/pilot-killed-nyc-helicopter-crash-did-not-know-where-he-n1021736>

⁷ National Transportation Safety Board. (2019). *NTSB Aviation Accident Preliminary Report*. New York: National Transportation Safety Board. Available at: <http://aviationdb.net/aviationdb/AccidentDetailPage>

⁸ *Id.*

Scenarios such as this are rampant throughout aviation. In 2015, a National Guard Black Hawk crashed off the coast of Florida when the deteriorating weather caused the pilots to lose their orientation killing 11 service members.⁹ While preliminary weather reports suggested a much more conservative forecast, the reality was detrimental as fog layers were as low as 200' during the flight.¹⁰ Other aircraft following the lead Black Hawk opted to cancel their route, initiate an instrument flight plan and proceeded back to an airfield where they could land safely; yet the lead pilots, with decades of experience between them, chose to push on beneath the scud layer, ultimately sealing their fate.¹¹ In hindsight, it appears obvious that they should have opted to return home rather than face the costly consequences of "scud running," yet, they didn't.

The coup de grâce for both aircraft wasn't a lack of terrain awareness equipment, it was the pilots becoming spatially disoriented when they lost their visual cues in the fog. Once those cues were lost, both pilots inadvertently put their aircraft in unusual attitudes resulting in their respective crashes. When a pilot becomes spatially disoriented, it isn't necessarily that they no longer know where the ground is, it is that they have no perception at all of where they are, what their aircraft attitude is, their altitude or their rate of descent. Worse even, sometimes pilots are not even aware they are disoriented until the attitude of the aircraft becomes too aggressive to correct. This disorientation occurs because, as terrestrial creatures not evolved for flight, we rely too heavily on our sight for balance. While navigating using visual cues from the ground, if we suddenly pop into a cloud where we can no longer see beyond our cockpit, we may not even realize we are turning or pitching the aircraft beyond correction until it is too late. One must ask, would a terrain awareness system provide any alert for a situation like this? More critically, is terrain really the enemy? Or is the more relevant question, should we spend more time discussing the judgement calls made by pilots in similar situations?

While these examples clearly infer an issue of pilot judgement rather than absence of equipment, there are still more factors to evaluate. A terrain awareness system is simple in operation. Rudimentary systems simply use the radar altimeter to tell you when you get within a specified distance from the ground whereas complex systems provide a moving map with color coded features that signal when rising terrain is near you or even above your current altitude. In operation, systems like this can be very valuable in specific conditions, but by no means is it something that would be of significance across the entire industry. For example, the crash in Manhattan was on relatively flat ground and the National Guard helicopter crashed in open water. The perceived problem is the ground itself, because that's where the wreckage was found, but the problem occurred thousands of feet higher when the pilot initially lost positive control of the aircraft. A terrain awareness system is, at best, a redundant altimeter that features loud beeps or a small screen with shades of red. What it doesn't tell you is your airspeed, your attitude or your rate of descent. Fixation on a terrain awareness system seems almost more dangerous than flying without one altogether. The important information a pilot needs to avoid the ground can be found using basic navigation equipment. Problems only arise when pilots, due to poor judgment,

⁹ Burdeau, C. (2015). *Report: Pilots in Deadly Black Hawk Crash Disobeyed Orders*. Washington, D.C.: Associated Press. Available at: <https://apnews.com/8bc40817d54149b9877e999978ee3eff/report-pilots-deadly-black-hawk-crash-disobeyed-orders>

¹⁰ *Id.*

¹¹ *Id.*

put themselves in situations where they lose their situational awareness and fail to correct their erratic attitude before it's too late. Regulating the hardware will only result in a noisy approach or flashing red screens on final when a cockpit should be sterile and silent aside from necessary communications.

The option this bill presents is either burdening the public with additional torn safety nets or demanding better judgement from our pilots. More facts need to be considered before any burdensome legislation is put into effect including on smaller commercial operators who can't afford to equip their entire fleet with unnecessary equipment. Effective solutions are found in training. Higher standards of training in inclement weather will show pilots how to more readily detect and recover from spatial disorientation. More importantly, facing the severity and danger head on, while under the guidance of an instructor, will show pilots that a 20-minute window isn't worth the rest of your life and that superior judgement will keep you safer than superior skills in the air. Ultimately, when a pilot becomes disoriented, a terrain awareness system is worthless if you don't even know which way is up.

Federal Air Marshals: The Future Looks Grounded

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Since the passing of the Aviation Transportation Security Act,² protecting the skies has been a top priority. Federal Air Marshals, under the Transportation Security Administration (TSA), are seen as the ultimate tool in deterring terrorists in the air. The Federal Air Marshals were to be individuals employed by the government with the authority to carry firearms and make arrests without warrants under the Act.³ These Air Marshals protect passengers for the public's interest in promoting air transportation. However, in the recent months we have seen a spike of domestic "air rage" amongst passengers. Where Federal Air Marshals were typically found on many of these flights, they are now being deployed by the government to operate as a catch-all for the fight against terrorism, despite the need for them on our aircraft.

According to the Transportation Security Administration website, Federal Air Marshals are a multi-agency task force.⁴ These individuals are involved in more than just protecting the skies and being deployed on commercial flights. Air Marshals are law enforcement officers who actively participate in land-based investigative assignments in order to promote the government's counterterrorism initiative. Along with investigative work, the Officers are involved in Visible Intermodal Protection and Response (VIPR) teams.⁵ Established in 2009, after the train bombing in Europe, the Visible Intermodal Protection and Response team combines the work of Federal Air Marshals with federal, state, and local law enforcement. They use their transportation expertise and station themselves at high traffic transportation crossroads in order to enhance security at all levels of transportation domains.

Today, many pilots are trained under the Federal Flight Deck Officer program,⁶ which allows pilots to secure the flight deck of the commercial aircraft by being armed. Not all pilots participate in this program. This program, much like the Federal Air Marshals, falls under the TSA. In the case of an armed pilot, they are trained to use deadly physical force if there is ever a threat of an attack in which an unauthorized individual attempts to break into the flight deck. The jurisdiction does not extend to the back of the aircraft.

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² AVIATION AND TRANSPORTATION SECURITY ACT, 107 P.L. 71, 115 Stat. 597, (2001)

³ 49 US § 44917: Deployment of Federal Air Marshals (2018)

⁴ <https://www.tsa.gov/about/jobs-at-tsa/federal-air-marshall-service-and-law-enforcement> /(accessed 2020)

⁵ 6 USCS § 1112: VIPR (2018)

⁶ 49 US § 44921: Federal Flight Deck Program (2018)

On January 12, 2020, a passenger aboard a United Express flight from Washington D.C to Newark N.J attempted to storm the flight deck. The passenger displayed erratic behavior and later engaged in a physical altercation with the flight attendant.⁷ On September 26, 2019, on an Alaska Airlines flight to New York, a passenger threatened the flight crew and attempted to enter the flight deck after being refused entry to the first-class lavatories. As a result of this, the flight was diverted.⁸ These are just two examples of domestic “air rage” incidents within the last year.

Air rage incidents will not go away. However, if they are on the rise, is it in the TSA’s best interest to deploy Federal Air Marshals on the ground? By doing this, they are limiting the number of flights which could be under the protection of Air Marshals. Air Marshals are trained to be able to de-escalate situations. The responsibility of the flight deck officer is higher, for they are not equipped in de-escalating a situation, rather they are flying the aircraft. If the situation of the “air raged” passenger in the back of the plane could be de-escalated by a trained law enforcement officer, why run the risk of a fatality 30,000 feet in the air?

⁷ <https://www.washingtonpost.com/transportation/2020/01/13/man-storms-cockpit-newark/> accessed (2020)

⁸ <https://nypost.com/2019/09/27/alaska-airlines-flight-from-jfk-diverted-after-man-tries-to-storm-cockpit/> accessed (2020)

Astronomers Float Legal Challenges Against SpaceX's Satellite Internet

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Space Exploration Technologies, Inc. (“SpaceX”), along with several other companies, is building a constellation of communications satellites in low-Earth orbit (“LEO”) called “Starlink,” through which it plans to deliver internet connectivity to users all over the Earth. Although SpaceX’s constellation has received approval from regulators, it has also drawn criticism from scientists and others who allege the satellites will interfere with astronomy and increase the risk of collisions in orbit. SpaceX responded to these complaints by experimenting with new satellite designs and has promised to address astronomers’ concerns. Nevertheless, one group of astronomers has threatened litigation over the issue. In this column, we will address the legal issues arising from this controversy, and potential impacts on astronomy, space exploration, and communications.

Starlink is a developing constellation of broadband internet communications satellites, which are intended to provide internet access to users around the Earth.² SpaceX applied for and received licenses to launch Starlink satellites from the FCC, which governs all space vehicles with communications capability.³ As of this writing, SpaceX has deployed 180 of these satellites, and has been licensed by the FCC to launch at least 12,000.⁴ SpaceX is not the only company with a LEO satellite constellation in development. Others include Iridium Communications, Amazon’s Project Kuiper, OneWeb, and Globalstar.⁵

Soon after the launch of the first Starlink satellites, astronomers and other concerned parties began raising objections to the deployment of the constellations. Astronomers were concerned

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² Press Release, SpaceX, Starlink Mission (Jan. 2020) available at https://www.spacex.com/sites/spacex/files/starlink_media_kit_jan2020.pdf.

³ See, e.g., Order and Authorization, *In the Matter of Space Exploration Holdings, LLC: Request for Modification of the Authorization for the SpaceX NGSO Satellite System*, IBFS File No. SAT-MOD-20181108-0083 (FCC Apr. 26, 2019) available at <https://docs.fcc.gov/public/attachments/DA-19-342A1.pdf>.

⁴ Jonathan O’Callaghan, “The FCC’s Approval of SpaceX’s Starlink Mega Constellation May Have Been Unlawful,” *Scientific American* (Jan. 16, 2020) available at <https://www.scientificamerican.com/article/the-fccs-approval-of-spacexs-starlink-mega-constellation-may-have-been-unlawful/>.

⁵ International Astronomical Union (“IAU”), IAU Statement on Satellite Constellations (“IAU Statement”), available at <https://www.iau.org/news/announcements/detail/ann19035/?lang>.

about light pollution, the phenomenon by which nearby light can make it difficult to observe stars and other objects in space.⁶ Although the Starlink satellites do not have beacons that emit light, they are metallic objects that reflect light from the sun, so even the lowest flying satellites will be visible after sunset and before sunrise in the same way that planes and clouds can be.⁷ According to astronomers, the light reflected off of the lowest of these satellites will be stronger than the brightest stars in the Ursa Minor constellation; brighter, in fact, than all but 172 of the stars visible from Earth.⁸ The highest Starlink satellites are not visible to the human eye, but they can be visible throughout the night to telescopic observers.⁹ Astronomers allege that these satellites will contribute the most light pollution to astronomical images, especially those images collected by large, extreme wide-angle survey telescopes constructed at great expense in several countries.¹⁰

Critics argue that the visual signature of these satellites will become much larger, brighter, and more disruptive if the Starlink launches continue and the constellation grows into the thousands planned.¹¹ In fact, the currently planned constellations, numbering tens of thousands of satellites between various operators, would more than triple the total number of catalogued objects orbiting the Earth.¹² By one calculation, the number of future satellites in orbit would equate, on average, to at least one satellite occupying each square degree of sky at any given time.¹³ Even though satellites would probably not be evenly distributed across the sky, astronomers complain that they may be unable to plan observations at a time and place to avoid satellite interference “[b]ecause the Starlink satellites can autonomously change their orbits” to avoid collisions.¹⁴

The effect of the described light pollution on ground-based astronomy could be significant. Telescopic imagery based on deep and long exposures would be “unavoidably impaired.”¹⁵ This could present other dangers besides the obvious harms to academic activities like astronomy and astrophysics. It could also hamper planetary protection efforts by interfering with sky surveys that identify and track near-Earth objects (“NEOs”), including asteroids and other bodies that present a risk of collision with Earth.¹⁶

Astronomers also alleged that the increasingly large numbers of constellation satellites, which rapidly encircle the Earth in LEO and which autonomously adjust their orbits, would increase the risk of a collision in space.¹⁷ Such a collision between satellites might produce fast-moving

⁶ IAU Statement; Gallozzi et al., “Concerns about ground based astronomical observations: A step to Safeguard the Astronomical Sky,” ARXIV.ORG (Feb. 4, 2020) available at <https://arxiv.org/pdf/2001.10952.pdf>.

⁷ IAU Statement; Gallozzi et al. 6.

⁸ Gallozzi et al. 6.

⁹ IAU Statement; Gallozzi et al. 6.

¹⁰ IAU Statement; Gallozzi et al. 6.

¹¹ Gallozzi et al. 6; Press Release, International Dark Sky Association, Response to SpaceX Starlink Low Earth Orbit Satellite Constellation (“IDA Response”) (May 29, 2019) available at <https://www.darksky.org/starlink-response/>.

¹² Gallozzi et al. 6; IDA Response;

¹³ Gallozzi et al. 7-8.

¹⁴ Gallozzi et al. 4.

¹⁵ Gallozzi et al. 8.

¹⁶ Gallozzi et al. 8.

¹⁷ Gallozzi et al. 4.

debris, which could collide with other satellites, possibly setting off a chain reaction known as a “Kessler syndrome;” that could wipe out a large number of satellites in operation and leave a dangerous cloud of debris in the orbital plane, effectively preventing the operation of future satellites in the orbital plane for years.¹⁸

In response to some of these objections, SpaceX announced that it would explore methods of reducing the reflectivity of Starlink satellites in order to minimize their visibility from Earth and interference with visual astronomy. The company launched a prototype satellite, with a new low-reflective coating, on January 6, 2020.¹⁹ Astronomers have argued that this mitigation method is unlikely to be sufficient, in part because the majority of the satellites’ surface area consists of solar panels, for which there may be no practical method of reducing reflectivity.²⁰ Even if the satellites were successfully darkened, astronomers complain that satellites will still interfere with observations by temporarily eclipsing distant objects as they fly in front of them, and will continuously emit radiation that will interfere with infrared and radio astronomy.²¹

SpaceX’s Chief Engineer and CEO, Elon Musk, assured participants at the Satellite 2020 conference in Washington that the company will do what is necessary to not only minimize but eliminate any negative effects of the Starlink constellation on astronomy. “I am confident that we will not cause any impact whatsoever in astronomical discoveries,” he said on March 9, 2020. “We’ll take corrective action if it’s above zero [impacts],” he added, stating that SpaceX is running “a bunch of experiments” to find ways to avoid interference with astronomical observations.²²

SpaceX’s efforts have not yet assuaged the concerns of many astronomers. The International Astronomical Union (“IAU”), among others, published a statement setting forth its “concerns” about Starlink and other satellite constellations.²³ An online petition seeking “intervention from institutions and governments” to “safeguard[] the astronomical sky” has been signed by more than 1,875 astronomers as of this writing.²⁴

On February 4, 2020, three astronomers published a draft paper suggesting that legal action might be appropriate to prevent further launches of constellation satellites like those of Starlink.²⁵ They cited the Preamble of the World Heritage Convention as well as the 1994 Universal Declaration of Human Rights for Future Generations and various statements published by the UN Educational, Scientific and Cultural Organization (“UNESCO”), all of which testified to the importance of astronomy as well as public enjoyment of starlight from the night sky.²⁶

¹⁸ Gallozzi et al. 1, 6 n.3, 14

¹⁹ Alexandra Witze, “SpaceX tests black satellite to reduce ‘megaconstellation’ threat to astronomy,” *NATURE* (Jan. 9, 2020) available at <https://www.nature.com/articles/d41586-020-00041-4>.

²⁰ Gallozzi et al. 8.

²¹ IAU Statement; Gallozzi et al. 9-11.

²² Eric Mack, “Elon Musk: SpaceX Starlink satellites will have no impact on space science,” *cNet* (Mar. 10, 2020) available at <https://www.cnet.com/news/elon-musk-spacex-starlink-satellites-will-have-zero-impact-on-space-finds/>.

²³ See IAU Statement.

²⁴ Appeal by Astronomers: Safeguarding the Astronomical Sky, available at <https://astronomersappeal.wordpress.com/>.

²⁵ Gallozzi et al. 12-15.

²⁶ Gallozzi et al. 11-12.

Citing the Outer Space Treaty, the astronomers asserted that the U.S. Government is responsible for the actions of SpaceX, which it has licensed through the FCC and other government agencies to launch the Starlink constellation.²⁷

Based on the allegations above regarding interference with visual and radio astronomy as well as the possible orbital collision risk, the astronomer authors argued that governments of other countries should sue the U.S. Government in the International Court of Justice (“ICJ”).²⁸ Such a claim would probably be impossible to bring, because the United States does not recognize the ICJ’s jurisdiction except with regard to a narrow set of treaties that would not apply in this case.²⁹ However, the astronomers also suggested, as other scholars have, that the FCC might be liable for failing to adequately review the potential environmental impacts of the Starlink constellation, as required under the U.S. National Environmental Policy Act (“NEPA”).³⁰

NEPA requires all federal agencies, including the FCC, to consider the environmental impacts of any projects they approve.³¹ However, there are certain categories of activities, known as “categorical exclusions,” for which agencies need not conduct an environmental review prior to approval.³² For the FCC, the categorical exclusion effectively applies generally to *all* actions under review that are *not* covered by Section 1.1307 of Title 47 of the Code of Federal Regulations.³³ The specified section, which lists activities that *may* be subject to environmental impact review, does not include communication satellites.³⁴ Instead, the section lists various categories of terrestrial locations where radio towers and other communications facilities might be built, including “designated wilderness area[s]” or “Indian religious sites,” as areas requiring environmental review before the agency may approve a communications license.³⁵

Environmental lawyers have alleged that the FCC’s categorical exclusion for space activities is too broadly drawn to survive judicial review.³⁶ At issue will be whether the satellite constellations have direct or indirect effects related to “ecological . . . aesthetic, historic, cultural, economic, social, or health” considerations.³⁷ The FCC, which apparently learned of these concerns “from press articles and reporters’ inquiries,” stated that no one raised any objections to the FCC’s approval of satellite constellations prior to the launch of SpaceX’s Starlink constellation satellites.³⁸ The Commission further noted that it “unanimously” approved SpaceX’s deployment of the satellites with an order providing “ample legal rationale based on

²⁷ Gallozzi et al. 12-13.

²⁸ Gallozzi et al. 13.

²⁹ See Stephen P. Mulligan, “The United States and the ‘World Court,’” *Congressional Research Service* (Oct. 17, 2018) available at <https://fas.org/sgp/crs/row/LSB10206.pdf> (citing Cesare P.R. Romano, *The Sword and the Scales: The United States and International Courts and Tribunals* (Cambridge 2009) 105-09.)

³⁰ Gallozzi et al. 13.

³¹ 42 U.S.C. § 4332(C).

³² 42 C.F.R. § 1500.4(p).

³³ 42 C.F.R. § 1.1306(a).

³⁴ See generally 42 C.F.R. § 1.1307.

³⁵ See 42 C.F.R. § 1.1307(a)(1), (5).

³⁶ O’Callaghan, “FCC Approval May Have Been Unlawful.”

³⁷ 40 C.F.R. § 1508(b).

³⁸ O’Callaghan, “FCC Approval May Have Been Unlawful.”

the public record—which incidentally did not include any comments along the lines of these after-the-fact criticisms.”³⁹

³⁹ *Id.*

***P A c Air Canada*, [2019] QCCS 606: A Case Comment**

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Traveling by air has never been easy for persons with disabilities (PWDs), especially those whose disability is that of obesity. And it has only gotten worse in the last 20 years with seat size getting smaller² in spite of people getting bigger.³ It is not surprising, then, that advocates for PWDs have taken to the courts and administrative agencies to find relief. I believe the case reviewed herein is well reasoned, correctly decided in light of existing law and will encourage Canadian airlines to be more respectful of the rights of PWDs requiring additional seating.

Introduction

The Quebec Superior Court of Justice, in February 2019, ruled against Air Canada in a class action suit⁴ by PWDs and their attendants relating to fees for additional seats paid for by the members of the class from the period 5 December 2005 to 5 December 2008 (the Compensatory Period). The suit was initially filed on behalf of all similarly situated people in Canada who paid for an extra seat on a domestic flight operated by or on behalf of Air Canada,⁵ but the court granted a motion by Air Canada to limit the class to those who had purchased their tickets in Quebec.

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² Air Canada's seat width has been reduced from 46 centimeters to 43 centimeters and pitch (distance between rows) has decreased from 89 centimeters to 79 centimeters. Rosa Marchitelli (30 May 2016) "Air Canada passenger suffers 'horrible pain' after being stuck in cramped seat" (30 May 2016), *CBC News*, online: <https://www.cbc.ca/news/canada/british-columbia/shrinking-seats-airplanes-long-haul-flights-blood-clot-health-risk-1.3599406>.

³ Obesity roughly doubled in Canada from 1981 to 2007. Public Health Agency of Canada, "Obesity in Canada: A Joint Report from the Public Health Agency of Canada and the Canadian Institute for Health Information" (2011) *Canadian Institute for Health Information*, online: https://secure.cihi.ca/free_products/Obesity_in_canada_2011_en.pdf, p. 4; but obesity remained the same from 2007 to 2017. Statistics Canada, "Obesity in Canadian Adults 2016 and 2017" (24 October 2018) *Canadian Health Measures Survey*, online: <https://www150.statcan.gc.ca/n1/pub/11-627-m/11-627-m2018033-eng.htm>.

⁴ *P A c Air Canada*, 2019 QCCS 606.

⁵ Staff Writers, "Air Canada to face class action suit from obese" (12 December 2011) *CBC News*, online: <https://www.cbc.ca/news/business/air-canada-to-face-class-action-suit-from-obese-1.1065695>.

Statement of Facts

The plaintiff representing the class lived in a nursing home, required constant assistance and periodically traveled by air within Quebec from his home in Baie-Comeau to Montréal for medical treatment. His condition required that an attendant accompany him on those flights. The policy of Air Canada required that PWDs who were unable to care for themselves had to travel with an attendant to assist the PWD with normal bodily needs and the implementation of emergency procedures (such as employing the aircraft's supplemental oxygen masks) should the need arise. Air Canada required that he purchase a ticket for himself and for his attendant for each flight during the Compensatory Period. The representative plaintiff paid for the tickets as required. The application to authorize the filing of a class action was timely filed and notices were authorized.⁶

Relevant Prior Legal History

In January of 2008 the Canadian Transportation Agency⁷ (Agency) issued a decision (*Air Canada Decision*) holding that Air Canada and WestJet were required to institute a one-person/one-fare (1P1F) policy for certain PWDs. The decision, requiring that the airline provide an additional seat free of charge, applied only to domestic flights within Canada and the PWDs protected by the policy were (i) PWDs required by the carriers' rules to travel with an attendant⁸ (as used herein, "attendant" means *bona fide* attendants required by the carrier's rules), (ii) PWDs disabled by obesity who could not lower the seat's armrest safely and with dignity and (iii) PWDs who required an additional seat to accommodate their disability.⁹ The Agency relied on a decision of the Supreme Court of Canada¹⁰ which held that certain provisions under the Canadian Transportation Act¹¹ (CTA) regarding accessible transportation were tantamount to human rights legislation.¹² The screening process required to give effect to the *Air Canada Decision* was left up to the airlines.¹³

After the issuance of the *Air Canada Decision*, a representative plaintiff filed a class action suit against WestJet in the Quebec Superior Court of Justice (WestJet Case) seeking damages for additional charges imposed by WestJet on international flights which constituted an illegal and discriminatory practice by WestJet.¹⁴ WestJet appealed to the Court of Appeal of Quebec on the

⁶ *Picard c Air Canada*, [2010] QCCS 2940 (CanLII).

⁷ The Canadian Transportation Agency is a quasi-judicial tribunal of the Government of Canada. See Decision No. 6-AT-A-2008 (10 January 2008) Canadian Transportation Agency Ruling, online: <https://www.otc-cta.gc.ca/eng/ruling/6-at-a-2008>.

⁸ The *Air Canada Decision* did not apply to attendants where (i) the PWD merely preferred to fly with a companion for personal reasons or (ii) the PWD required the care of an attendant at the destination but not in flight. Canadian Transportation Agency, "Highlights of one-person-one-fare policy decision" (6 August 2019) *Canadian Transportation Agency*, online: <https://otc-cta.gc.ca/eng/highlights-one-person-one-fare-policy-decision>.

⁹ *Id.*

¹⁰ *Council of Canadians with Disabilities v VIA Rail*, 2007 SCC 15, the Supreme Court of Canada.

¹¹ Canada Transportation Act (S.C. 1996, c. 10).

¹² *Supra* note 7.

¹³ Emily Luther, "Justice for All Shapes and Sizes: Combatting Weight Discrimination in Canada" (2010) 48:1 *Alta. L. Rev.* 179.

¹⁴ *Chabot v. WestJet*, 2013, QCCS 5297.

grounds that the Agency had exclusive jurisdiction in such matters.¹⁵ The motion for appeal was dismissed by the Court of Appeal and the class action was allowed to go forward in the Quebec Superior Court of Justice.

With that as background, I now turn to the arguments and holdings in the instant case of *P A c Air Canada*.

Arguments of the Parties in *P A c Air Canada*

The plaintiff asserted that:

- Air Canada had committed a contractual fault by charging PWDs for an additional seat reasonably necessary to accommodate their disability or condition in disregard of Air Canada's obligations under (i) the Civil Code of Quebec,¹⁶ (ii) the CTA and (iii) the Canadian Human Rights Act;¹⁷
- Air Canada should pay the fare for attendants because it is obliged to reasonably accommodate PWDs and claims of the attendants were reasonably related to those of the PWDs; and
- The charges for additional seats constituted an undue obstacle to mobility in violation of the CTA.

Air Canada maintained that:

- The Quebec Superior Court of Justice lacked jurisdiction;¹⁸
- Air Canada's tariffs were not discriminatory and did not create undue obstacles to mobility;
- Class members who were attendants should be disallowed because they had not been personally discriminated against on the basis of a disability; and
- The class should be limited to persons who purchased tickets in Quebec.

Holdings in *P A c Air Canada*

- The court viewed this as a case of contractual liability on the part of Air Canada for failing to fulfill obligations imposed on it by the Civil Code of Quebec, the CTA and the Canadian Human Rights Act;
- The court held that the WestJet Case was dispositive of the question of jurisdiction and that the court had the jurisdiction to hear this class action case;
- Attendants who were required to purchase their own tickets should be included in the class because they were a necessary accessory to the transport of the related PWDs;
- The court limited the class to PWDs and their attendants who had purchased tickets in Quebec and noted that (i) the claim was based on contractual fault under Article 1458 of the Civil Code of Quebec, (ii) Quebec is a civil law jurisdiction which differs

¹⁵ *WestJet v. Chabot*, 2016 QCCA 584 (CanLII), online: <http://canlii.ca/t/hn8xc>.

¹⁶ L.Q. 1991, c. 64.

¹⁷ L.R.C. (1985), c. H-6.

¹⁸ Air Canada argued unsuccessfully that it was subject to the constitutional principle of interjurisdictional immunity and that the Civil Code of Quebec should not be interpreted in a manner that would hinder Air Canada's discharge of its essential air transportation purpose. *Supra* note 4, para. 72-73.

significantly from the law in common law jurisdictions and (iii) plaintiffs did not provide evidence concerning the applicable law of other common law provinces;

- The court found that Air Canada had discriminated against PWDs by requiring them to purchase two seats¹⁹ and concluded that Air Canada had committed a contractual civil fault within the meaning of the Quebec Civil Code and conducted discriminatory practices within the meaning of the Canadian Human Rights Act;²⁰
- The court rejected Air Canada's argument that the costs of implementing a 1P1F policy would be excessively costly of unduly burdensome.²¹

Damages in *P A c Air Canada*

The court awarded pecuniary damages based on the price of the second seats that were purchased but dismissed plaintiff's claims for moral and punitive damages due to the lack of evidence.

Subsequent Action in *P A c Air Canada*

Both parties have been granted leave to appeal to the Quebec Court of Appeal. A date has not yet been set for the appellate hearing.

Commentary

I believe *P A c Air Canada* was correctly decided both in terms of the limits of the class (Quebec being a civil law jurisdiction would seem to compel a class limited to injured parties in this province) and the type of damages awarded. This case confirms that failure to abide by the 1P1F policy will expose an airline to liability for discrimination against PWDs (including those who are disabled due to obesity). It also invites potential plaintiffs in other provinces to bring similar class action suits in their provincial trial courts thereby increasing the potential exposure of Air Canada.

It should be noted, however, that this decision did not affect the ability of an airline to establish its own screening mechanisms under the *Air Canada Decision*. These procedures can be cumbersome and potentially humiliating. Passengers requesting an extra seat on Air Canada due to their disability must submit a six page "Fitness for Air Travel" form signed by a physician which, in the case of passengers requesting an extra seat due to obesity, required the physician to measure the width of the passenger's buttocks while seated.²² In my view it should be readily apparent to airline personnel which PWDs do and do not require an extra seat because of obesity. The required measurement strikes me as a humiliating and unnecessary requirement.

¹⁹ The court relied on the *Air Canada Decision* in finding that the requirement for a person to purchase two seats because of their disability created an undue obstacle to their mobility within the meaning of the CTA. Air Canada did not present any contradictory evidence. *See supra* note 4.

²⁰ *Supra* note 17.

²¹ Air Canada had unsuccessfully made the argument that a 1P1F policy would be too costly to the Agency. *See Air Canada Decision supra* note 7, p.5-11.

²² Air Canada, "Fitness for Air Travel form" (September 2017) *Air Canada*, online: <https://www.aircanada.com/content/dam/aircanada/portal/documents/PDF/en/fft.pdf>.

The current law does not protect those passengers who are obese but not disabled and the airlines are understandably interested in curbing any potential abuse of the 1P1F policy by such non-PWDs. So some form of medically certified diagnosis of a disability seems reasonable. But the existing screening procedures mandated by the airlines, including in some circumstances the amount of advance notice of the need for extra seating, could arguably be regarded as a deliberate attempt to exclude otherwise deserving passengers. That is certainly my view.

It should be noted that this case is in its infancy. As mentioned, it is on appeal by both parties and the appellate court could make significant changes to the lower court's decision. In any event, and regardless of the final outcome, it is unlikely to be the last word on air travel rights for PWDs in Canada.

The LM Ascent Stage: The Most Remarkable Space Vehicle Ever

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As the 50th anniversary of Apollo 11 (first Moon landing – July 20, 1969) was approaching last summer, my fascination with the Apollo program was relaunched. That fascination, if not obsession, with all the hardware, genius and courage involved in that program, took off in a big way in the summer of 1968. I was 18 years old and my older cousin, Ray Cerrato, a NASA engineer, brought me to work with him one day at the Kennedy Space Center. We visited the Vehicle Assembly Building where I saw stages of the Saturn V being hoisted into place, one of which launched Apollo 8 into lunar orbit that December. Apollo 8 gave us a memorable Christmas Eve retelling of the Genesis creation story from a lunar orbit and that now iconic “Earthrise” photo. That mission was missing one major piece of equipment: the Grumman-made Lunar Module or “LM” that was not yet ready for testing in the lunar environment. An unmanned LM was flown in earth orbit in 1968. Apollo 9 and Apollo 10 conducted manned tests in early 1969 in earth orbit and then in lunar orbit, respectively. The Apollo 10 crew flew the LM below 50,000 feet from the lunar surface, tantalizingly close to the Moon, but in accordance with mission plans, did not touch down. Then in July, 1969: Apollo 11. We all know that the LM performed perfectly (except for two computer overload alarms during the descent to the Moon) when Neil Armstrong and Buzz Aldrin landed LM-5, named “Eagle,” in the Sea of Tranquility. Just as impressive, the LM returned the two astronauts to the orbiting Command Module (“CM”) named “Columbia” as Michael Collins, waiting in the CM, successfully docked the two vehicles 51 miles above the Moon.

The LM, previously referred to as “LEM” for “Lunar Excursion Module” before “Excursion” was deleted by NASA as sounding too “touristy,” was designed by Grumman Aircraft, aided by several major sub-contractors. Work began in earnest in early 1963. The task was to develop a vehicle that could dock and undock multiple times with the CM, maneuver in lunar orbit, descend to and land on the lunar surface, sustain two astronauts while on the Moon, lift off from the Moon with the two astronauts and lunar rock samples and re-dock with the CM, only then to be discarded and allowed to crash into the lunar surface. That crash was intended to trigger seismic reading packages left behind at the landing site. Six LMs accomplished this ambitious

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mission without any significant failure, and a seventh served as a “life boat” for the Apollo 13 astronauts. On the way to the Moon, the Apollo 13 CM lost electrical power and the propulsion available to the CM from the large rocket engine of the cylindrical Service Module (“SM”) that was connected behind the CM. Fortunately, the LM, with full fuel, was still attached to the CM. The three Apollo 13 astronauts moved into the LM and used its life support systems and propulsion capability to loop around the Moon and return to the earth’s space environment, where they re-occupied and re-started the CM for splashdown. This role was not designed in the specs for the LM, but the LM performed it admirably.

NASA is known to require redundancy in all critical systems, never leaving the success of a mission, especially the lives of crew, dependent on one system or piece of equipment that may fail. But even with the heft of the enormous Saturn V, the payload – the CM, SM and LM with three astronauts who had to make it to the Moon and back – imposed weight demands that necessitated compromise. Look, for instance, at the tissue-thin gold Mylar covering of the descent stage of the LM. The metal portion of the skin of the LM was paper thin, yet had to sustain temperature variations of 500 degrees Fahrenheit and internal pressure in the vacuum of space so that the astronauts could rest inside without wearing bulky space suits. The interior of the LM provided a volume of living space for two astronauts that was roughly the equivalent of a typical clothes closet and there were no seats. At one point in the design phase, the exterior ladder leading down from the inhabitable cabin to the surface was going to be eliminated, but experiments showed that the astronauts could not hoist themselves back up to the entrance hatch using a rope and pulley, so the ladder, with all its weight, remained.

The biggest compromise of all in the LM design was the decision to have only one propulsion system to lift the ascent stage back into lunar orbit to re-unite with the CM. That task required a distance of about 50 miles above the lunar surface and a speed of about 3,800 mph so that the LM could dock with the orbiting CM/SM combination to return the astronauts back to earth. A hard decision was taken because of the weight constraints: there would be only one rocket engine in the LM ascent stage. It would have to ignite and provide a stable source of 3,500 pounds of thrust for up to 550 seconds (nine-plus minutes) to accomplish the task. The engine on the ascent stage of the LM could not fail or the astronauts would be stranded on the Moon. In addition to the human tragedy, the criticism of NASA for not having a back-up plan – and there was none – would be devastating.

The engine developed for the task was a fixed-thrust hypergolic (means the two fuels ignite on contact) rocket engine developed by Bell Aerosystems. It used Aerozine 50 fuel, and N_2O_4 oxidizer. Rocketdyne provided the injector system. The main advantages of hypergolic propellants are that they can be stored as liquids at room temperature and that engines which are powered by them are easy to ignite reliably and repeatedly. The two fuels were stored in pressure in tanks in the ascent stage. Hypergolic propellants are difficult to handle due to their extreme toxicity and corrosiveness, but the lack of an ignition system was seen as an advantage in that the ignition and lift-off would not be dependent upon an ignition system that might fail. Spontaneous ignition, though harder to control – i.e., shut down and restart – was surely a more reliable source of ignition than the available alternatives.

There is no doubt that all the while they walked the Moon, the two astronauts were excited at having successfully landed there. They exited the LM, and in two of the six missions, unfolded and drove a “Lunar Rover” stored in the descent stage. Even so, thoughts of the rocket ignition that would have to be successful lest the Moon become their final resting place must have always been present. When the moment to depart came, the firing of the ascent stage engine was televised live back to earth, either from the interior of the ascent stage, or in the case of Apollo 15, 16 and 17, from remote cameras on the surface that were aimed at the ascent vehicle and followed it upwards after ignition. The countdowns and liftoffs of the ascent stages of Apollo 15, 16 and 17 are available on YouTube. The calm of the astronauts as the countdown proceeded is truly remarkable. Even after all the intervening years, the viewer experiences relief at the ignition. The sudden upward movement and the lack of visible flame (due to the zero-atmosphere condition) have been cited by “the Moon-landing-was-fake” conspiracy proponents.

Six successful ignitions from the lunar surface returning twelve astronauts to the CM for the journey home is one more tribute to the engineers who designed this “cannot fail” ascent-stage engine. In addition, the LM ascent stage had several small thruster engines that made possible its maneuvers during the landing and ascent phases to assure a stable touchdown and a successful docking with the CM. It is interesting to note that the small 180-pound engine in the Apollo 11 ascent stage fired for 434.9 seconds, leaving residual fuel of 75.1 seconds in case re-ignition had been required to improve its position vis-à-vis the CM when docking in lunar orbit.

On October 30, 1972, NASA published a comprehensive report on the development, design and performance of the LM ascent stage engine. It is the APOLLO EXPERIENCE REPORT - ASCENT PROPULSION SYSTEM I, Manned Spacecraft Center, Houston, Texas 77058 by Clarence E. Humphries and Reuben E. Taylor. It can be found at:
<https://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/19730010173.pdf>

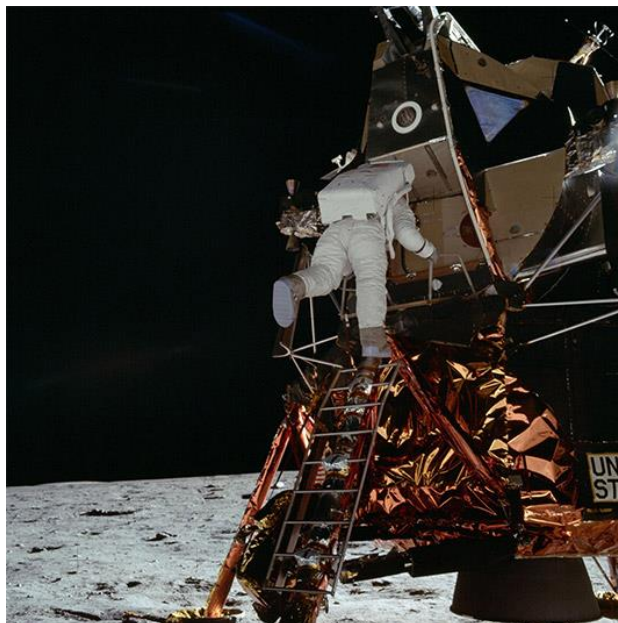
Have a look at the attached photos of the LM, CM and SM. The CM and SM have obvious aerodynamic designs that were required for their performance atop the Saturn V during lift-off and, in the case of the CM, for its re-entry into the atmosphere with its heat shield forward. But the amazing LM, especially its ascent stage, has no aerodynamic accommodation at all and derives its shape purely from its interior components, each covered by a thin metallic skin capable of withstanding temperatures on the lunar surface ranging from 248 degrees Fahrenheit above zero to 238 degrees Fahrenheit below zero, while providing a safe and reasonably comfortable, albeit cramped, living quarters for two astronauts (three, in the case of Apollo 13). The ascent engine is tucked in the interior, under a cover just behind where the astronauts stood, in an alcove that also provided storage for their bulky spacesuits and back packs. The fuel tanks occupy the asymmetric bulging compartments on each side of the LM cabin area. Over fifty years ago, the awkward-looking LM exceeded all reasonable expectations for flawless performance. It is the product of both genius and daring. It is a tribute to the human ability to imagine and then make it happen.

The following photos can be found at <https://www.nasa.gov/specials/apollo50th/photos.html>

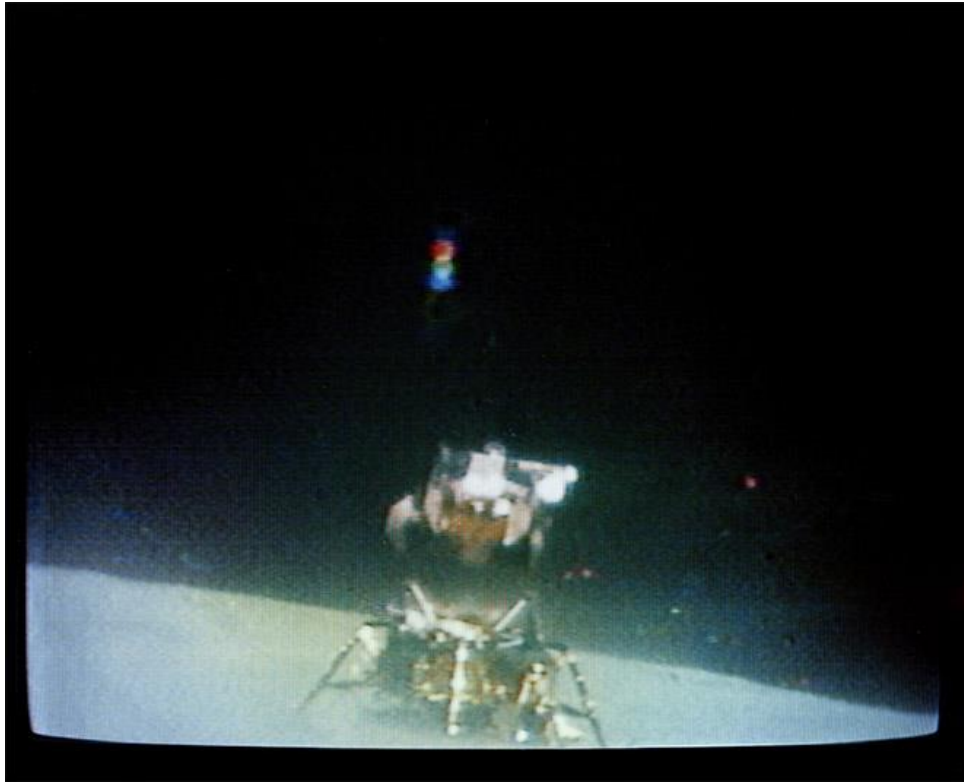
Apollo 11 lifts off on July 16, 1969; CM (covered in a protective shield under the Escape Rocket Tower) and SM atop Saturn V.



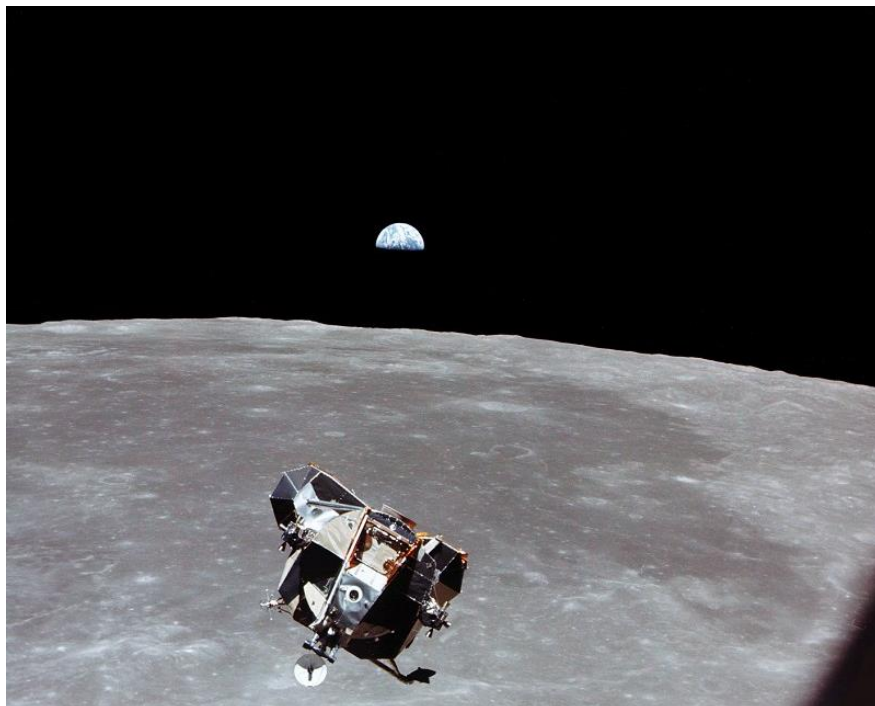
Buzz Aldrin descends the Ladder of the Apollo 11 LM on July 20, 1969.



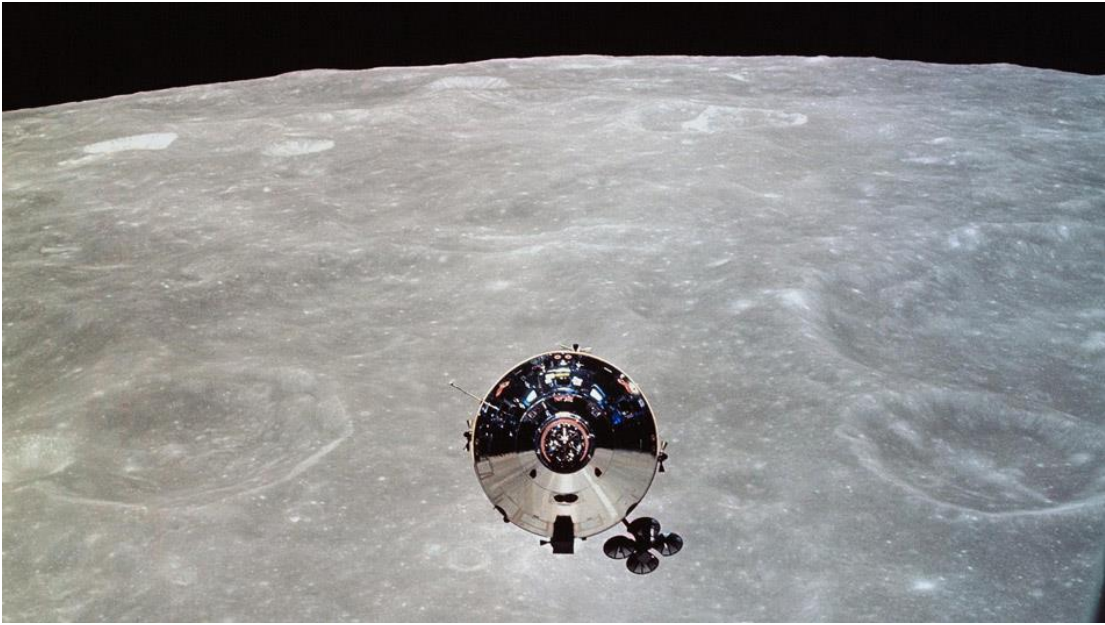
Apollo 16 Ascent Stage Liftoff from the Moon on April 24, 1972.



Apollo 11 LM Ascent Stage approaches CM for Docking above Lunar Surface on July 21, 1969.



Apollo 10 CM and SM in Lunar Orbit on May 22, 1969.



Coronavirus / COVID-19: The Aviation Industry Response

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The aviation industry faces special challenges in addressing Covid-19, which has become a global pandemic. The virus has spread around the world, apparently including, among other ways, via passengers boarding airplanes that transport the virus around the globe. This article will briefly examine different ways the industry has been addressing the pandemic, which may evolve over time (this article was updated on March 15, 2020).

Airlines

Airlines are faced with the task of tracking its passengers and providing to the Department of Health and Human Services (DHHS) information about passengers who have traveled with those passengers who are later found to be afflicted with Covid-19. On February 7, the Centers for Disease Control and Prevention (CDC), an agency within the DHHS, issued an interim rule requiring airlines to share certain passenger data with the Federal government.² As noted, “By this interim final rule, CDC requires airlines to collect, and within 24 hours of an order by the Director of CDC, submit to CDC certain data regarding passengers and crew arriving from foreign countries for the purposes of health education, treatment, prophylaxis, or other appropriate public health interventions, including travel restrictions.” The Interim Rule was issued as part of what is known as “contact tracing” in the event that travelers are discovered to have contracted Covid-19. Airlines are required to share the following information of passengers: full name, address in the United States, e-mail, and primary and secondary phone numbers. The Washington Post reported that airlines have been unable to comply with the Interim Rule, and an official within the DHHS stated that the information provided has been “incomplete.”³ According to the Washington Post, airline lobbyists, worried about the potential liability for airlines, have been requesting that the emergency Coronavirus spending package being negotiated in Congress include a provision that absolves airlines of liability to collect this

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² See <https://www.federalregister.gov/documents/2020/02/12/2020-02731/control-of-communicable-diseases-foreign-quarantine>

³ See <https://www.washingtonpost.com/business/2020/03/02/airline-data-cdc-coronavirus/>

sort of data.⁴ The final emergency aid bill signed March 6, 2020 did not include this waiver of liability, but there will be further aid bills that it might be included in.⁵

In addition to the above-mentioned requirement to maintain passenger tracking, CDC requires that airlines have a special protocol for cleaning airplanes when there is a suspected Covid-19 passenger who has traveled on board; additionally, the CDC requires that all airline staff perform extra handwashing and maintain enhanced levels of cleanliness. Should a sick person be discovered on board a flight, airline employees are instructed to offer a face mask, maintain distance, and inform authorities upon landing for possible quarantine procedures to be implemented.⁶

On Wednesday, March 11, 2020, airlines were granted a waiver (until May 31, 2020) from slot use-or-lose requirements by the FAA.⁷ Prior to the waiver, in slot-controlled airports (including John F. Kennedy International, LaGuardia, and Newark Liberty Airports, operated by the Port Authority of New York and New Jersey (Port Authority)), airlines were given “slots”, or operating authorizations to take off or land during a half hour increment of time, by the FAA, and would lose the slots if not operating at 80% capacity. When demand plummeted in light of the Covid-19 pandemic, airlines were forced to run “ghost planes,” burning fuel and resources, merely to not lose the slots. This rule is meant to prevent running these wasteful “ghost planes.”

Finally, some airlines have issued fee waivers for passengers who seek to cancel their trips during the time of the Covid-19 pandemic. The specific policies of each airline are subject to change, but as of March 5, 2020, all major American carriers have issued some form of fee waiver for travel during the month of March. Domestic carriers also have been cutting flights to affected regions, such as China, Italy, and South Korea.⁸

Airport Authorities

Airports have responded to the pandemic by announcing more thorough cleaning of their facilities and providing antibacterial where needed to passengers. The Port Authority announced it will increase its cleaning of all surfaces at the airports and provide all necessary support for Customs and Border Protection (CBP) quarantines.⁹ Similar measures appear to be taken at Chicago O’Hare, LAX, and Hartsfield Atlanta Airports.¹⁰ Airports Council International (ACI) published a bulletin of effective policies airports should implement to prevent the spread of Covid-19; this bulletin recommended coordination between passengers, health authorities, and

⁴ See *Id.*

⁵ See <https://docs.house.gov/billsthisweek/20200302/BILLS-116hr6074-SUS.pdf>

⁶ See <https://www.cdc.gov/quarantine/air/managing-sick-travelers/ncov-airlines.html>

⁷ See <https://www.ch-aviation.com/portal/news/87456-us-faa-waives-minimum-slot-use-rules-through-mid-2q20>

⁸ See <https://www.today.com/money/coronavirus-travel-us-airline-cancellation-fee-waiver-policies-t175016>

⁹ See <https://www.panynj.gov/port-authority/en/press-room/at-airports--bus-terminals--and-on-path--port-authority-increase.html>

¹⁰ See Chicago O’Hare <https://www.dailyherald.com/news/20200302/coronavirus-what-ohare-metra-cta-are-doing-amid-covid-19-fears->; LAX <https://www.flylax.com/Traveler-Updates>; Hartsfield Atlanta <http://www.atl.com/COVID19/>

airlines. It is important to note that many of the various forms of screenings suggested would be the responsibility of the CDC, rather than the airports themselves.¹¹

Federal Government

DHHS announced new enhanced health screenings for passengers who travel from various affected regions of the world. CDC will be performing special screening of these passengers, including temperature checks. CDC regularly will update its website to determine the country of origin that requires such enhanced health screenings. On March 12, 2020 and March 14, 2020, the U.S. announced restrictions (with some exceptions) on travel between the U.S. and Europe.¹² The White House is reportedly also considering some domestic travel bans.¹³ The restrictions are evolving on a daily basis and are subject to change. Upon airplanes landing in the United States, CBP and CDC will work together to implement appropriate quarantines.

¹¹ See <https://aci.aero/wp-content/uploads/2020/01/Advisory-Bulletin-on-Coronavirus-20200124.pdf>

¹² See <https://www.npr.org/2020/03/12/815182875/travel-restrictions-spread-as-coronavirus-pandemic-widens>; <https://www.cnn.com/2020/03/14/politics/uk-ireland-travel-restrictions-coronavirus/index.html>

¹³ See https://www.cnn.com/world/live-news/coronavirus-outbreak-03-14-20-intl-hnk/h_0b5c4bc0a88f7a3b33e2b411e5518a7c

DOT Proposes Amendments to Transportation of Service Animals by Air Regulations

Jenny Ann Urban¹
Chair, Technical Advances in Aviation
Subcommittee



Airline passengers have attempted to travel with mini horses, squirrels, pigs, and more, but what type of animals are actually permitted by law? Under current regulations, airlines are not required to allow specific types of “unusual service animals (e.g., snakes, other reptiles, ferrets, rodents, and spiders) as service animals in the cabin.”² U.S. air carriers must permit other non-traditional service animals, such as mini horses and monkeys, to travel onboard, if none of the below factors prohibit a service animal from traveling in the cabin:

- whether the animal is too big or heavy;
- whether the health and safety of other passengers are directly threatened;
- whether cabin service would be significantly disrupted; and
- whether the flight’s destination country would prohibit entry to the animal.³

Foreign air carriers are only required to carry dogs as service animals.⁴

On February 5, 2020, the U.S. Department of Transportation (“DOT”) issued a Notice of proposed rulemaking (“NPRM”) to amend the Air Carrier Access Act (“ACAA”)⁵ regulations in 14 CFR Part 382 that relate to traveling by air with service animals.⁶

Unsurprisingly, the number of service animal complaints to DOT rose from 45 in 2013 to 115 in 2018, and complaints directly from the passengers to the airlines rose from 719 in 2013 to 3,065 in 2018.⁷ A few of the compelling factors that DOT uses to justify the NPRM are inconsistent regulatory definitions of service animals, non-traditional service animals being brought onboard, pets being misrepresented as service animals, and safety concerns of misbehaving service animals onboard aircraft. A consistent federal definition of the term “service animal” is lacking. Additionally, there is a considerable indication that many passengers are attempting to avoid the airline pet fees by dishonestly claiming the pet is a service or emotional support animal. Pets disguised as service animals may be untrained, posing a significant risk to the safety of the other lives onboard.

¹ Jenny Ann Urban is an aviation attorney licensed to practice in New York, the District of Columbia, and Mississippi.

² 14 CFR 382.117(f).

³ *Id.*

⁴ *Id.*

⁵ 49 U.S.C. 1705.

⁶ Traveling by Air With Service Animals, 85 FR 6448.

⁷ *Id.* at 6449.

Under DOT's proposed amendments, "service animal" would be defined as "a dog that is individually trained to do work or perform tasks for the benefit of a qualified individual with a disability, including a physical, sensory, psychiatric, intellectual, or other mental disability."⁸

DOT's proposed amendments include, but are not limited to, the following:

- allowance of the airlines to categorize emotional support animals as pets, rather than as service animals;
- clarified policies on the airlines' ability to restrict service animals based on breed;
- limits the number of service animals to two (2) per passenger;
- requirement to leash service animals within the airport and aircraft;
- policies on how large service animals should be safely transported; and
- clarifications on damages the airline may charge a passenger for damage caused by his or her service animal.

Currently, airlines must recognize emotional support animals as service animals as long as the passenger provides the required documentation; however, DOT proposes to change this requirement.⁹ Emotional support animals are not individually trained to perform a specific type of work or task to benefit a person with a disability, therefore the U.S. Department of Justice ("DOJ") does not define emotional support animals as service animals.¹⁰ Although "service animal" is defined in a similar manner, DOT's proposed requirements would differ from service animal requirements within DOJ's Americans with Disabilities Act ("ADA").¹¹

Finally, the NPRM proposes to permit the airlines to require the below DOT forms be completed by all passengers who are traveling with a service animal.

- United States Department of Transportation Air Transportation Service Animal Behavior and Training Attestation Form;
- United States Department of Transportation Air Transportation Service Animal Health Form; and
- United States Department of Transportation Service Animal Relief Attestation Form Flight Segments Eight Hours or Longer.

Comments on the NPRM should be filed in Docket Number DOT-OST-2018-0068 by April 6, 2020.

⁸ *Id.* at 6448.

⁹ 14 CFR 382.117(e).

¹⁰ Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities, 75 FR 56236, 56269 (Sept. 15, 2010).

¹¹ Americans with Disabilities Act, 28 CFR 35.104 & 28 CFR 36.104.

FUN PAGES¹

¹ Please submit original aviation-related drawings, puzzles, pix, etc. for the Fun Pages to areitzfeld@gmail.com.

Article

Fun facts about the A380

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Chair, Airport Travel, Safety and Funding
Issues Subcommittee



As the biggest passenger airplane in the world is set to retire,² here are some fun facts about one of the most popular passenger airplanes: the Airbus A380.

The A380 is large. VERY LARGE. The A380 has a maximum takeoff weight of almost 1.3 million pounds and is 40 percent bigger than the Boeing 747-8 model.³ It typically carries over 525 gallons of water⁴ to supply onboard showers (yes, showers!) and standard galleys and bathrooms. Its maximum fuel capacity is over 320,000 liters,⁵ which is the same as about 5,614 Honda Accords.⁶ It can fly over 500 passengers in a three-class configuration or up to 850 in a single economy class configuration.⁷ Alternatively, if you are a Saudi prince, you can include a rotating praying room so it always faces Mecca, garage for cars and a stable for horses and camels.⁸

The airplane is so large that, in addition to a fleet of specially designed vessels to transport its components,⁹ a special route called *Itinéraire à Grand Gabarit* (“IGG”) was created and utilized to transport the oversized structural sections of the airliner to Toulouse, France for final assembly. The French Environmental Ministry even dedicated to IGG its own website, where it displayed the schedule of the convoy moving along the specially modified roads to deliver the components.¹⁰

Though A380s were built in Toulouse, their parts came from all over Europe. The wings came from Broughton, Wales, fuselage sections from Hamburg, Germany and St. Nazare, France, the

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² See <https://www.airbus.com/newsroom/press-releases/en/2019/02/airbus-and-emirates-reach-agreement-on-a380-fleet--sign-new-widebody-orders.html>

³ See <https://www.enginealliance.com/a380/>

⁴ See <https://www.aviationpros.com/gse/lav-potable-water-carts-accessories/product/10026411/semler-industries-inc-potable-water-cabinet-for-airbus-a380>

⁵ See <http://www.modernairliners.com/airbus-a380/airbus-a380-specs/>

⁶ See <https://fueltankcap.com/honda/accord>

⁷ See <https://financesonline.com/8-most-expensive-planes-in-the-world-how-much-does-it-cost-to-fly-like-the-elite>

⁸ *Id.*

⁹ See <https://www.cnn.com/travel/article/airbus-a380-parts-together/index.html>

¹⁰ See <http://www.igg.fr/spip.php?rubrique8>

horizontal tailplane was manufactured in Spain, and the vertical tailplane was also made in Hamburg.¹¹ The A380 is made up of few million parts that were produced in 1,500 companies located in 30 different countries.¹² When Airbus engineers were ready to put together the first A380 they were shocked to discover that the pieces didn't fit, or that the wires designed in Germany were too short to meet the connectors built in France!¹³ As a result, the company had to redesign 500 kilometers of wiring.¹⁴

The Airbus A380 is also one of the most expensive planes in the world. In 2018 it had an average list price of almost \$500 million.¹⁵

It flies one of the world's longest flights, from Auckland to Dubai, covering 8,824 miles which takes 17 hours. Its shortest flight lasts about 1 hour and covers 217 miles – from Dubai to Muscat.¹⁶

To fully enjoy the A380 experience one must fly it. Airbus created its own booking assistant <http://www.iflya380.com> where travelers can browse and book all A380 flights.

As for souvenirs, collectors' luggage tags crafted from the aluminum body of the first Airbus 380 were listed on <https://www.aviationtag.com/en/> and were sold out within a mere 48 hours.¹⁷ Keep an eye on the website for additional models and grab a piece of the world's largest aircraft!



¹¹ See <https://www.cnn.com/travel/article/airbus-a380-parts-together/index.html>

¹² *Id.*

¹³ See <https://www.theglobeandmail.com/report-on-business/airbus-crossed-wires/article20415306/>

¹⁴ *Id.*

¹⁵ See <https://www.airbus.com/newsroom/press-releases/en/2018/01/airbus-2018-price-list-press-release.html>

¹⁶ See <https://liveandletsfly.boardingarea.com/2019/05/31/shortest-longest-a380-flights/>

¹⁷ See <https://www.aviationtag.com/en/produkt/airbus-a380-9v-ska/>

Photo

January 7, 2020 Committee Holiday Gathering

