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INDEPENDENCE OF AVIATION SAFETY INVESTIGATION AUTHORITIES: KEEPING THE FOXES FROM THE HENHOUSE*

PAUL STEPHEN DEMPSEY**

ABSTRACT

I. AMONG THE MOST important means of improving safety is to objectively determine the causes of aviation accidents so that appropriate action can be taken to prevent similar events from recurring in the future. The determination of causation can have an adverse political, economic, punitive, and reputational effect upon individuals, airlines, manufacturers, air navigation service providers, airports, maintenance companies, and governmental institutions. Hence, many institutions and individuals are motivated to try to influence the outcome of the investigation.

Article 26 of the Chicago Convention requires a State in which an aviation accident occurs (involving death or serious injury, or involving a serious technical defect in the aircraft or air navigation facilities) to investigate the event. The Chicago Convention obliges the 190 ratifying States to implement the

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* This study parallels a similar evaluation by the McGill University Centre for Research on Air & Space Law and the International Civil Aviation Organization (ICAO) on governance structures of Air Navigation Service Providers (ANSPs), of which this author was the principal investigator: McGill University/ICAO, Air Navigation: Flying Through Congested Skies (Paul Dempsey, ed., McGill/ICAO 2007). That study focused on governance structures of ANSPs in ten States. See http://www.mcgill.ca/files/iasl/CongestedSkies.pdf.

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standards promulgated by the International Civil Aviation Organization (ICAO) in Annexes to the Convention through their legislation, regulations, policies, and organizational structures. Annex 13 addresses aviation accident investigations.

Annex 13 provides that "the accident investigation authority shall have independence in the conduct of the investigation and have unrestricted authority over its conduct. . . ." It also recommends that any court or administrative action designed to apportion blame or impose liability be autonomous from the accident or incident investigation. Annex 13 designates the State where the accident occurred as the appropriate body for designating the Investigator in Charge (IIC). ICAO advises that, "The accident investigation authority must be strictly objective and totally impartial and must be perceived to be so. It should be established in such a way that it can withstand political or other interference or pressure."

II.

Because of the compelling need to protect public safety, and to ensure unbiased accuracy and credibility in the investigatory process and its findings, many States have fulfilled their international obligations under the Chicago Convention by establishing specialized, autonomous, and independent agencies to investigate transportation safety incidents and accidents, determine causation, and make recommendations for prevention of future such occurrences. Some States have been motivated to make the investigatory body formally independent from other transport governmental institutions.

This study examines the legal and policy issues surrounding the independence and autonomy of aviation accident investigatory bodies. It provides case studies of the structural and organizational models in Australia, Canada, France, Ireland, New Zealand, Nigeria, the United Kingdom, the United States, and the European Union (E.U.). It examines the laws and policies of several States on:

The technical role: the independence of investigation authorities responsible for airworthiness, certification, flight operation, maintenance, licensing, air traffic management, or airport operation; and

The social role: the independence of investigation authorities from any party whose interests or mandates could conflict with
the independence of the investigation or influence its objectivity.

Strong political and economic forces can be mobilized to try to influence the investigation and bias the outcome of the cause(s) of an aviation accident. These challenges require an investigation that is performed by an investigatory body that: (1) is independent, unbiased, honest, and free of political or industry influence; (2) has unhampered access to the evidence; (3) has adequate financial, human and operational resources; and (4) possesses a high degree of professional competence, integrity, and expertise. Many States have made investigation institutions organizationally, operationally, and functionally independent and autonomous from other governmental institutions, and in particular, from the transport regulator and the judiciary. The E.U. too, has mandated that the accident/incident investigation agency must be functionally independent of the national aviation authorities responsible for airworthiness, certification, flight operation, maintenance, licensing, air traffic control or airport operation, and independent of any other party whose interests might conflict with the responsibilities entrusted to the investigating entity. Lately, however, the E.U. has flirted with giving the European Air Safety Agency (EASA) a role in the appointment of investigators, which might constitute a conflict of interest.

Functionally, the safety investigator is often separated from the safety regulator—the investigator investigates the causes of safety accidents and incidents and makes recommendations to the regulator for corrective action, while the regulator promulgates and enforces regulations on the aviation industry. Both investigators and regulators have safety as their ultimate goal, but their organizational and functional lines are kept firm to enhance the objectivity of the investigating agency, and therefore the credibility of its findings. Often, these organizational and functional lines have been drawn after a tainted accident investigation caused an erosion of public confidence in the investigator’s objectivity. Sometimes, it is the aviation regulator itself that is the subject of inquiry; allowing the regulator to influence the investigation creates a manifest conflict of interest.

In many States, the functional and operational lines of the regulator are also kept separate from the judiciary and its civil and criminal litigation. The investigating body focuses on causes of accidents, as a catalyst for corrective and preventive action, but not blame or the imposition of sanctions. In con-
contrast, civil or criminal litigation focuses on causation as a catalyst for blame (fault), liability, compensation, and sometimes criminal punishment. Keeping these functions separate helps ensure that the investigatory body is free from conflicts of interest which may jeopardize its objectivity as a safety watchdog, and thereby corrode its credibility. An accident investigation body is like a medical doctor attempting to diagnose the cause of an illness. Sometimes the doctor must prescribe a remedy that is expensive, inconvenient, and painful. Only if the doctor is perceived to be both competent and objective will the patient undergo an unpleasant and expensive, yet necessary, cure.

I. INTRODUCTION

Aircraft accidents are often dramatic catastrophic events, sometimes involving the death or injury of hundreds of passengers and crew and the destruction of tens, and sometimes hundreds, of millions of dollars of property. Because so many lives may be lost in a single event, airline accidents generate widespread media and public attention, often making headlines on the front pages of newspapers, web sites, and broadcast media, and sometimes spurring hundreds of lawsuits. The crash of a large commercial aircraft also can impose major financial burdens upon insurers, air carriers, and manufacturers.¹

Enhancing the safety of transport facilitates the manifest public interest in protecting human life and property. Among the most important means of improving safety is objectively to determine the causes of aviation accidents, so that appropriate action can be taken to prevent similar events from recurring in the future.² The “cause” of an aviation catastrophe consists of the “omissions, events, conditions, or a combination thereof which led to the accident or incident.”³ Since modern commercial aircraft, airlines, and air navigation systems are technologically and

¹ Liability costs of a single catastrophic commercial aircraft accident can reach into the several hundreds of millions of dollars, Euros, or British Pounds Sterling.  
operationally complex, determining the cause of an accident can be equally complex. The determination of causation can have an adverse political, economic, punitive, and reputational effect upon individuals, airlines, manufacturers, air navigation service providers, airports, maintenance companies, and governmental institutions. Hence, many institutions and individuals are motivated to try to influence the outcome of the investigation.

Investigating an accident to determine its cause can be important for several reasons:

- To determine civil liability and award compensation for the victims;
- To impose regulatory sanctions and criminal penalties on wrongdoers; and
- To improve the safety of air transport.

This article focuses on the latter of these three purposes.

Because of the compelling need to protect public safety, most States have fulfilled their international obligations under the Chicago Convention by establishing specialized agencies to investigate transportation safety incidents and accidents, determine causation, and make recommendations for prevention of future such occurrences. To ensure the unbiased accuracy and encouraged to extend the scope of safety investigations to accidents and serious incidents. Id. at 29.


[A]s the aviation industry produces more sophisticated equipment, which often depends on computer-controlled solutions to rapidly changing flight conditions, it is unlikely that NTSB investigators can keep up with the thousands of versions of software, displays, and applications by which modern aircraft are flown and controlled. Increasing demands on air traffic control systems, the proliferation of airways and of off-airway navigation with global positioning devices, and ageing fleets compound the problems. However, the task of investigators is not to "keep up" with technological changes, but to determine causes of accidents and incidents.

Id.


6 An "incident" is "[a]n occurrence, other than an accident" that potentially "could affect the safety or operation." Annex 13, supra note 3, ch. 1.

7 An "accident" is an occurrence associated with aircraft operation in which a person suffers death or serious injury or in which the aircraft suffers substantial damage. Id.

credibility of their findings, most investigation agencies in developed countries have been made autonomous from, and independent of, other governmental institutions. As explained below, independence and autonomy of the safety investigation organization are essential to ensure accuracy and credibility of safety investigations.

Aviation accident investigations identify and elucidate the causes of a safety incident or accident, and thereby can reduce the probability of a recurrence. Investigations can also:

- Enable a better understanding of "the events leading up to the occurrence;"
- Identify hazards and conduct risk assessments;"
- Provide the basis for "recommendations to reduce or eliminate unacceptable risks;" and
- Enable the communication of "the safety messages to the appropriate stakeholders."10

The goal of the investigator is principally proactive—to prevent future aviation accidents—yet the investigation is performed principally in a reactive manner, responding to a catastrophic event.11 The core purpose of feedback is to learn the lessons of the past—to learn from prior mistakes, and prevent the repetition of such events in the future.12 The experience-based feedback loop is an important feature of safety management and a basic tenet of danger science and risk prevention.13

This article examines issues of governance, structure, independence, autonomy, and technical ability surrounding governmental agencies that investigate aviation accidents. It assesses the importance of these issues to the credibility of the institutions that perform these crucial functions; the interactions between the investigator, the regulator, and the operator; and the social expectations of the public for an objective and honest assessment of the causes of aviation catastrophes.

9 Shubert, supra note 3, at 33 ("Effective formal autonomy is common throughout the world.").
12 Shubert, supra note 3, at 21–22.
Article 26 of the Chicago Convention of 1944 requires a State, in which an accident occurs “involving death or serious injury, or indicating serious technical defect in the aircraft or air navigation facilities,” to investigate the event, though the State of aircraft registry may appoint observers to the investigation.

The Chicago Convention attempted to establish a uniform regime of safety and navigation in international aviation and to that end created the International Civil Aviation Organization (ICAO). Among ICAO’s principal objectives is to meet the needs of the public for “safe, regular, efficient and economical air transport.” ICAO promulgates “International Standards and Recommended Practices” (SARPs), standardizing safety and navigation in air transportation. Areas addressed by ICAO include personnel licensing, rules of the air, aeronautical meteorology, charts, units of measurement, operation of aircraft, airworthiness, aeronautical telecommunications, air traffic services, search and rescue, aircraft noise and emissions, security, navigation, and accident investigation.

Article 12 of the Chicago Convention requires every contracting State to keep its regulations uniform, to the greatest extent possible, with those established under the Convention. Article 37 attempts to achieve uniformity in air navigation by

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14 Chicago Convention, supra note 5, art. 26.
15 See Dan Fiorita, The International Framework of Aircraft Accident Investigation—Contemporary Issues, 19 Annals Air & Space L. 161, 166 (1994). Specifically, Article 26 provides:

In the event of an accident to an aircraft of a contracting State occurring in the territory of another contracting State, and involving death or serious injury, or indicating serious technical defect in the aircraft or air navigation facilities, the State in which the accident occurs will institute an inquiry into the circumstances of the accident, in accordance, so far as its laws permit, with the procedure which may be recommended by the International Civil Aviation Organization. The State in which the aircraft is registered shall be given the opportunity to appoint observers to be present at the inquiry and the State holding the inquiry shall communicate the report and findings in the matter to that State.

Chicago Convention, supra note 5, art. 26.
16 Id. art. 43.
17 Id. art. 44.
19 See Thomas Buergenthal, Law Making in the International Civil Aviation Organization 102 (1969) (“The elimination of the multitude of conflicting national aeronautical regulations, through the domestic implementation of the
requiring that every contracting State cooperate in achieving the "highest practicable degree of uniformity in regulations, standards, procedures, and organization in relation to aircraft, personnel, airways and auxiliary services in all matters in which such uniformity will facilitate and improve air navigation." \(^{20}\)

The sentence that follows provides that "to this end [ICAO] shall adopt and amend from time to time . . . international standards and recommended practices and procedures" addressing various aspects of air navigation. \(^{21}\) Therefore, ICAO’s 190 Member States have an affirmative obligation to conform their domestic laws, rules, and regulations to the international leveling standards adopted by ICAO.

SARPs become effective as Annexes to the Convention not less than three months after they are approved by a two-thirds vote of the ICAO Council, unless during that period they are disapproved by a majority of the members of the ICAO General Assembly. \(^{22}\) Typically, they are not issued until after extensive consultation with Member States and consensus is achieved, a process that takes two years or more. Member States are obliged by Article 37 of the Chicago Convention to collaborate in achieving the "highest practicable degree of uniformity" in the adoption of SARPs. \(^{23}\)

III. ANNEX 13

A. THE FRAMEWORK FOR ACCIDENT INVESTIGATIONS

Of the eighteen Annexes to the Chicago Convention, Annex 13 (Accident Investigation), \(^{24}\) originally promulgated in 1951, is

regulatory SARPs prescribed in the Annexes, would be an immense step forward in facilitating international civil aviation.")

\(^{20}\) Chicago Convention, supra note 5, art. 37.

\(^{21}\) Id.

\(^{22}\) Id. art. 90(a).

\(^{23}\) Paul Stephen Dempsey, Compliance & Enforcement in International Law: Achieving Global Uniformity in Aviation Safety, 30 N.C. J. INT’L L. & COM. REG. 1, 15 (2004). “In 1948, the ICAO Council adopted a resolution encouraging contracting States to adopt ‘so far as practicable, the precise language of those ICAO Standards that are of a regulatory character . . ..’” Id. at 12 (quoting Chicago Convention, supra note 5, Annex 1). “ICAO has drafted its Annexes in a way to ‘facilitate incorporation, without major textual changes, into national legislation.’” Id. “Subject to the notification of differences, the legal regime effectively assumes that States are in compliance with these safety mandates.” Id.

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Among the most succinct. A half century later, in 2001, the ninth edition of Annex 13 was adopted. It consists of eight chapters, an appendix, and four attachments. Annex 13 was amended in 2006 to add a fifth attachment (Attachment E) addressing legal guidance for the protection of information from safety data collection and processing systems. At this writing, an amended version of Annex 13 edition is expected to be released in 2010.

One source observed:

While Annex 13 provides a common framework for accident investigations around the world, there are many differences in structure and governance arrangements adopted to give effect to its standards and recommendations. States generally adopt the key guidance of ICAO with regard to the independence of the accident investigator, but with many variations . . . .

B. PURPOSES OF THE INVESTIGATION

An accident investigation can serve several different purposes:

- To provide corrective action;
- To punish a wrongdoer; or
- To compensate injured parties.

But under Annex 13, the sole objective is prevention of future accidents, not the apportionment of blame or liability for prior accidents or incidents. Specifically, Annex 13 provides, inter alia: "The sole objective of the investigation of an accident or incident shall be the prevention of accidents and incidents. It is not the purpose of this activity to apportion blame or liability." This separation of investigatory from liability and criminal functions is repeated in several places in the Annex: "Any judicial or administrative proceedings to apportion blame or liability should be separate from any investigation conducted under the


27 Ortiz & Capaldo, supra note 24, at 265; Dempsey, supra note 25, at 158.

28 Annex 13, supra note 3, ¶ 3.1 (emphasis added).
provisions of this Annex." 29 Hence, a strict separation is contemplated between technical investigations and judicial inquiries, the former focusing on causation and prevention, and the latter focusing on blame. 30 Recognizing the parallel paths pursued by investigators and litigants, though separation of functions is emphasized, coordination between the investigation and judicial authorities is contemplated as well. 31 Such coordination must ensure that both safety investigation and judicial authorities can share factual information.

An investigation into the causes of an aircraft accident or serious incident 32 is essential in order to prevent repeated occurrences. 33 The adoption of remedial measures from lessons learned from accidents and incidents avoids repetition of safety problems. U.S. National Transportation Safety Board (NTSB) Vice Chairman Robert Sumwalt observed:

[A]s air safety investigators, we’re not there to point fingers, to lay blame, to assign fault, to push a personal agenda, or to help lawyers build their cases. As safety investigators, our job is to determine what happened so we can prevent it from happening again . . . .

We are here to serve the traveling public by conducting proper investigations that enhance safety. We are not here to please the manufacturers; we are not here to please the regulatory authorities.

We are here to conduct honest, competent, thorough and timely investigations that identify systemic or individual weaknesses and then issue recommendations aimed at correcting those deficiencies. 34

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29 Id. ¶ 5.4.1.
31 Annex 13, supra note 3, ¶ 5.10 ("The State conducting the investigation shall recognize the need for coordination between the investigator-in-charge and the judicial authorities."). See also Ortiz & Capaldo, supra note 24, at 273.
32 A "serious incident" is an "incident involving circumstances indicating an accident nearly occurred." Rudolf Kapustin, How to Prevent Major Accidents Effectively, 10 AIR & SPACE LAW. 1, 17 (1996) (quoting Annex 13, supra note 3, ch. 1).
33 Although the Chicago Convention refers to "accidents," Annex 13 refers to "accidents and incidents" as well as "serious incidents." MICHAEL MILDE, INTERNATIONAL AIR LAW AND ICAO 91 (2008).
Sumwalt here emphasizes the social role of the investigation—to assure the public that the aviation investigatory system has been designed to dissect the cause of accidents, and to learn from them so that they are not repeated.

Similar to Annex 13, the U.K. regulations governing aviation accident investigation provide: “The sole objective of the investigation of an accident or incident under these Regulations shall be the prevention of accidents and incidents. It shall not be the purpose of such an investigation to apportion blame or liability.”35 The relevant Australian statute provides:

[T]he following are not objects of this Act:
(a) apportioning blame for transport accidents or incidents;
(b) providing the means to determine the liability of any person in respect of a transport accident or incident;
(c) assisting in court proceedings between parties (except as expressly provided by this Act);
(d) allowing any adverse inference to be drawn from the fact that a person is subject to an investigation under this Act.36

Hence, the purpose of the investigation is to determine the cause or causes (the actions, inactions, processes, events, conditions or systemic failures) that led to the accident or incident by assessing the evidence and drawing conclusions in order, where appropriate, to make recommendations so that they might not be repeated. It is the enhancement of safety, and not the apportionment of blame, that is the goal of the independent accident investigation.

C. INDEPENDENCE OF THE INVESTIGATION AUTHORITY

Independence, autonomy, and technical excellence are important in order for the investigator to be—and be perceived as—objective, impartial, and free from political influence and the appearance of impropriety or conflicts of interest.37 Credibility of the investigating organization vis-à-vis all interested and concerned parties depends on competence, integrity, neutrality,

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36 Australia Transport Safety Investigation Act, 2003 §7.3; see also id. § 15 (granting the Executive Director independence from the Secretary of Transport).
37 See, e.g., George Tompkins & Andrew Harakas, ICAO and Aviation Accident Investigation, 19(2) ANNALS AIR & SPACE L. 375 (1994).
and independence. Credibility is essential if the recommendations for corrective action based on lessons learned from safety accidents and incidents are to be accepted and implemented.

Annex 13 provides that "the accident investigation authority shall have independence in the conduct of the investigation and have unrestricted authority over its conduct . . . ." The investigation consists of the gathering, recording, and analyzing all available relevant information and, if possible, determining the cause(s) and completing the Final Report followed by, where appropriate, the making of safety recommendations. Note however, that although Annex 13 calls for "independence in the conduct of the investigation," it does not mandate institutional independence of the investigatory body. It may be that certain States are too small, or too financially restricted, to establish a separate governmental institution focused on accident investigations.

In auditing State compliance with SARPs, ICAO insists:

A State's primary aviation legislation should contain provisions to enable the Government and its administration to conduct or participate in aircraft incident and accident investigations which may be vested in an independent or separate body. . . . The State should establish an investigation authority to be responsible for the conduct of accident and incident investigations.

ICAO's Manual of Aircraft Accident and Incident Investigations provides: "The accident investigation authority must be strictly objective and totally impartial and must also be perceived to be so. It should be established in such a way that it can withstand political or other interference or pressure." As the E.U. has observed, the accident investigation body should be functionally, operationally, and financially separate from the civil aviation administration responsible for "airworthiness, certification, flight operation, maintenance, licensing, air traffic control or

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38 Abraham, supra note 13, at 28-29.
39 Annex 13, supra note 3, ¶ 5.4; DEMPSEY, supra note 25, at 58.
40 Annex 13, supra note 3, ch. 1 (defining "Investigation").
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airport operations," or any other institution that might conflict with the tasks ascribed to the accident investigator.43

Annex 13 recommends that States establish a voluntary incident-reporting system.44 It also insists that such a system be "non-punitive and afford protection to the sources of the information," because a "non-punitive environment is fundamental to voluntary reporting."45 In its guidance material, ICAO observes, "Ideally, State-run voluntary incident reporting systems are operated by an organization separate from the aviation administration responsible for the enforcement of aviation regulations."46 Sometimes, the voluntary incident-reporting program is run by the safety investigator (as in Australia, Canada, France, Singapore, and Taiwan), whereas in others it is run by another governmental institution.47 The important point is that it not be run by the safety regulator.

As noted above, Annex 13 recommends that any court or administrative action designed to apportion blame or impose liability should be autonomous from the accident or incident investigation.48 However, "[t]he State conducting the investigation shall recognize the need for coordination between the investigator-in-charge and the judicial authorities."49 Generally, most of the evidence50 gathered should remain confidential unless the judicial authorities determine "that their disclosure outweighs the adverse domestic and international impact such


44 Annex 13, supra note 3, ¶ 8.1.
45 Id. ¶ 8.3, note 1.
46 ICAO, supra note 8, at 6-6.
47 In the United States, it is administered by the National Aeronautics and Space Administration (NASA). See, e.g., Nat'l Aeronautics & Space Admin. [NASA], ASRS: The Case for Confidential Incident Reporting Systems, http://asrs.arc.nasa.gov/docs/rs/60_Case_for_Confidential_Incident_Reporting.pdf (last visited May 12, 2010).
48 Annex 13, supra note 3, ¶ 5.4.1 ("Recommendation.—Any judicial or administrative proceedings to apportion blame or liability should be separate from any investigation conducted under the provisions of this Annex.").
49 Id. ¶ 5.10.
50 Such evidence includes: "all statements taken by persons from the investigation authorities . . . ; all communications between persons having been involved in the operation of the aircraft; medical or private information regarding persons involved . . . ; cockpit voice recordings and transcripts . . . ; and . . . flight recorder information." DEMPSEY, supra note 25 at 57.
action may have on that or any future investigations . . . .”

Annex 13 also recognizes that evidence gathered during the accident or incident investigation, including that given voluntarily, “could be utilized inappropriately for subsequent disciplinary, civil, administrative, and criminal proceedings. If such information is distributed, it may, in the future, no longer be openly disclosed to investigators. Lack of access to such information would impede the investigation process and seriously affect flight safety.” Hence, extreme caution is urged in using evidence gathered for safety investigation purposes in liability or punitive judicial or administrative proceedings, lest those involved in an aviation accident be less willing to volunteer useful information. These principles are reaffirmed in Attachment E to Annex 13, addressing the disclosure of information gathered during the safety investigation.

“THE investigator-in-charge [IIC] shall have unhampered access to the [evidence] and . . . unrestricted control over it to ensure that a detailed [investigation] can be made without delay.”

Annex 13 also describes the appropriate relationship between the accident investigator and judicial authorities:

The State conducting the investigation shall recognize the need for coordination between the investigator-in-charge and the judicial authorities. Particular attention shall be given to evidence which requires prompt recording and analysis for the investigation to be successful . . . .

Note 2.—Possible conflicts between investigating and judicial authorities regarding the custody of flight recorders and their recordings may be resolved by an official of the judicial authority

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51 Annex 13, supra note 3, ¶ 5.12. See Ortiz & Capaldo, supra note 24, at 275; see also Singer, supra note 24, at 506.

52 Annex 13, supra note 3, ¶ 5.12.1 note 1; see also Dempsey, supra note 25, at 57; NTSB Bar Assoc., Aviation Professionals and the Threat of Criminal Liability—How Do We Maximize Aviation Safety?, 67 J. AIR L. & COM. 875, 895, 901–02 (2002).


54 Id. ¶ 3.1. Disclosure may be permitted where it would “not inhibit its future availability in order to improve safety.” Id. ¶ 5.2(b). The release of information to promote the proper administration of justice may be allowed if the “release outweighs the adverse domestic and international impact such release may have on the future availability of safety information.” Id. ¶ 4.1(c).

55 Id. ¶ 5.6.
carrying the recordings to the place of readout, thus maintaining custody.\textsuperscript{56}

**D. Parties Involved in the Investigation**

Location determines which State shall conduct the investigation. The responsibility for conducting an investigation depends on whether the location of the occurrence is:

- In the territory of an ICAO Contracting State;
- In the territory of a non-contracting State; or
- Outside the territory of any ICAO State.\textsuperscript{57}

As noted above, Article 26 of the Chicago Convention requires the State where the accident occurred (the State of Occurrence) to conduct the investigation.\textsuperscript{58} Under Annex 13, the responsibility for an investigation also resides in the State where the accident or incident occurred, though the Annex permits the State of Occurrence to delegate the whole or part of the investigation to another State.\textsuperscript{59} If the event occurred outside the territory of any State, then the State of registry shall conduct the investigation.\textsuperscript{60} The investigating State shall designate the IIC.\textsuperscript{61} It also may recruit technical expertise from any source to assist with the investigation.\textsuperscript{62}

Article 26 provides that the State of aircraft registry may be given the opportunity to appoint observers to the investigation.\textsuperscript{63} Annex 13 goes further. It provides that an accredited representative may be appointed by the States of registry, operator, design, or manufacture to participate in the investigation.\textsuperscript{64} “Any State which on request provides information, facilities, or experts to the [investigating] State... shall be entitled to appoint an accredited representative to participate in the investigation.”\textsuperscript{65}

\textsuperscript{56} Id. ¶ 5.10.
\textsuperscript{57} Dempsey, supra note 25, at 159.
\textsuperscript{58} Chicago Convention, supra note 5; Dempsey, supra note 25, at 159.
\textsuperscript{59} Annex 13, supra note 3, ¶ 5.1. The investigating State may delegate all or part of the investigation to another State.
\textsuperscript{60} Id. ¶ 5.3. “If the State of Registry is a non-Contracting State,” the State of the Operator, Design, or Manufacture should conduct the investigation. Id. ¶ 5.3.2.
\textsuperscript{61} Id. ¶ 5.5.
\textsuperscript{62} Id. ¶ 5.3.2.
\textsuperscript{63} Chicago Convention, supra note 5, art. 26.
\textsuperscript{64} Annex 13, supra note 3, ¶ 5.18 note.
\textsuperscript{65} Id. ¶ 5.23. The State of Design or Manufacture of the power plant or major component parts may request to participate in the investigation. Id. ¶ 5.18 note.
At the discretion of the investigator, advisers proposed by the operator, designer, or manufacturer may be engaged in the investigation.66 The investigator may also seek the assistance of the air navigation service provider, airport operator, or any other relevant party.67 In fact, nothing precludes the investigating State, or any State participating in the investigation “from calling upon the best technical expertise from any source . . .” to assist in the investigation.68 This sometimes means seeking expertise from the airline or aircraft manufacturer, who may have expertise essential for the determination of probable cause. One must be cautious, however, in using these resources, as airlines and manufacturers often are defendants in aviation catastrophe tort litigation and are increasingly subject to criminal investigation as a result of the incident. Hence, they may not be perfectly neutral and objective sources of information. Their inclusion in the investigation, though a necessary evil, may create the appearance of impropriety, and therefore their expertise must be limited to the provision of factual data and assistance in the analysis of technologically complex facts. They should be constrained from offering hypotheses as to the causes of the accident.

Those who participate in the investigation have the right to visit the accident scene, examine the wreckage, obtain witness information, and suggest areas of questioning.69 They also have the right to obtain full access to relevant evidence, to receive copies of pertinent documents, to participate in media events, to participate in off-scene investigative activities and investigation-progress meetings, and to make submissions.70 They also have the duties to provide the IIC with all relevant information available to them, not to reveal information about the progress and findings of the investigation to the public without permission of the IIC, and to refrain from reporting to their States except as necessary “to facilitate appropriate safety actions.”71

Chapter 4 of Annex 13 provides that all States that are eligible to participate in the investigation must be notified of the accident or incident promptly.72 States whose citizens have died in

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66 Id. ¶ 5.19.
67 Id. ¶ 5.24.
68 Id. ¶ 5.24 note 1.
69 Id. ¶ 5.25.
70 Id.
71 Id. ¶ 5.26.
72 Id. ¶ 4.1.
an accident also may appoint an expert to participate in the investigation. Chapter 3 explains how the investigating State shall address requests from other States to participate in the investigation.

E. THE INVESTIGATION PROCESS

Chapter 5 of Annex 13 describes the investigation process. The process includes establishing the investigation team; gathering, recording, and analyzing the relevant evidence including reconstruction of the event; determining the causes of the accident or incident; formulating safety recommendations; and preparing the Final Report.

ICAO maintains a reporting system known as the Accident/Incident Data Reporting (ADREP) system, which facilitates the exchange of safety information. Chapter 7 prescribes that the reporting requirements of the ADREP system are to be done by means of Preliminary and Accident/Incident Data Reports.

F. OTHER PROVISIONS

Chapter 5 of Annex 13 also includes provisions addressing the designation of the IIC, the use of flight recorders, autopsy examinations, coordination with judicial authorities, communication with aviation security authorities, disclosure of records, and the possibility of re-opening of an investigation.

Chapter 6 addresses the development and issuance of the Final Report. The model format for the Final Report is set forth in an Appendix. Draft reports are sent for comments to the States of registry, design, and manufacture, and the operator. Comments received within sixty days of transmission must be in-
corporated in, or if disagreed with, appended to, the Final Report. The Final Report shall be distributed to those same States as well as any State which, on request, provides information, facilities, or experts to the investigating State, any State that has a special interest in an accident because of the fatalities or serious injury of its citizens, and to the State that instituted the investigation.

Chapter 8 addresses accident prevention measures, including mandatory and voluntary incident reporting systems, and the desirability of a non-punitive atmosphere to encourage the voluntary reporting of safety hazards. Chapter 8 also addresses database systems and the analysis of database safety data. It recommends that States establish safety information sharing networks to facilitate the exchange of information on safety deficiencies.

G. State Implementation of These Obligations

The Chicago Convention obliges the 190 ratifying States to implement the standards promulgated by ICAO in Annexes to the Convention through their legislation, regulations, policies, and organizational structures, unless they find it “impracticable to comply,” in which case they must immediately notify ICAO. The legislation typically defines the jurisdiction, powers, and independence of the investigation body, implements Annex 13 standards, and provides penalties for obstructing the investigation and for unauthorized disclosure. Among the powers conferred to investigation agencies are:

- To have access to the accident aircraft or wreckage, flight recorders, and air traffic control records;
- To have access to relevant records;
- To require persons to answer questions or furnish information;
- To require the aircraft or wreckage to be preserved pending examination;
- To examine and test an aircraft or any part thereof; and

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83 Id.
84 Id.
85 See Dempsey, supra note 25, at 160; Shubert, supra note 3, at 19.
86 Annex 13, supra note 3, ¶ 8.1, 8.6.
87 Id. ¶ 8.9.
88 Chicago Convention, supra note 5, art. 38.
States are highly motivated to comply with SARPs contained in Annexes by ICAO, as they are now audited for their compliance and the results of such audits are made public. The following section of this article examines several States’ implementation of Annex 13.

IV. LEGAL AND POLICY ISSUES SURROUNDING INDEPENDENCE OF ACCIDENT/INCIDENT INVESTIGATION AUTHORITIES

One source notes that, “Perhaps the most important prerequisite of public and industry trust is independence. An independent accident investigation body ensures that there can be no perception of conflict of interest which reduces the scope for ‘cover-up’ or conspiracy theories.”

This section examines the laws and policies of several States on the:

• Technical role: The independence of investigation authorities responsible for airworthiness, certification, flight operation, maintenance, licensing, air traffic management, or airport operation; and

• Social role: The independence of investigation authorities from any party whose interests or mandates could conflict with the independence of the investigation or could influence its objectivity.

In particular, it addresses the level of participation of some parties and their access to investigation data, particularly when these parties are participating in the Annex 13 investigation and are simultaneously plaintiff or defense litigants in a parallel judicial inquiry. This section also examines the organizational structures of several national safety investigation authorities and the extent to which they have been made autonomous from

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89 Annex 13, supra note 3, ¶ 5.9, 5.9.1. Siew Huay Tan, Dir. Legal, Civil Aviation Auth. of Sing., Address Before the Singapore Aviation Academy: Accident Investigation (June 7, 2007) (notes on file with author).
91 Dempsey, supra note 23, at 29-30.
other governmental institutions and investigations or litigation.\textsuperscript{94}

At the outset, one observes that formal autonomy and independence are common among many States' accident investigation bodies, including:

- Australia Aviation Safety Board
- The Netherlands Accident Investigation Bureau
- New Zealand Accident Investigation Commission
- U.S. National Transportation Safety Board\textsuperscript{95}

Other accident investigation bodies that enjoy nominal dependence but factual independence include:

- U.K. Air Accidents Investigation Branch;
- BEA France; and
- German Federal Bureau of Aircraft Accidents Investigation.\textsuperscript{96}

Some States, such as the U.S., established politically-appointed boards that supervise a bureaucratic superstructure.\textsuperscript{97} Others, such as Sweden and Finland, place the organization within the Ministry of Justice.\textsuperscript{98} The Netherlands adopted another model still—"[a] small number of professional investigators who are supported by a large [b]oard drawn from experts across transport modes."\textsuperscript{99} Because of financial constraints, some developing States placed their investigation units within the Civil Aviation Authority, or have established an ad hoc investigation commission to deal with an occasional accident, while others delegate the task to developed States.\textsuperscript{100} Several States in Central America, troubled by the absence of independence of the accident investigation bodies from their respective civil aviation authorities, have proposed the establishment of a regional commission responsible for accident and incident investigation, paralleling their regional safety regulator, COCESNA.\textsuperscript{101}

\textsuperscript{94} Id. at 3–5, 11.
\textsuperscript{95} Id. at 4.
\textsuperscript{96} Id. at 119.
\textsuperscript{97} Id.
\textsuperscript{99} Smart, supra note 92, at 113.
\textsuperscript{100} Id.
\textsuperscript{102} See id. COCESNA is the Corporación Centroamericana de Servicios de Navegación Aérea (Central American Corporation for Air Navigation Services). See gen-
In several instances, an investigative body has been removed from the State’s transport department and made independent following aviation catastrophes that have called into question the credibility of the investigator.\textsuperscript{102} For example:

- A prominent crash of a TWA aircraft in 1931, and the public perception of incompetence, secrecy, and conspiracy led the U.S. Congress to require that reports on the probable cause of fatal air crashes be made public.\textsuperscript{103} A 1935 crash led Congress to establish an independent investigatory body, a predecessor of today’s NTSB.\textsuperscript{104}

- The Canadian Aviation Safety Board (CASB) was created after a formal inquiry was made concerning the efforts of senior officials of the transportation department who attempted to taint an investigation of a 1978 Boeing 737 crash.\textsuperscript{105} In turn, the CASB was sunset by the Canadian Parliament in 1989, following an Air Ontario crash on takeoff in Dryden, Ontario, which killed twenty-one of the sixty-five passengers, and three of the four crew members, and the perceived mishandling of the Arrow Air disaster investigation three and a half years earlier at Gander, Newfoundland, in which 278 U.S. military personnel and crew died.\textsuperscript{106} A Commission of Inquiry was convened, chaired by the Honorable Virgil P. Moshansky, which issued two interim reports and a four-volume investigative report including 191 safety recommendations.\textsuperscript{107} Moshansky found that the competitive pressure created by airline deregulation had eroded safety standards.\textsuperscript{108} He blamed Transport Canada for allowing Air Ontario to expand into using larger, more complicated aircraft without detecting the deficiency of its existing fleet.\textsuperscript{109} These accidents led to the creation of the Transportation Safety Board of Canada (TSB).\textsuperscript{110}


\footnotesize{\textsuperscript{102} Sumwalt, \textit{supra} note 34.}

\footnotesize{\textsuperscript{103} Id.}

\footnotesize{\textsuperscript{104} Id.}


\footnotesize{\textsuperscript{107} Id.}

\footnotesize{\textsuperscript{108} Id.}

\footnotesize{\textsuperscript{109} Id.}

\footnotesize{\textsuperscript{110} 137 PARL. DEB., SEN. (1ST SESS.) (1988) 58 (Can.) (statements of Hon. Mira Spivak).}
A 1992 Parliamentary inquiry in the Netherlands led to the creation of an autonomous investigation unit following an accident investigation involving an El Al Boeing 747 that crashed into two apartment buildings.\textsuperscript{111}

A 1979 DC-10 crash into Mount Erebus, Antarctica, by an Air New Zealand DC-10, resulting in 257 fatalities (the worst disaster in New Zealand history), led to both a traditional accident investigation and a parallel Royal Commission of Inquiry.\textsuperscript{112} The investigators reached different results.\textsuperscript{113} The chief accident investigator, Ron Chippendale, issued a report in 1980 finding that the aircraft had flown into the mountain in whiteout conditions “soon after the ground proximity warning had sounded.”\textsuperscript{114} He faulted “the airline for inadequate pilot briefings and procedures” (including failing to notify the crew of a late flight path alteration), criticized “the Civil Aviation Division for not monitoring Antarctic flights more rigorously,” and blamed the pilots “for descending to a low altitude when [they were] unsure of [their] position and unable to see the terrain.”\textsuperscript{115} But High Court Judge Peter Mahon, leading a royal commission of inquiry, reached a different conclusion in 1981, issuing a report finding that Air New Zealand “was primarily to blame [for] changing the flight plan without telling the crew,” thus putting the aircraft on a trajectory towards Mt. Erebus instead of McMurdo Sound.\textsuperscript{116} Judge Mahon harshly condemned Air New Zealand for “mis[leading] the inquiry through an ‘orchestrated litany of lies.’”\textsuperscript{117} The airline sought judicial review. A court of appeal concluded that Mahon had exceeded his authority in suggesting criminal conspiracy, a decision upheld by the Privy Council.\textsuperscript{118} This experience led to the creation of the New Zealand Transport Accident Investigation Commission (TAIC).\textsuperscript{119}

\begin{thebibliography}{119}
\bibitem{113} Id.
\bibitem{114} Id.
\bibitem{115} Id.
\bibitem{116} Id.
\bibitem{117} Id.
\bibitem{118} Id.
\bibitem{119} Johnson, supra note 105.
\end{thebibliography}
• In Nigeria, an autonomous accident body was created in the Civil Aviation Act of 2006, following a series of aviation accidents.\textsuperscript{120}

Though aviation-safety policy and law has often been driven reactively by catastrophic incidents, the modern approach attempts to be more proactive through the use of scientific risk-management principles, best practices, shared safety data, analyzed incidents, and by encouraging pilots and machinists to report hazards in a non-punitive environment.\textsuperscript{121}

Several States have created independent boards to oversee accident investigations.\textsuperscript{122} These include Australia, Canada, Finland, the Netherlands, New Zealand, Sweden, the United Kingdom, and the United States.\textsuperscript{123} Often, the board members are appointed for a term of office (e.g., five years), and, to ensure their independence, they may be removed from office only for cause.\textsuperscript{124}

Though some accident-investigation agencies are focused solely on aviation, many are multimodal accident-investigation organizations.\textsuperscript{125} Established in 1967, the U.S. NTSB became the first multimodal accident-investigation agency in the world.\textsuperscript{126} Multimodal boards have since been established in Australia, Canada, Finland, Sweden, the Netherlands, and New Zealand.\textsuperscript{127} One source notes that, "Establishing such multi-modal boards is frequently initiated by parliamentary interference after one or more major events, which disrupt public confidence in

\begin{itemize}
\item \textsuperscript{120} Akin Obasa, \textit{Pioneering a New Aviation Safety Regime}, \textit{THE NEWS} (May 26, 2008), \url{http://thenewsng.com/news/pioneering-a-new-aviation-safety-regime/2008/05}.
\item \textsuperscript{121} ICAO ET AL., \textit{IMPLEMENTING THE GLOBAL AVIATION SAFETY ROADMAP} 1–4 (2006), \url{available at http://www.icao.int/FSIX/_Library%5CGlobal_Aviation_Safety_Roadmap_Part_2.pdf}.
\item \textsuperscript{123} Id.
\item \textsuperscript{127} van Vollenhoven, \textit{supra} note 125.
\end{itemize}
the transport systems." Public confidence in the safety and security of the transport sector is essential to the efficient and proper performance of transport networks that serve the public's need for travel.

Often, the aviation model is adapted to other modes because it has been able to establish public and industry trust [in] its ability to conduct thorough and objective investigation into the circumstances of aircraft accidents. This trust extends to a confidence that the process will swiftly address the public safety issues arising from any accident while... meeting the needs of survivors and bereaved families by keeping them updated on the progress of the investigation.

We now turn to an examination of several States' accident investigation organizational forms.

A. AUSTRALIA

Australian air carriers are subject to certification and regulation by the Australian Civil Aviation Safety Authority (CASA) under a number of Civil Aviation Safety Regulations (CASRs). CASA sets safety standards and monitors compliance by the air carriers. Since its creation as a multimodal safety bureau in 1999 (incorporating the former Bureau of Air Safety Investigation), accident investigations have been conducted by the Australian Transport Safety Bureau (ATSB), Australia's independent agency for transportation safety investigations. Operating under the Transport Safety Investigation Act 2003 (TSI Act), ATSB has jurisdiction to investigate aviation, marine, and interstate rail accidents. Consolidating the various modal safety-investigation agencies into a multimodal agency was thought desirable to ensure a "more efficient use of resources," a greater pool of resources available to meet needs during peri-

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128 Stoop & Kahan, supra note 30, at 123.
129 Smart, supra note 92, at 111.
131 Id.
133 Transport Safety Investigation (TSI) Act 2003 § 11 (Austrl.). Investigations prior to June 30, 2003, were conducted under the Air Navigation Act 1920. Id. § 106.
ods of unexpected workloads, better career opportunities for staff, benefit from cross-fertilization of expertise and procedures, a more interesting work mix, and “better use of common resources.” The TSI Act gives the ATSB Executive Director jurisdiction to report transportation safety matters, to conduct blameless safety investigations, to make safety recommendations, to protect and disseminate information, and to publish investigation results. Investigations are explicitly required to be “independent.”

ATSB is an operationally-independent body within the Australian Government Department of Infrastructure, Transport, Regional Development and Local Government, and is Australia’s prime agency for transport safety investigations. The bureau is entirely separate from transport regulators and service providers. As Carol Boughton, Director of ATSB Safety Investigations, observed, “In terms of independence from the aviation industry, such independence must be balanced against a sound and robust relationship with the numerous parties in the industry.”

The ATSB and CASA have a common mission of enhanc-

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154 Boughton, supra note 132, at 1.
155 See generally TSI Act, pts. 4–6.
156 Id. § 12AA.

The ATSB Executive Director is currently supported by a Director Safety Investigations Branch and a Director Safety Research and Education Branch. The Safety Investigations Branch (SIB) is currently supported by a Deputy Director Aviation Safety Investigation and a Deputy Director Surface Safety Investigation. Aviation investigation responsibilities are carried out by two teams referred to as the Green Team and the Red Team; each led by a team leader that reports to the Deputy Director Aviation Safety Investigation.

ICAO, supra note 41, ¶ 5.3.2.2.

158 Department of Foreign Affairs and Trade, Australian Government, Australian Transport Safety Bureau: A Leader in Accident Investigation, http://www.dfat.gov.au/facts/transport_safety.html (last visited May 29, 2009). These include the Australian Civil Aviation Safety Authority, the Maritime Safety Authority, Airservices Australia (the air navigation service provider), rail authorities, and of course, other parties that are investigated. Id.

159 Boughton, supra note 132, at 3.
ing aviation safety, but the means by which they advance that objective are quite different.\textsuperscript{140} The ATSB promotes safety, by producing independent, high quality, accident and incident reports and safety recommendations from which important safety lessons for the future can be learned. CASA does so, in part, by drawing on the learning the ATSB's investigation reports and safety recommendations provide and applying that learning to maintain, enhance and promote aviation safety.\textsuperscript{141}

The ATSB's mission is to "maintain[,] and improve[,] transport safety and public confidence through excellence in" independent transport accident and incident investigation, safety data analysis and research, and safety communication and education.\textsuperscript{142} On July 1, 2009, to enhance its independence, ATSB became a statutory agency separate from the department.\textsuperscript{143}

The ATSB enjoys "organisational separation from transport regulators such as the Civil Aviation Safety Authority, the Australian Maritime Safety Authority, Airservices Australia (Australia's air traffic service provider), rail authorities, and other parties that may need to be investigated."\textsuperscript{144} The TSI Act updated the ATSB's jurisdiction over aviation and marine investigation, and extended it to include the interstate rail network.\textsuperscript{145} The Act also reinforced "the ATSB's operational independence to conduct 'no blame' safety investigations."\textsuperscript{146} The TSI Act provides that "the Executive Director [of Transport Safety Investigation] is not subject to directions from the Minister or the Secretary in respect of the exercise of the Executive Director's powers under this Act."\textsuperscript{147}

Though Australia filed a difference with ICAO on Annex 13, "reserving the right to remove a participant from an investigation if such a participant contravened the agreed conditions of participation," the ICAO audit team responded that "the spirit of Annex 13 was full cooperation between the States and the participants involved, and full adherence to Annex 13," and that

\textsuperscript{140} See \textit{supra} notes 130-39 and accompanying text.
\textsuperscript{141} ATSB/CASA Review 2007, \textit{supra} note 26, ¶ 19.1.
\textsuperscript{143} TSI Act 2003 § 12 (AustL).
\textsuperscript{144} Department of Foreign Affairs and Trade, \textit{supra} note 138.
\textsuperscript{145} \textit{Id}.
\textsuperscript{146} \textit{Id}.
\textsuperscript{147} The Executive Director is explicitly not subject to direction by the Minister or Secretary of Transport. TSI Act 2003 § 15 (AustL).
the filing of such a difference was unnecessary. Moreover, the audit team noted that, "subject to a consultation with the State that appointed an accredited representative or an adviser, that State could be expected to replace or withdraw" its uncooperative representative or advisor, thus making removal unnecessary.

B. Canada

Originally, the investigation of transportation accidents in Canada was performed by the transportation regulatory agencies. Ken Johnson, Director of the Canada’s Transportation Safety Board, observed:

Gradually, the public began to note, particularly in aviation, that the regulator (the Department of Transport) set the safety standards for the industry, operated elements of the system such as airports and air traffic control, licensed the carriers and the crews, and enforced its regulations. At the same time, it analysed the safety features of the industry in which it had such a pervasive presence. The public began to doubt the appropriateness of the system and later began to ask for some reforms.... [It was observed that] there was a conflict of interest when the regulator operated much of the air transport system and also analysed its failures.

In February, 1978, a Boeing 737 crashed in western Canada causing numerous fatalities. After the investigation, the investigators were accused of incompetence and destruction of evidence. As a consequence, the government appointed a judge to conduct an inquiry. The inquiry lasted two years. The report concluded that attempts had been made at higher levels in the Department of Transport to influence the accident investigators’ work. The judge recommended creation of an “independent federal agency to investigate aviation accidents and

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148 ICAO, supra note 41 ¶ 5.1.3.5.
149 Id.
151 Id.
152 Id.
153 Id.
154 Id.
155 Id.
In 1984, the Canadian government created the Canadian Aviation Safety Board (CASB) as an independent agency with a mandate to investigate incidents, accidents, and hazards associated with aircraft operation.\textsuperscript{157}

Another significant Canadian investigation took place after an Arrow Air DC-8 accident at Gander, Newfoundland, in which 278 U.S. military personnel and air crew died.\textsuperscript{158} "The [CASB] initiated an investigation immediately after the Dryden crash."\textsuperscript{159} In response to “widespread public outrage . . . over [the] CASB’s perceived mishandling of the Arrow Air DC-8 crash at Gander,” the Canadian Parliament sunset the agency on March 29, 1989.\textsuperscript{160} Simultaneously, on that date, a commission of inquiry, chaired by the Honorable Judge Moshansky, “was established under the Inquiries Act to take over the investigation of the Dryden crash from the . . . defunct CASB.”\textsuperscript{161} As noted above, this led to organizational changes designed to restore the credibility of the aviation accident investigation process in Canada.\textsuperscript{162}

This inquiry presented an opportunity for an independent body “to examine the entire Canadian aviation system for organizational failures, both latent and active, which might have contributed to the Captain’s faulty decision,” and to make recommendations for necessary change.\textsuperscript{163} The report issued 191 safety recommendations—mostly related to ground ice procedures, de-icing, de-icing fluids, and training—all of which were accepted.\textsuperscript{164}

The Canadian Transportation and Safety Board Act of 1989 folded the Aviation Safety Board into a new and independent multimodal independent federal agency—the Canadian Trans-

\textsuperscript{156} Id.
\textsuperscript{157} Id.
\textsuperscript{158} Honorable Virgil P. Moshansky, supra note 106.
\textsuperscript{159} Id.
\textsuperscript{160} Id.
\textsuperscript{161} Id.
\textsuperscript{162} Id.
\textsuperscript{164} This report has become a landmark in accident investigation reporting and has also influenced causal models. For example, this report has been used to illustrate the Swiss Cheese Model. James Reason’s model of accident causation reveals the various human contributions to the breakdown of a complex system and its application to a de-identified scenario adapted from the Dryden accident. \textit{Id.}
portation Safety Board (TSB). Headed by a Board of five and a staff of more than 200, Canada’s TSB investigates the causes and contributing factors of aviation, rail, commodity pipeline, and marine accidents, incidents, and occurrences. The Act provides that TSB shall conduct independent investigations, identify safety deficiencies, make recommendations designed to reduce such deficiencies, and report publicly on its investigation and findings. The statute also clearly states that in making its findings as to the causes of an incident or accident, TSB shall not assign fault or determine liability. The TSB is designed to advance transportation safety; its activities are separate from the courts. “Two key features of the Act are the TSB’s independence from regulatory bodies and other governmental departments and the common approach to occurrence investigations across all” modes of transport.

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167 Canadian Transportation Accident Investigation and Safety Board Act & 7(1), 1989 S.C., ch. 3 (Can).
168 Id. Paragraph 7 provides: Object of the Board
(1) The object of the Board is to advance transportation safety by
(a) conducting independent investigations, including, when necessary, public inquiries, into selected transportation occurrences in order to make findings as to their causes and contributing factors;
(b) identifying safety deficiencies as evidenced by transportation occurrences;
(c) making recommendations designed to eliminate or reduce any such safety deficiencies; and
(d) reporting publicly on its investigations and on the findings in relation thereto.
Restriction
(2) In making its findings as to the causes and contributing factors of a transportation occurrence, it is not the function of the Board to assign fault or determine civil or criminal liability, but the Board shall not refrain from fully reporting on the causes and contributing factors merely because fault or liability might be inferred from the Board’s findings.
Idem
(3) No finding of the Board shall be construed as assigning fault or determining civil or criminal liability.
Id. ¶ 7.
Today, Transport Canada functions as an independent, arm’s length safety regulator. The corporatized and independent NAV CANADA provides air navigation services. Major airports in Canada have been corporatized, and its flag carrier, Air Canada, has been privatized.

In its Annual Report, the TSB emphasized the importance of independence in the performance of transportation accident investigations:

To encourage public confidence in transportation accident investigation, the investigating agency must be, and be seen to be, objective, independent, and free from any conflicts of interest. The key feature of the TSB is its independence. It reports to Parliament through the President of the Queen’s Privy Council for Canada and is separate from other government agencies and departments. Its independence enables it to be objective in arriving at its conclusions and recommendations. The TSB’s continuing independence and credibility rest on its competence, openness, and integrity and the fairness of its processes.

One TSB Board member described the organization in these terms: “The TSB is an independent body that investigates accidents with the purpose of advancing safety . . . and to report publicly on our investigations. Our focus is straightforward. We examine what happened; why it happened; and how we can help ensure it never happens again.” Another Board member addressed the issue of independence of the TSB from those directly involved in an accident:

The independence of accident investigation authorities must not be put at risk or perceived as such. Our role remains to report findings to the public in an impartial and unbiased way, with the sole aim of advancing transportation safety. Without this inde-

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pendence the TSB could not expect any party involved in an incident to provide us with full disclosure. But does that mean we cannot dialogue with industry and regulators? Not at all. The key is to share information, not responsibilities.\textsuperscript{175}

TSB’s governing statute also provides:

[1]t is not the function of the Board to assign fault or determine civil or criminal liability, but the Board shall not refrain from fully reporting on the causes and contributing factors merely because fault or liability might be inferred from the Board’s findings . . . . No finding of the Board shall be construed as assigning fault or determining civil or criminal liability.\textsuperscript{176}

C. FRANCE

The Bureau d’Enquêtes et d’Analyses pour la sécurité de l’aviation civile (BEA) was established “in 1946 to investigate accidents, conduct inquiries and prepare reports.”\textsuperscript{177} BEA enjoys a statutory guarantee that, “In the context of the investigation, the permanent organisation and the members of the commission act entirely independently and neither ask for, nor receive instructions from any authority, nor from any organisation whose interests may be in conflict with the mission with which they are entrusted.”\textsuperscript{178} The “any authority” language includes the French Minister of Civil Aviation.

Further, the law provides that a technical investigation performed by BEA shall not be conducted in such a way as to establish individual or collective guilt but shall instead be focused on information likely to prevent future accidents.\textsuperscript{179} Specifically, the statute provides that the accident investigation, “shall have, as its sole objective, the collection and analysis of useful information, the determination of the circumstances and the causes or probable causes of the accident or incident, and if necessary, the issuing of safety recommendations, with the intention of


\textsuperscript{177} Abraham, \textit{supra} note 13, at 29.


\textsuperscript{179} Abraham, \textit{supra} note 13, at 30.
preventing future accidents and incidents and, where applicable, without prejudice to judicial inquiries. However, there is no equivalent to the “exclusionary provision” that prevents NTSB reports from being admissible into a judicial proceeding. Moreover, in France, a criminal proceeding sometimes follows the BEA investigation. The criminalization of aviation accidents has been criticized as deterring “witnesses from cooperating in the accident investigation because of a legitimate concern that their testimony could be used against them in a criminal prosecution.”

The Decree re-establishing the BEA states that

The director of the B.E.A. is nominated, for a period of seven years, by order of the minister for civil aviation, following a proposal from the head of the Inspectorate General for Civil Aviation, from among those category A public servants with at least twenty years professional experience in the field of civil aviation.

This seven year period is important as the French cycle of governments is based on a five year period. So by definition, the Director of the BEA will work for at least two different governments. Also, the Director is nominated on grounds of technical expertise (20 years of professional experience as a civil servant in the field of civil aviation) and not for political reasons. This is another guarantee of independence at the helm of the permanent specialized investigatory organization. There are also provisions on communications and confidentiality, important in times of crisis lest information be released prematurely. The French Penal Code also “requires investigation

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181 Simon Foreman, Aviation Accidents and the French Courts, 20 AIR & SPACE LAW. 1, 16 (Fall 2005).
182 Id. at 14.
186 Id. art. L731-1 relating to technical investigations into accidents and incidents in civil aviation provides, inter alia:

I. The staff of the permanent organisation, field investigators, members of Commissions of Inquiry and any technical experts called upon are bound by professional secrecy under the condi-
personnel, accident site investigators, commission members and experts to observe strict confidentiality."\textsuperscript{187} As noted above, confidentiality is also mandated by Annex 13.\textsuperscript{188}

However, accident investigations are complicated by the activism among the French judiciary and French prosecutors. Under French law, if at least one plaintiff, at least one defendant, or the insurer of the defendant is a French citizen, an action may lie in French courts irrespective of the locale of the injury.\textsuperscript{189} French courts also have no equivalent doctrine to \textit{forum non conveniens}.\textsuperscript{190} Moreover, French judges have the discretion to appoint an "expert" to gather evidence and issue a report, even before a suit is filed.\textsuperscript{191} In a civil case, the plaintiff pays for the cost of the expert investigation; but in a criminal case, the cost is borne by the government.\textsuperscript{192} Where passengers suffer death or injury, it is common for a prosecutor immediately to launch a criminal investigation for involuntary manslaughter to satisfy the interests of both the public and the victims.\textsuperscript{193} The judge has the assistance of both an "expert" and special aviation police—\textit{Gendarmerie du Transport Aérien}—who may take witnesses into custody and search premises.\textsuperscript{194} Only one of the victims need be

\textsuperscript{187} Abraham, \textit{supra} note 13, at 29–30; C. \textit{pén.} art. 226-13.

\textsuperscript{188} Bureau d'Enquêtes et d'Analyses Pour La Sécurité de L'aviation Civile, Judicial Framework, \url{http://www.aero/en/bea/qui-sommes-nous/cadre-juridique.php}.

\textsuperscript{189} C. Civ art. 14.

\textsuperscript{190} Foreman, \textit{supra} note 181, at 13.

\textsuperscript{191} \textit{Id.} at 13–14.

\textsuperscript{192} \textit{Id.} at 14.

\textsuperscript{193} \textit{Id.}

\textsuperscript{194} \textit{Id.} at 15.
French for the courts to pursue a prosecution against defendants, even those that reside abroad.\textsuperscript{195}

In 1988, an Airbus A320, flying low over the Paris Air Show, crashed in a nearby forest. The investigators concluded there was no technical problem with the aircraft and that the crash had been caused by the pilot flying dangerously low.\textsuperscript{196} The flight recorder (i.e., black box) had been taken into custody by BEA for analysis. The pilot, under investigation, alleged the flight recorders had been tampered with by BEA to cover up a defect in the aircraft. In 1999, the Civil Aviation Code was amended to guarantee access by investigators to the wreckage provided that the court is informed in advance and that appropriate measures are taken to preserve the evidence.\textsuperscript{197} The recorders are placed under seal by the court, and BEA is allowed to make a copy under the supervision of the police. Removal by BEA of any wreckage from the scene of the accident also requires permission from the investigating judge, and only non-destructive tests may be performed.\textsuperscript{198} These civil and criminal investigations may go on for years after the BEA publishes its report. One source notes:

No good can come from such a situation. It could progressively lead the public to become wary of the overall system of aeronautical safety, encourage operators and manufacturers to reduce the reporting of incidents which are being used as evidence against them, and discredit all the efforts that are conducted to improve safety on an international level.\textsuperscript{199}

D. Ireland

The Irish statute on aviation accident investigations established the Air Accident Investigation Unit (AAIU) as an autonomous organization "functionally independent" of any other person or governmental institution whose interests could conflict with those of the AAIU.\textsuperscript{200} Its primary mission is to gather

\textsuperscript{195} Id. at 13.
\textsuperscript{197} CODE DE L'AVIATION CIVILE [Code of Civil Aviation] art. L721-1 (Fr.).
\textsuperscript{198} CODE DE L'AVIATION CIVILE art. L721-3, L721-4.
\textsuperscript{199} Foreman, \textit{supra} note 181, at 16.
and analyze air safety data for accident and incident prevention purposes.\textsuperscript{201}

E. New Zealand

As noted above, the Mount Erebus investigation was the catalyst for the promulgation of the Transport Accident Investigation Commission Act of 1990, which created the New Zealand Transportation Accident Investigation Commission (TAIC). “TAIC is similar to a standing Commission of Inquiry.”\textsuperscript{202} It was given additional operational and financial independence in 2001 when it was designated for a funding line separate from the Ministry of Transport and the modal safety authorities.\textsuperscript{203} Unlike Annex 13, under New Zealand law the main purpose (but

\textsuperscript{201} Air Navigation (S.I. No. 205 of 1997):

6(1) The Minister shall ensure that there is in the Department of Transport, Energy and Communications a permanent civil aviation body, to be known as the air Accident Investigation Unit, to carry out the technical investigation of occurrences.

(2) The AAIU shall be functionally independent of the State aviation authorities responsible for the operation or regulation of airworthiness, certification, flight operations, aircraft maintenance, licensing, air traffic control or airport management, and in general shall be independent of any other person or body whose interest could conflict with the functions of the AAIU.

(3) Notwithstanding paragraph (1), the functions of the AAIU may be extended to the gathering and analysis of air safety data, in particular for accident or incident prevention purposes, in so far as those functions do not affect its independence and entail no responsibility in regulatory, administrative or standards matters.

(4) The Minister shall ensure that the AAIU is given the means necessary for it to perform its functions independent of the authorities referred to in paragraph (2).

(5) The Minister shall ensure that—

(a) the AAIU includes at least one inspector capable of performing the function of investigator in charge in the event of an occurrence, and

(b) its members are afforded such status as is necessary to guarantee its independence in the performance of its functions.

7(9) The investigator in charge shall be independent of any parties involved in the accident or incident, and of the authorities referred to in regulations 6(2) or any other body whose interests could conflict with the task entrusted to the investigator in charge.


not the "sole purpose") of the investigation is the determination of causation.\textsuperscript{204}

TAIC is comprised of three commissioners and eleven staff members.\textsuperscript{205} The agency describes its independence, and the rationale therefore, in these terms:

TAIC is independent of all organisations and has an arm's-length relationship with the Police, transport operators, transport regulatory authorities, unions, insurers and any other organisations that may have some involvement in the investigation or in the occurrence under investigation. This independence is seen by the transport industry as making an important contribution to TAIC's effectiveness in determining causes and making effective recommendations to prevent similar accidents.\textsuperscript{206}

TAIC maintains that its independence is important for several reasons: (1) independence enables TAIC to investigate and comment impartially on any role the regulator or other groups might have been able to play in preventing the accident; (2) independence from the judicial and regulatory authorities allows people involved in the accident to speak freely to investigators with the knowledge that the Commission cannot use that information for enforcement, punishment, or corrective purposes; (3) independence from judicial and regulatory authorities ensures that any prosecution brought by them will not compromise or delay TAIC's investigation and report on the accident; and (4) independence from other governmental institutions gives TAIC full control over its reports.\textsuperscript{207} Alastair Bisley, the New Zealand Secretary for Transport, observed:

A critical attribute of a transport accident and incident investigation system is that the investigating agency has no stake in the system beyond its role as investigator and is independent of any interested party. This is to avoid any conflict of interest or appearance of such. . . . [T]he agency should have no stake in the design of legislative and administrative arrangements in place in the sector or in the way in which they are managed and enforced. The investigator would be shielded from pressure from any inter-


\textsuperscript{205} Introduction to the TAIC, supra note 202.

\textsuperscript{206} Id.

\textsuperscript{207} Id.
ested party to reach a particular finding and would be objective, and would be perceived to be so.\textsuperscript{208}

Although Annex 13 urges the clear separation of investigatory and judicial functions, and although many States have adopted legislation explicitly prohibiting or limiting the use of investigatory reports in civil and criminal judicial proceedings, the courts in New Zealand have eroded the distinct lines between investigation and litigation.\textsuperscript{209}

\section*{F. \textit{Nigeria}}

The Accident Investigation Bureau (AIB) of Nigeria was established as an autonomous safety investigatory unit by the Civil Aviation Act of 2006, following a series of crashes during the preceding two years.\textsuperscript{210} The purpose of making the AIB autonomous was to ensure its independence and efficiency.\textsuperscript{211} The principal responsibility of the AIB is to perform independent investigations into aviation accidents by determining their causes and making safety recommendations to prevent future occurrences without apportioning blame or liability.\textsuperscript{212} The AIB was created, "To improve aviation safety by determining the circumstances and causes of air accidents and serious incidents and making safety recommendations intended to prevent recurrence of similar accidents in [the] future . . . . It is not the purpose of this activity to apportion blame or liability."\textsuperscript{213} To assure its independence, the Act provides that the AIB CEO "report directly to the President and Commander-in-Chief through the Minister of Air Transportation."\textsuperscript{214}

\section*{G. \textit{The United Kingdom}}

The British Air Accidents Investigation Branch (AAIB) had its beginnings in the Accident Investigation Branch (AIB) of the

\textsuperscript{208} Ministry of Transport, \textit{supra} note 203.

\textsuperscript{209} See Sharif, \textit{supra} note 24, at 339; see also Dempsey, \textit{supra} note 25, at 55-61.


\textsuperscript{211} Engr Sam Oduselu, Comm'r of Accident Investigation, AIB, Speech at the Closing Ceremony of Aircraft Accident Investigation Course at Cranfield Univ., United Kingdom (Feb. 26, 2009), \textit{available at} http://aib.gov.ng/cranfield1.aspx.

\textsuperscript{212} Welcome to the Accident Investigation Bureau (Nigeria) Homepage, http://aib.gov.ng/default.aspx (last visited June 5, 2010).

\textsuperscript{213} \textit{Id.}

\textsuperscript{214} Obasa, \textit{supra} note 120.
Royal Flying Corps, established in 1915. The Air Navigation Act of 1920 conferred upon the Secretary of State for Air jurisdiction to make regulations and investigate accidents. After World War II, three separate government reviews of aircraft accident procedures and practices in the United Kingdom were conducted, leading to the establishment of a Department of Civil Aviation, to which the AIB was transferred. A common denominator of all three of these committees of inquiry was that "the independence of the accident investigation body should be firmly established and recognised by the public and everyone within the industry."

In 1983, the AIB was transferred to the Department of Transportation, and in 1987 its name was changed to the Air Accidents Investigation Branch. Although a part of the Department, it is functionally independent, with the Chief Inspector reporting directly to the Secretary of State for safety matters. The purpose of the AAIB is to determine the causes of accidents, and not to apportion blame or liability. The AAIB and the surface transport safety investigation units of the British government had signed a memorandum of understanding defining their respective roles vis-à-vis the Crown Prosecution Service, calling for independence, cooperation, and confidentiality.

Following the separation of National Air Traffic Services from the U.K. Civil Aviation Authority (CAA) in 2001, the CAA became the United Kingdom's independent aviation regulator that, as a single, specialist body, incorporates all civil aviation regulatory functions—economic regulation, safety regulation, airspace policy, and consumer protection. The CAA is a public corporation originally established by Parliament in 1972 as

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215 Stoop & Kahan, supra note 30, at 117.
216 Id.
217 Id.
218 Smart, supra note 92, at 113.
221 Welcome to the Accident Investigation Bureau (Nigeria) Homepage, supra note 212.
222 Memorandum of Understanding Between the Crown Prosecution Service and the Air Accidents Investigation Branch, supra note 220.
223 Id.
an “independent, specialist aviation regulator and provider of air traffic services.” Today, it only retains its aviation-regulator function (NATS is the service provider), being independent of both the Department for Transport and political interference.

The AAIB’s governing statute provides that, “The sole objective of the investigation of an accident or incident under these Regulations shall be the prevention of accidents and incidents. It shall not be the purpose of such an investigation to apportion blame or liability.”

H. THE UNITED STATES

The U.S. aviation market is sufficiently large that four agencies have been created at the federal level to administer various aspects of aviation. The National Transportation Safety Board (NTSB) handles aircraft accident investigations mandated under Annex 13 and administrative appeals of decisions of

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224 The Civil Aviation Authority, http://www.caa.co.uk (last visited May 7, 2010). “The U.K. Government requires that the CAA’s costs are met entirely from its charges on those whom it regulates. Unlike many countries . . . there is no direct Government funding of the CAA’s work.” About the Civil Aviation Authority, http://www.caa.co.uk/default.aspx?catid=286 (last visited May 7, 2010).

225 Glen McDougall, ATC Commercialization Policy: Has it Been Effective? 48 J. AIR TRAFFIC CONTROL 50, 50-55 (2006). It was also decided to separate the CAA from political influence—there is a separate board and a requirement to act independently. While political interference has significantly been reduced, there is always the possibility of interaction between Ministers and Board members. Moreover, the military has a seat on the CAA Board and can require a CAA decision to be referred to the U.K. government if it disagrees with a Board decision. However, to date this has not happened, even though such a possibility acts as a safety net. Decisions can be judicially reviewed. Id.


228 49 U.S.C. §§ 1131–32. The NTSB describes its responsibilities as follows: The [NTSB] is the agency charged with fulfilling the obligations of the United States under Annex 13 to the Chicago Convention on International Civil Aviation . . . consistent with State Department requirements and in coordination with that department. Annex 13 contains specific requirements for the notification, investigation, and reporting of certain incidents and accidents involving international civil aviation. In the case of an accident or incident in a foreign state involving civil aircraft of U.S. registry or manufacture, where the foreign state is a signatory to Annex 13 to the Chicago Convention of the International Civil Aviation Organization, the state of occurrence is responsible for the investigation. If the accident or incident occurs in a foreign state not bound by the provi-
the Administrator of the Federal Aviation Administration (FAA).\(^{229}\) As described in greater detail below, the FAA regulates the airlines, airmen, manufacturers, and airports, and directly provides air navigation services.

Though it has no authority to issue regulations, the NTSB does have the responsibility to make regulatory recommendations to the FAA to avoid future accidents.\(^{230}\) The Transportation Security Administration (TSA) of the U.S. Department of Homeland Security regulates aviation security.\(^{231}\) The Office of

\(^{229}\) 49 U.S.C. § 1131 provides:

(a)(1) The National Transportation Safety Board shall investigate . . . and establish the facts, circumstances, and cause or probable cause of—

A. an aircraft accident the Board has authority to investigate . . . ;

B. a highway accident . . . the Board selects in cooperation with a State;

C. a railroad accident in which there is a fatality or substantial property damage, or that involves a passenger train;

D. a pipeline accident in which there is a fatality, substantial property damage, or significant injury to the environment;

E. a major marine casualty (except a casualty involving only public vessels) occurring on or under the navigable waters, internal waters, or the territorial sea of the United States . . . or involving a vessel of the United States . . . ; and

F. any other accident related to the transportation of individuals or property when the Board decides—

i. the accident is catastrophic;

ii. the accident involves problems of a recurring character; or

iii. the investigation of the accident would carry out this chapter.

\(^{230}\) PAUL STEPHEN DEMPSEY, ROBERT HARDAWAY & WILLA THOMS, AVIATION LAW & REGULATION § 12.67 (Butterworth 1993) [hereinafter DEMPSEY ET AL.].

the Secretary of Transportation (OST) within the U.S. Department of Transportation (USDOT) has jurisdiction over economic regulatory issues such as airline financial fitness, competition policy, and consumer protection. The Secretary of Transportation is statutorily commanded to assign and maintain safety as "the highest priority in air commerce."

In 1931, a Trans World Airlines Fokker tri-motor crashed near Bazaar, Kansas, killing all aboard including the popular Notre Dame University football coach Knut Rockne. The accident investigation was perceived to have been shrouded "by incompetence, secrecy, and conspiracy." The U.S. Congress responded by amending the Air Commerce Act of 1926 to require that reports on fatal aircraft crashes be made public.

In 1935, a DC-2 crashed in Missouri, killing five persons including U.S. Senator Bronson Cutting. This event led to the 1938 creation of an independent investigative body—the Bureau of Safety—housed in the Civil Aeronautics Authority (the agency was renamed the Civil Aeronautics Board two years later).

In the mid-1950s, a series of accidents brought to the surface an underlying need for significant safety enhancement in aviation. In 1956, a Trans World Airlines Constellation collided with a United Airlines' DC-7 over the Grand Canyon. In early 1957, a Douglas Aircraft company-owned DC-7 collided with an Air Force F-89 over Sunland, California. The DC-7 crashed into a junior high school, killing three and injuring seventy

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232 For a review of the legislation passed by the United States to address aviation issues, see Paul Stephen Dempsey & Lawrence E. Gesell, Air Commerce & the Law (Coast Aire 2004).
235 See Sumwalt, supra note 34.
236 Id.
237 Id.
239 Id. at 12.
In 1958, a United Airlines' DC-7 collided with an Air Force F-100 near Las Vegas, Nevada. The U.S. Congress responded with the promulgation of the Federal Aviation Act of 1958 and the creation of the Federal Aviation Agency, later to become the Federal Aviation "Administration" under the Department of Transportation Act of 1966.

The FAA was established by the Federal Aviation Act of 1958 and subsequently became a part of the USDOT upon its creation in 1967. The FAA is headed by an Administrator, who is appointed by the President with the advice and consent of the Senate and serves for a term of five years. The FAA Administrator is required to consider the maintenance and enhancement of safety and security as among the highest priorities in the public interest. The FAA is charged with promoting aviation safety, ensuring the safe and efficient utilization of the national airspace, and providing oversight of the U.S. airport system. Although it does not own and operate airports (they are owned and operated by local institutions, usually governments), the FAA issues airport operating certificates, regulates them, and provides financial support to them. The FAA handles all other aspects of airman, aircraft, airport, and airline safety as well as providing air traffic control and navigation ser-

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245 49 U.S.C. subtitle I; Dempsey & Gesell, supra note 232, at 21. This section borrows from Dempsey, supra note 23, at 43–44.
246 The five-year term was added in an FAA Appropriations Bill in 1996 in order to give the agency some stability. Before that, the agency had been headed by a string of Administrators, and therefore been denied continuity of leadership.
249 The FAA Administrator is charged with promoting aviation safety, promoting aviation security, ensuring the safe and efficient utilization of the national airspace, overseeing of the U.S. airport system, and supporting national defense requirements. See 49 U.S.C. § 40101 et seq.
vices. It may require design or maintenance changes from manufacturers and carriers through the issuance of Airworthiness Directives (AD). Under U.S. law, actions of the Secretary of Transportation and of the FAA Administrator must be consistent with the international obligations imposed by the Chicago Convention.

The accident investigation and recommendation responsibilities of the U.S. Civil Aeronautics Board, which was created in 1938, were transferred to the FAA initially, and in 1967 they were re-delegated to the NTSB, made independent in 1974. The NTSB thereby was affirmed as "an independent Government agency, located within the Department of Transportation, to promote transportation safety by conducting independent accident investigations and by formulating safety improvement recommendations." The Act noted: "Proper conduct of the responsibilities assigned to this Board requires vigorous investigation of [transportation] accidents . . . . No federal agency can perform such functions unless it is totally separate and independent from any other department, bureau, commission or agency of the United States." Accordingly, the NTSB is separate from all other U.S. governmental institutions.

Since its formal independence in 1974, the NTSB has become a global leader in performing the mission of accident investigations. One source noted that the NTSB "enjoys the reputation of being the most important safety investigative authority in the world; the caliber of its investigations has become the international standard. The NTSB is considered to be the best in the business and has served as a model for independent investigative authorities in many countries."

252 Dempsey et al., supra note 230, §§ 12.48-12.54.
255 Independent Safety Board Act, Pub. L. No. 93-633, Title III (1974). In 1966, the NTSB was established as an independent agency within the newly-created U.S. Department of Transportation. In 1974, the U.S. Congress passed the Independent Safety Board Act, formalizing the NTSB's independence from the USDOT. See also Dempsey, supra note 23, at 43 n.213.
257 Id. § 1901(2).
258 Sarsfield et al., supra note 11, at 8.
The primary mission of the NTSB is to investigate the facts and circumstances, determine the probable cause of safety incidents and accidents in all modes of transport, and issue recommendations to transportation agencies such as the FAA so as to reduce the likelihood of recurrence. Though the NTSB has the power to investigate and make recommendations to federal, state, and local arms of government, it is without regulatory or enforcement jurisdiction. The FAA has the power to promulgate and enforce regulations and the responsibility to consider and respond to NTSB recommendations. Within ninety days of the receipt of an NTSB recommendation, the Secretary of Transportation must indicate whether it intends: "(1) to carry out procedures to adopt the complete recommendation; (2) to carry out procedures to adopt a part of the recommendation; or (3) to refuse to carry out procedures to adopt the recommendation." Annually, the Department of Transportation must report to the Congress what action, if any, it has taken on the NTSB recommendations, such as the issuance, or amendment, of Federal Aviation Regulations (FARs); in turn, the NTSB is directed to review that report and submit comments to the appropriate congressional committees. The risk of such a process is that the NTSB may be perceived as having co-ownership of the

261 Id. § 1116 directs the NTSB to:
(a) . . . report periodically to Congress, departments, agencies, and instrumentalities of the United States Government and State and local governmental authorities concerned with transportation safety, and other interested persons. The report shall—
(1) advocate meaningful responses to reduce the likelihood of transportation accidents similar to those investigated by the Board; and
(2) propose corrective action to make the transportation of individuals as safe and free from risk of injury as possible, including action to minimize personal injuries that occur in transportation accidents.
(b) Studies, Investigations, and Other Reports.—The Board also shall—
(1) carry out special studies and investigations about transportation safety, including avoiding personal injury;
(2) examine techniques and methods of accident investigation and periodically publish recommended procedures for accident investigations.
262 Id. § 1135(a).
263 Id. § 1135(d).
result, thereby compromising its objectivity and independence. It blends the investigation and recommendation roles of the investigator with the regulatory role of the regulator. It would be preferable to have these roles kept strictly separate. The NTSB should not be asked to comment to Congress on the decision of the FAA either to adopt, reject, or accept with modifications the recommendations of the NTSB.

NTSB findings have inspired a plethora of FAA safety regulations, airworthiness directives, service bulletins, and enforcement actions. Hence, their respective roles are clearly separate and defined. Historically, the FAA has responded positively to 90% of the NTSB’s urgent recommendations and 80% of all its recommendations.\(^{264}\)

Though the NTSB has jurisdiction to investigate safety incidents and accidents in all modes of transport, overwhelmingly the bulk of its work is aviation related. The NTSB investigates all public aircraft accidents in the United States and participates in the investigation of accidents abroad where the United States is the State of registry, operator, designer, or manufacture.\(^{265}\) Thus, as BEA investigates most accidents involving Airbus aircraft, the NTSB investigates accidents involving Boeing aircraft.

The National Transportation Safety “Board” is comprised of five individuals appointed by the President and confirmed with the “advice and consent” of the Senate for terms of five years, and supported by a staff of several hundred.\(^{266}\) At least three of the members shall be appointed “on the basis of technical qualification, professional standing, and demonstrated knowledge in accident reconstruction, safety engineering, human factors, transportation safety, or transportation regulation.”\(^{267}\) Note that the five-year term of NTSB Board members exceeds the four-year term of the President, meaning that he may inherit Board members appointed by his predecessor and that his successor

\(^{264}\) Relationship Between the Federal Aviation Administration and the National Transportation Safety Board: Hearing before the Subcomm. on Aviation of the S. Comm. on Commerce, 103d Cong., 65 1993 (letter from Steve Kaplan and Mortimer Downey to Sen. Larry Pressler).


\(^{267}\) 49 U.S.C. § 1111(b).
may inherit Board members appointed by him. Also, no more than three of the five members may be members of the same political party.268 Board members may only be removed from office prior to the expiration of their term for “inefficiency, neglect of duty, or malfeasance in office.”269 However, with the advice and consent of the Senate, the President may designate who among the Board members shall serve as Chairman and Vice Chairman, each for a two-year term.270

The NTSB’s investigations consist of four phases: (1) launch; (2) fact finding; (3) analysis; and (4) report production.271 When a “major accident” occurs, a fact-finding team normally is dispatched to the scene within hours of notification.272 The team leader is a senior investigator termed the investigator-in-charge (IIC).273

Under the direction of the IIC, a NTSB investigator heads a working group (Accident Investigation Committee) in each area of expertise, which in aviation can usually involve the specialized areas of operations, structures, power plants, systems, air navigation services, weather, human performance, and survival.274 Working groups are staffed by “parties” to the investigation that have technical expertise in the area.275 According to NTSB regulations, parties are “limited to those persons, government agencies, companies, and associations whose employees, functions, activities, or products were involved in the accident or incident, and who can provide suitable qualified technical personnel actively to assist in the investigation.”276 These may include, for example, aircraft operators and manufacturers of aircraft, engines, and component parts. It always includes FAA representatives, but it never includes persons in legal or litigation positions.

268 Id.
269 Id. § 1111(c).
270 Id. § 1111(d).
271 U.S. GAO, supra note 265, at 12.
272 Id. at 13. The NTSB considers an event to constitute a “major accident” if it either involves an issue related to a current safety study or investigation, impacts public confidence or transportation safety in a significant way, or is catastrophic. Id.
274 U.S. GAO, supra note 265, at 14; NTSB, supra note 273.
275 NTSB, supra note 273.
276 49 C.F.R. § 831.11(a) (2005).
The NTSB’s party system creates a potential conflict of interest or a perception of a conflict of interest.\textsuperscript{277} Air operators and manufacturers have valuable expertise that can be useful in the determination of the cause of an accident—they can provide essential information that cannot be gleaned from other sources concerning such vital issues as aircraft design and assembly, airline operations, and flight systems.\textsuperscript{278} One source notes that, “[w]ithout the input and expertise of the parties it is unlikely that the NTSB would have the technical capability to determine the cause of complex aviation accidents.”\textsuperscript{279} Yet, operators and manufacturers also can be named as defendants and found liable for damages in tort litigation filed by survivors and the estates of those killed or injured in the accident. Civil liability in mass disaster litigation can be tremendously expensive, while the prospect of criminal liability can be terrifying. Though their lawyers are banned from participating in the investigation, they likely are not far from it, as the liability consequences of the accident investigation findings on causation can greatly influence the outcome of litigation.

Though the air operators and manufacturers may participate in the accident investigation, potential plaintiffs such as family representatives, claimants, and their representatives, may not.\textsuperscript{280} The plaintiffs tend to view this as unfair, as it gives potential defendants not only advanced access to the evidence, but also the potential ability to influence the outcome of the investigation. One source observes, “This inherent conflict of interest may jeopardize, or be perceived to jeopardize, the integrity of the NTSB investigation.”\textsuperscript{281}

After the 1996 explosion of TWA Flight 800 over Long Island, New York, killing 230 passengers and crew, President Bill Clinton established a White House Commission on Aviation Safety

\begin{footnotes}
\item[277] See London, \textit{supra} note 4, at 39–42. “[T]he NTSB’s heavy dependence on party participants to provide technical assistance often results in NTSB reports, observations, and data which make NTSB evidence fall outside rather than inside the tests for trustworthiness and reliability which the federal and most state rules of evidence impose as conditions of admissibility.” \textit{Id.} at 40.
\item[278] SARSFIELD ET AL., \textit{supra} note 11, at 34.
\item[279] \textit{Id.} at 99.
\item[280] See Graham v. Teledyne-Continental Motors, 805 F.2d 1386 (9th Cir. 1986) (upholding the exclusion of a representative of the pilot’s estate to participate in or observe testing and disassembly of the engines involved in a general aviation crash).
\item[281] SARSFIELD ET AL., \textit{supra} note 11, at xiv.
\end{footnotes}
and Security chaired by Vice President Al Gore. Among the salient recommendations was that the NTSB "formally review" the party system.

The theoretical and practical realities are quite different. The NTSB's statute and regulations attempt to separate the investigative process from the litigation process and explicitly provide they are not conducted for the purpose of determining rights or liabilities of any party. But this theoretical isolation is difficult to achieve in a practical environment in which the investigation relies on the party process to assist it in determining causation, and in which the litigation process relies so heavily on the NTSB's findings on causation.

Although U.S. law provides that NTSB reports "relating to any accident or the investigation thereof" may not be introduced as evidence in "any suit or action for damages growing out of any matter mentioned in such report," and further precludes NTSB investigators from testifying in court, the reality is that such reports are viewed as "roadmaps to liability," and often trial is postponed until the Final Report is prepared. For its part,

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282 Id. at 3.
283 Id. at 4.
285 49 U.S.C. §§ 1441(e), 1903(c). 49 U.S.C. § 1441(e) provides: "No part of any report or reports of the Board relating to any accident or the investigation thereof, shall be admitted as evidence or used in any suit or action for damages growing out of any matter mentioned in such report or reports." Courts have held that this prohibition renders only the NTSB's formal reports inadmissible, and does not require exclusion of the testimony of those having firsthand factual knowledge of the causes of an accident. Gesell & Dempsey, supra note 260, at 762–63. Further, though those portions of the findings of probable cause of an NTSB report may be excluded, some courts have allowed admission of the factual portions of the report. Id. Cockpit voice recorder transcripts prepared by the NTSB are also inadmissible unless the court decides a transcript is required for a fair trial. Paul Larsen, Joseph Sweeney & John Gillick, Aviation Law: Cases, Laws and Related Sources 704 (2006). But see, Rachel Clingman, Admissibility and Use of NTSB and FAA Reports in Civil Litigation, in Litigating the Aviation Case 383, 406 (A. Harakas ed., 3rd ed. 2008) ("The circumstances surrounding a particular incident, the amount of publicity it receives, and the decisions made by the NTSB and FAA during and following their investigations all impact the final determination a court may make regarding admissibility in a subsequent civil case.").
286 Wendell Smith, The General Aviation Case, 12 Utah B.J. 17, 18 (Feb. 1999) ("The NTSB permits the deposition to be taken of their investigators. However, the testimony of these investigators is limited strictly to the facts."); see also Robert Jarvis, James Crouse, James Fox & Gregory Walden, Aviation Law: Cases and Materials 72–105 (2006).
287 Sarsfield et al., supra note 11, at 81–82.
the NTSB has promulgated regulations attempting to differentiate between (admissible) factual accident reports, and (inadmissible) Board accident reports (which include the probable cause finding). Several U.S. federal appellate courts have concluded that NTSB reports are inadmissible in litigation.

Upon gathering information and analyzing it, the NTSB will issue an accident investigation report (the Final Accident Report, or “Blue Book”), usually between twelve and eighteen

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288 49 C.F.R. pt. 835 (2005). 49 C.F.R. § 835.2 provides that “no part of a Board accident report may be admitted as evidence or used in any suit or action for damages growing out of any matter mentioned in such report.” Id. § 835.2 Although NTSB accident reports may not be admitted into evidence in a judicial proceeding, certain factual information derived during the investigation of an accident in preparation for an accident report may be admissible. Section 835.2 distinguishes between the NTSB accident reports and factual accident reports. Id. A “factual accident report” is the result of the NTSB investigation. Id. Section 835.2 also provides that the NTSB “does not object to, and there is no statutory bar to, admission in litigation of factual accident reports.” Id. The U.S. Supreme Court also attempted to clarify the distinction between “factual findings” and inadmissible “conclusions” in Beech Aircraft v. Rainey, 488 U.S. 153 (1988). See also In re Air Crash Disaster at Sioux City, Iowa, 780 F. Supp. 1207 (N.D. Ill. 1991); London, supra note 4, at 73 ("Because of the statutory inadmissibility of NTSB probable cause final reports, parties do not have the use of public, professional, and unprivileged evidence, theoretically because it would improperly sway the jury and because it would impair the neutrality and independence of the NTSB."); Roy Tess Atwood, Comment, Admissibility of National Transportation Safety Board Investigations in Civil Air Crash Litigation, 53 J. AIR L. & COM. 469 (1987).

months after the accident. The report includes a list of factual findings relevant to the accident, a finding of probable cause, and often includes recommendations, including proposals for new or amended procedures or regulations.

The Rand Institute for Civil Justice performed a comprehensive assessment of the NTSB, concluding:

Although it is not a regulatory agency and does not command significant enforcement powers, the NTSB exerts enormous influence based on the independence and accuracy of its accident investigations and the authority of its recommendations. The NTSB is charged with the responsibility for investigating and establishing the facts, circumstances, and probable cause of transportation accidents and making safety recommendations to governmental agencies to prevent similar accidents from happening in the future. Fundamentally, the Safety Board provides a quality assurance function vital to the ongoing safety of all modes of transportation. The NTSB's unique role in transportation safety is contingent on the ability of the board members and the professional staff to conduct independent investigations of accidents and major incidents and, in so doing, to assure public confidence in the safety of our national transportation systems.

V. THE ROLE OF THE EUROPEAN COMMUNITY IN ACCIDENT/INCIDENT INVESTIGATIONS.

This section evaluates the relationship between European Regulations and Directives vis-à-vis Annex 13 of the Chicago Convention.

A. CIVIL AVIATION ACCIDENT/INCIDENT INVESTIGATIONS

Within the E.C./E.U., the procedures and mechanisms for investigating civil aviation accidents have long been governed by the Chicago Convention, which gave exclusive control of the

290 SARSFIELD ET AL., supra note 11, at 14.
291 Id.
at 14.
process to the Member State where such an accident occurred and, where different, the home State of the carrier that suffered the accident. But with the passage of the Third Package of air transport liberalization, it became more difficult to neatly identify which Member States had an interest in such an investigation. Therefore, the Council determined that it was necessary to provide guidance to harmonize the investigation processes in the Member States.

To this end, in 1994 the Council issued Directive 94/56 with the goal of “facilitating the expeditious holding of investigations . . . .” The terms of the directive apply to all investigations of accidents or incidents within the territory of the E.U., along with accidents or “serious incidents” outside of the territory of the E.U. if the aircraft concerned are registered in a Member State or owned by an undertaking established in a Member State, and the State where the event took place does not conduct such an investigation. For the purpose of the directive, an “accident” is defined as an event that occurs while passengers are onboard the aircraft and where the event results in the death of, or serious injury to, a person, where the aircraft is seriously damaged, or where the aircraft “is missing or is completely inaccessible.” An “incident” is an event, other than an accident, which affects or would affect the safety of the aircraft, while a “serious incident” is an event that involves circumstances suggesting an accident nearly occurred.

Every accident and serious incident must be subjected to a mandatory investigation, while lesser incidents may be investigated at the discretion of concerned Member States. A Member State may delegate its investigatory duties to another Member State. The scope and nature of the investigation is determined by the appropriate investigating bodies, but, consistent with Annex 13, the sole objective of the investigation is to prevent its recurrence, and not to assign “blame or liability” for

296 Dempsey, supra note 43.
298 Id. art. 2(1)–(2)(i)–(ii).
299 Id. art. 3(a)(1)–(3).
300 Id. art. 3(j)–(k); see the Annex to the Directive for a list of possible events which would constitute a “serious incident.”
302 Id. art. 6(5).
303 Annex 13, supra note 3, ¶ 3.1.
the event.\textsuperscript{304} A Member State may use whatever procedures are appropriate within its legislative system for establishing or defining an investigating body.\textsuperscript{305} However, the investigating body must have free access to all relevant materials and evidence related to the event, such as manufacturers' design information and the site of the incident.\textsuperscript{306} The investigating body must also be "functionally independent" from other national aviation authorities.\textsuperscript{307} Specifically, the accident/incident investigation agency must "be functionally independent . . . of the national aviation authorities responsible for airworthiness, certification, flight operation, maintenance, licensing, air traffic control or airport operation and . . . of any other party whose interests could conflict with the task entrusted to the investigating body or entity."\textsuperscript{308} The investigating body must be a permanent and independent body with sufficient resources to be able to perform its duties properly.\textsuperscript{309} However, it may request assistance from other national agencies for the supply of installations and equipment for certain aspects of the investigation process.\textsuperscript{310} This would include everything from hangars to store crash debris to specialized lab facilities for examination of flight data recorders.\textsuperscript{311} Wherever possible, this assistance should be supplied at no cost.\textsuperscript{312} These requirements facilitate the obligation set forth in Annex 13 requiring the accident investigatory authority be independent in the conduct of the investigation and have unrestricted authority over it.\textsuperscript{313} Any investigation into an accident must be the subject of a mandatory accident report summarizing the investigating body's findings and its safety recommendations, if any.\textsuperscript{314} The report must be made public, preferably within twelve months of the accident.\textsuperscript{315} The conditions attached to an incident report are significantly more stringent, presumably because the less severe nature of the event militates against the release of superfluous

\textsuperscript{305} Id. art. 5(1).
\textsuperscript{306} Id. art. 5(2)(a)-(g).
\textsuperscript{307} Id. art. 6(1).
\textsuperscript{308} Id. art. 6(1).
\textsuperscript{309} Id. art. 6(1), (3)
\textsuperscript{310} Id. art. 6(3)-(4)(a).
\textsuperscript{311} See id. art. 6(4)(a).
\textsuperscript{312} Id. art. 6(4)(b).
\textsuperscript{313} Annex 13, \textit{supra} note 3, ¶ 5.4.
\textsuperscript{314} Council Directive 94/56, art. 7(1).
\textsuperscript{315} Id. art. 7(2).
information. While an incident report must be generated, including safety recommendations where appropriate, it should guard the anonymity of any persons involved in the incident.\textsuperscript{316} Furthermore, unlike the accident report, which is to be publicly distributed, an incident report need only be provided to "the parties likely to benefit" from its determinations.\textsuperscript{317} Any safety recommendations included in either type of report must be provided to all of the concerned parties and to the Commission.\textsuperscript{318} Such recommendations shall not give rise to "a presumption of blame or liability for" the event being investigated.\textsuperscript{319}

Although Directive 94/56 establishes minimum standards for E.U. Member States, it is silent as to several issues addressed in Annex 13 including, according to European air lawyer Nikolai Ehlers, "disclosure of records, participation of accredited representatives, [and] access to information . . . ."\textsuperscript{320} Ehlers points out that though the "directive is not intended to be a detailed set of rules for accident investigations . . . [it] seems to be somewhat out of balance because of the total lack of provisions dealing with the rights of those directly or indirectly affected by the accident . . . ."\textsuperscript{321}

Directive 2003/42 addresses "occurrence" reporting. An "occurrence" is "an operational interruption, defect, fault or other irregular circumstance that has or may have influenced flight safety and has not resulted in an accident or serious incident . . . ."\textsuperscript{322} Here again, "the sole objective of occurrence reporting" is prevention and not the attribution of fault or blame.\textsuperscript{323} The Directive seeks to improve air safety "by ensuring that relevant information on safety is reported, collected, stored, protected, and disseminated."\textsuperscript{324} Among the governmental institutions that may be designated to collect and store the information in an accessible database are the accident investigation bodies of the E.U. Member States.\textsuperscript{325}

\textsuperscript{316} Id. art. 8(1).
\textsuperscript{317} Id. art. 8(2).
\textsuperscript{318} Id. art. 9.
\textsuperscript{319} Id. art. 10.
\textsuperscript{321} Id.
\textsuperscript{323} Id. art. 1.
\textsuperscript{324} Id.
\textsuperscript{325} Id. art. 5(1)(b).
To further the purposes of Directive 2003/42, in 2007, the E.U. established a central repository (compatible with the EC-CAIRS system) to store, process and exchange safety information at the E.U. level. The Commission also issued regulations governing the dissemination of information so collected.

In recent years, two important European safety organizations have been created—the European Air Safety Agency (EASA), in 2002, and the Council of European Aviation Safety Investigation Authorities (CEASIA), in 2006. EASA’s principal purpose is to establish uniformity on the issue of aviation safety within Europe. EASA enjoys comprehensive authority to exercise E.U. Member States’ aircraft certification functions under the Chicago Convention’s Annex 8—Airworthiness of Aircraft. EASA handed out its first aircraft type certification in 2003, and established its headquarters in Köln the following year. Thus far, as the E.U. regulator of civil aviation, EASA has remained free of the accident investigatory function. This separation of regulatory and investigatory functions is contemplated by Directive 94/56, though EASA’s jurisdiction may be expanded to address other aviation functions.

The Council of European ASIAs was established by the investigation authorities of the twenty-seven E.U. Member States in 2006 to coordinate activities, share resources and expertise, and exchange information. It is represented by the “[h]eads of the aviation safety investigation authorities of the E.U. Member States. Observers include the European Commission and other ECAC Member States.” The Council performs an im-

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333 The Council was established in 2006 after the proposal of the Aviation Working Group of the E.U. Group of Experts on Transport Accident Investigation. ICAO Working Paper, supra note 329, at 4.

334 Id.

335 See id.
important function as a body for coordination of accident investigation among Member States and as a liaison with the institutions of the European Union.\textsuperscript{336} The Council is a decision-making body with an “Executive” Bureau to act on its behalf.\textsuperscript{337} A dialogue has been established between the Council, the European Commission, and EASA.\textsuperscript{338}

In 2003, the European Commission established a “Group of Experts” to advise it on a strategy to address accidents in the transport sector.\textsuperscript{339} In 2006, the group issued its report, including several recommendations of relevance to the issue of independence of accident investigation bodies:

- A Safety Investigation Authority shall have unrestricted authority over its conduct and shall be granted the power and the resources to fulfill its tasks independently, effectively and in a competent manner.
- The Safety Investigation Authority shall be set up permanently and shall carry out its tasks impartially. Its functional, financial and legal independence from any other public bodies or third parties shall be guaranteed. The Safety Investigation Authority shall especially be independent from those authorities responsible for the establishment or enforcement of safety requirements that are imposed on the transport sector.\textsuperscript{340}

In 2007, the European Commission issued an “information document” addressing the role of the Community in accident investigations.\textsuperscript{341} In it, the Commission addressed two questions:

1. Whether the competence to designate and exercise the functions of the “accredited representative” under Annex 13 to the Chicago Convention resided in the Community or with Member States; and

2. If competence resides in the Community, whether EASA should be appointed the accredited representative.\textsuperscript{342}

\textsuperscript{336} Id.
\textsuperscript{337} See id.
\textsuperscript{338} See id.
\textsuperscript{339} Commission Decision 2003/425, 2003 O.J. (L144) 10 (EC).
\textsuperscript{341} European Commission, Agenda Item 14: Accident Investigations, EASA MB 03/2007, WP 14 Accident Investigations (June 13, 2007) (on file with author).
\textsuperscript{342} Id. at 2–3.
As to the first question, the Commission observed that the definitions of the “State of Registry,” the “State of Design,” and the “State of Manufacture” are the same in both Annex 13 and Annex 8, which addresses airworthiness of aircraft. The Commission “assumed” that the reason why Annex 13 designates these States as competent to appoint an accredited representative is that these functions have been attributed to these States with respect to the certification of aircraft as airworthy under Annex 8. Because airworthiness within the E.U. had been comprehensively addressed in Regulation 1592/2002, the Commission concluded that “the Community, and not member States, is now competent to designate the ‘accredited representative’ of the State of Design, the State of Manufacture and the State of Registry, where the aircraft concerned has been designed, manufactured or registered within the Community, respectively.”

As to the second question, the Commission observed that Article 15(1) of Regulation 1592/2002 had delegated to EASA jurisdiction “as specified in the Chicago Convention or its Annexes, [to] carry out on behalf of member States the functions and tasks of the State of design, manufacture or registry when related to design approval.” The Commission therefore concluded that it would not be justified to designate EASA as the sole “accredited representative” of the Community under Annex 13. Instead, the Community’s “accredited representative” should be the Commission, which could be assisted by “advisers” of EASA and the accident investigation authorities of the Member States. Alternatively, the Commission could appoint a person proposed by EASA as the “accredited representative” for all matters related to design approval, and the person(s) proposed by Member States where the aircraft has been assembled or registered for questions relating to those issues. Though it thought the ideal solution would be to establish an independent E.U. accident investigation body, the Commission favored the second alternative as a “pragmatic solution.”

343 Id.
344 Id.
345 Id. at 3–4.
346 Id. at 4.
347 Id.
348 Id.
349 Id.
350 Id. at 5.
Involving EASA in the investigation process—and in the critical task of designating the IIC—poses a troubling challenge to the independence and autonomy of the accident investigation process, for EASA is the aviation safety regulator for the E.U. Moreover, it appears the Commission is confused about the respective roles Annexes 8 and 13 play—the former addressing certification of aircraft as airworthy, and the latter addressing the quite different issue of investigation of safety failures. Annex 13 explicitly provides that the investigative authority must have independence in, and unrestricted authority over, the conduct of the investigation.\footnote{Annex 13, supra note 3, ¶ 5.4 ("[T]he accident investigation authority shall have independence in the conduct of the investigation and have unrestricted authority over its conduct . . . ").} Moreover, in promulgating E.U. Directive 94/56, the Council explicitly mandated that the investigatory body "be functionally independent of the aviation authorities responsible for airworthiness."\footnote{Council Directive 94/56, art. 6(1).} For example, if EASA participates in the selection of the IIC, how can the investigator be expected to objectively assess whether, in a particular case, EASA deficiently certified an aircraft as airworthy? Though Brussels appears tenaciously dedicated to stripping power from Member States and vesting it in E.U. institutions, allowing EASA to participate in the investigatory process in any way is fraught with peril, for it would undermine the integrity and credibility of the investigation, as many States have learned through hard experience. As George Santayana observed, "Those who cannot remember the past are condemned to repeat it."\footnote{Wikiquote, George Santayana, http://en.wikiquote.org/wiki/George_Santayana (last visited Apr. 4, 2010).}

In 2009, the European Commission identified the following concerns with the status quo:

- Unclear relationship between Community and Member States in accident investigation;
- Lack of uniform quality standards;
- Serious weaknesses in the implementation of safety recommendations;
- Under-optimal use of resources;
- Tensions between safety and judicial procedures; and
- Insufficient protection of the interests of air crash victims and their families.\footnote{European Commission, supra note 326.}
Among the alternatives under consideration are: (1) do nothing; (2) promote voluntary cooperation; (3) modify Directives 94/54 and 2003/42 and introduce a number of central functions; or (4) establish a centralized European Civil Aviation Accident Investigation Body (such as an E.U. "NTSB"). In October 2009, the E.U. Commission issued a proposed regulation addressing the role of the accident investigator. Among its principles is that: "The safety investigation authority shall be functionally independent in particular of aviation authorities responsible for airworthiness, certification, flight operation, maintenance, licensing, air traffic control or airport operation and, in general, of any other party whose interests could conflict with the task entrusted to the safety investigation authority or influence its objectivity." Further, the draft regulation provides, "The safety investigation authority shall be given the means required to carry out its responsibilities independently and shall be able to obtain sufficient resources to do so." However the final rule is written, the European Union would be well advised to keep the regulatory and investigatory functions and institutions separate, independent, and autonomous.

VI. CONCLUSION

The results of an accident investigation can be politically and economically devastating. If, for example, domestic transport regulatory institutions or governmental service providers are found to have been lax in enforcement, oversight, or service provision, the political fallout can be serious. If foreign governmental institutions are found to have been deficient, the foreign policy ramifications also can be unpleasant. If air carriers or manufacturers are found to have been less than diligent, the economic impact in terms of mandated repairs and modifications, design changes, and operating procedures can be tremendously expensive, as can the potential liability and criminal exposure in litigation, and the loss of market share because of a decline in consumer confidence.

355 Id.
357 Id. art. 5.2.
358 Id. art. 5.5.
359 SARSFIELD ET AL., supra note 11, at 30.
Strong political and economic forces can be mobilized to try to influence the investigation and bias the outcome or the determined cause(s) of an aviation accident. These challenges require an investigation that is performed by an investigatory body that is independent, unbiased, honest, free of political or industry influence, has unhampered access to the evidence, has adequate financial, human and operational resources, and possesses a high degree of professional competence, integrity, and expertise. Many States have learned this the hard way—by facing public skepticism when the investigator lacks impartiality or independence, or when the investigatory process has been tainted by politics.

One source notes that the credibility of an accident investigation agency depends on “the independence, timeliness, and accuracy of its factual findings and analytical conclusions.” Independence and competence are essential for credibility. Credibility is essential for the implementation of measures essential for the improvement of the safety of air transport. Change, though sometimes necessary, can be socially and economically difficult. These difficulties can be more easily overcome if the institution advocating change is perceived as competent, objective, and credible.

As we have seen, many States have made investigation institutions organizationally, operationally, and functionally independent and autonomous from other governmental institutions, and in particular the transport regulator and the judiciary. Functionally, the safety investigator often is separated from the safety regulator—the investigator investigates the causes of safety accidents and incidents and makes recommendations to the regulator for corrective action, while the regulator promulgates and enforces regulations on manufacturers and carriers, principally, but also airports, air navigation providers, and maintenance operators. Both investigators and regulators have safety as their ultimate goal, but their organizational and functional lines are kept firm so as to enhance the objectivity of the investigating agency, and therefore the credibility of its findings. Often these organizational and functional lines have been drawn after a tainted accident investigation has caused an erosion in public confidence in the investigator’s objectivity. Among the institutions that sometimes warrant investigation is the regulator itself; hence, allowing the regulator to influence

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360 Id. at xiii.
the investigation creates a manifest conflict of interest. The fox should never be allowed to guard the hen house.\textsuperscript{361}

So too, the functional and operational lines of the regulator are kept separate in many States from the judiciary and its civil and criminal litigation and its world of litigators, prosecutors, sheriffs, and jails. The investigating body focuses on causes of accidents as a catalyst for corrective and preventive action, and not on blame or the imposition of sanctions. In contrast, civil or criminal litigation focuses on causation as a catalyst for blame (fault), liability, compensation, and sometimes crime and punishment. Keeping these functions separate helps ensure that the investigatory body is free from conflicts of interest which may jeopardize its objectivity as a safety watchdog, and thereby corrode its credibility.\textsuperscript{362} According to aviation expert Francis Shubert, although coordination between these investigatory bodies "is desirable and necessary, the effectiveness of the safety investigation requires full independence of the investigation board."\textsuperscript{363}

One must add that the growing trend toward criminalization of aviation accidents—driven by families, the press, and politics—may impede the ability of the investigator to acquire evidence from parties that may themselves be subject to prosecution, and may chill voluntary incident reporting. Unless there is evidence of an intentional wrong, there can be little justification for criminal prosecution.\textsuperscript{364} Often, an accident has been caused by simple, ordinary negligence. Criminalization of aviation accidents may actually be detrimental to safety.\textsuperscript{365} Ab-

\textsuperscript{361} Kenneth Elsea, Independence: The (Often) Missing Ingredient in Root Causes and Corrective Actions 1 (Paper presented to the Sixth Annual Human Performance, Route Cause & Trending Workshop, Phila., Pa., June 12–15, 2000).

\textsuperscript{362} Shubert, supra note 3, at 33–34. Shubert notes that, beyond formal autonomy, "Independence is also guaranteed by making sure that parties that may have a particular interest of their own, different from the promotion of aviation safety, are not allowed to take part in the investigation." Id.

\textsuperscript{363} Id. at 32–33.

\textsuperscript{364} NTSB Bar Association, supra note 183, at 923. ("The damage done to aviation safety by prosecutions undertaken where there is no clear intent to commit a crime does not justify the marginal benefit that might result from such prosecutions . . . . The application of criminal laws should be reserved only in cases where there is independent evidence of intentional criminal activity.").

\textsuperscript{365} See id. at 877–78. ("[T]he increased involvement of criminal investigators actually may be detrimental to aviation safety, since aviation professionals fear that routine business decisions could now become the basis for criminal prosecutions. As a result of the increased involvement of criminal investigators, these witnesses could become more guarded when dealing with accident and safety
sent intentional harm, we must retreat from the notion that vengeance must be exacted whenever human lives are lost.

Internally too, the investigatory body must remain independent of those who have an interest in a preferred outcome and who may seek to bias the result in a direction other than that which the truth would lead. Families, friends, neighbors of victims, unions representing flight personnel, airlines and manufacturers, and even foreign governments all may have an interest in skewing the outcome in their direction. Most can be held at arm's length and excluded from any formal role in the investigation. But herein lies a significant "catch-22." The manufacturers and the airlines have technical expertise that may be critical to the investigation. Hence, despite their potential bias, their essential expertise sometimes requires an invitation to participate in the investigation. However, they must not be allowed to interfere with the objectivity of the investigation and must act properly within the direct control of the IIC as to evidence gathering and evaluation and dissemination of results, be confined to the performance of specific tasks, and be subject to dismissal should they stray from the rules established by the IIC.

The families and other interested parties, including lawyers, though not allowed to participate in the investigation, deserve transparency during the investigatory process as transparency enhances credibility of the investigation. Transparency, of course, must be tempered by the need to refrain from releasing information prematurely (which might lead to erroneous conclusions as to causation), the need to protect the confidentiality of certain information, and the privacy of those who submit it.

In the final analysis, irrespective of the legislative, organizational, and procedural mechanisms for achieving autonomy and independence from political, industry, and other governmental institutions, the public must have confidence in the integrity and technical competence of the investigation. The investigators must show that they have objectively reviewed all the relevant facts, including systemic causes, which often will require examining airlines, manufacturers, maintenance providers, air

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investigators. This, in turn, could lead to less-informed investigators, at the expense of aviation safety."); id. at 904 ("The reticence of witnesses to disclose information may result in error reporting by those individuals who provide testimony and may ultimately impede an investigation. Approximately seventy-five per cent of aircraft accidents in the United States involve some form of human error. Thus, the potential for losing the cooperation of individuals who feel they may face criminal accusations is very real.").
navigation service providers, the regulatory framework, and sometimes too, the governmental institutions responsible for regulation and policy.\textsuperscript{666} The search for the truth must not be deterred because the truth is unpleasant.

An accident investigation body is like a medical doctor attempting to diagnose the cause of an illness. Sometimes the doctor must prescribe a remedy that is expensive, inconvenient, and painful. Only if the doctor is perceived to be both competent and objective will the patient undergo an unpleasant and expensive, yet necessary, cure.

\textsuperscript{666} Smart, supra note 92, at 113.