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Remembering How to Fly: How New Pilot Training Requirements May Do More Harm than Good

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REMEMBERING HOW TO FLY: HOW NEW PILOT TRAINING REQUIREMENTS MAY DO MORE HARM THAN GOOD

JANE CHERRY *

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I. INTRODUCTION

In 2011, a study by a Federal Aviation Administration (FAA) advisory committee reportedly found that an increasing proportion of the commercial air accidents that occurred over the last five years were the result of pilot error. The media and certain government officials have attributed these accidents caused by pilot error to pilot fatigue and pilot training, which is now directed more toward aircraft technology rather than flight maneuvering. Pilots are "forgetting how to fly." If this is true, however, accident reports issued after recent plane crashes do not reflect this reality.

Piloting is becoming increasingly automatic as equipment continues to advance. Despite this, aviation experts are saying that pilot error is playing an increased role in crashes. One crash in particular directed public attention to the issue of pilot error over the last few years, causing Congress to repeatedly acknowledge problems with FAA duty and rest requirements as

1 See Bill Sanderson, Auto-Pilots' Scary Skies – Computers Taking over Airliners, N.Y. Post, Aug. 31, 2011, at 6 (reporting that the study concluded that "[c]ommercial airline pilots are ‘forgetting how to fly’ as equipment becomes more advanced—and the loss of those important skills have had deadly results").


4 See Lowy, supra note 3.

well as training requirements. The FAA has responded with new rules in both areas. But the new rules are misfocused and will impose billions of dollars of compliance costs on the airlines at a time when the airlines cannot afford them and the rules are not needed. These rules are unnecessary for three reasons. First, the current rules are more than sufficient. Second, the law allows plaintiffs to recover from airlines, pilots, and their insurance companies where pilots bear some or all of the responsibility for aviation accidents. Finally, history has shown that the consequences, particularly the unintended consequences, of these rules are likely to harm rather than help the airline industry.

Part II of this comment looks at the history of aviation safety, marked by periods in which different agencies and different legislation guided the field. In order to learn from monumental changes in the history of aviation safety, it analyzes the impact of deregulation, a process by which the FAA stopped controlling fares and allowed the market to determine air prices. It also looks closely at the Colgan airplane accident of 2009, a tragic event that killed fifty people and served as the impetus for recent changes in legislation and regulation.

Part III examines the current state of the law by looking at the FAA regulations in place in 2009 that became the focus of media attention. Specifically, this part examines the regulations covering pilot duty and rest requirements, as well as those covering pilot training requirements. Part III also covers the recent campaigns to change these two sets of rules and examines how courts have handled these issues.

Part IV analyzes the historical background and laws presented in Parts II and III and concludes that no regulatory change was necessary, as inevitable human error, rather than pilot error,
was the primary cause of the Colgan crash. Part IV also analyzes the evolution of pilot training requirements in the context of the history presented in Part II and the lessons that can be learned from it. Finally, Part IV proposes that legislative restraint, rather than new laws and rules, is the solution to the problems that recent regulatory reform sought to tackle.

II. HISTORICAL BACKGROUND OF AVIATION SAFETY

A. Regulating Aviation: “Safety First, Last, and Always”

1. Air Commerce Act of 1926

Until 1926, states and localities governed regulation of aircraft and pilots. In 1926, Congress began regulating aircraft and pilots at the federal level with the passage of the Air Commerce Act, which put the Department of Commerce’s new Aeronautics Branch in charge of “fostering air commerce, issuing and enforcing air traffic rules, licensing pilots, certifying aircraft, establishing airways, and operating and maintaining aids to air navigation.”

2. Civil Aeronautics Act of 1938

Unlike the Air Commerce Act of 1926, the Civil Aeronautics Act of 1938 sought to establish “comprehensive” federal regulation of aviation in that it increased the focus on accidents. This law established the Civil Aeronautics Authority (CAA) and tasked it with accident investigation and prevention. Later, the CAA split into two federal agencies: the Civil Aeronautics Administration and the Civil Aeronautics Board (CAB). The CAB maintained control of pilot and aircraft certification as well

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14 FAA History, supra note 12.

15 See Sam L. Majors Jewelers v. ABX, Inc., 117 F.3d 922, 926 (5th Cir. 1997) (describing the history of aviation regulation as part of a discussion of whether the federal court had jurisdiction).

16 FAA History, supra note 12.

17 Id.
PILOT TRAINING REQUIREMENTS

as accident investigation. Despite these developments, regulation during this time was described as “spotty,” “unfocused,” and “flawed.”

In 1956, a tragic accident directed media and congressional attention to federal air regulation and safety. A Trans World Airlines (TWA) plane and a United Airlines plane collided in “uncontrolled airspace,” killing all the passengers on board both planes—a total of 117 people. Daniel Bubb described how the public reaction to the crash affected the policy that followed:

Newspaper headlines nationwide pointed out the obvious problem: the government was unequipped to handle the rapidly expanding air traffic, especially jets. The American public angrily criticized the government, but specifically targeted the Civil Aviation Authority for not doing its job. Washington finally realized that it did not need just an oversight board, but an entire separate, independent agency to handle all aviation affairs.

Thus, as a result of media coverage and public pressure, a new era of regulation began with the Federal Aviation Act of 1958.

3. Federal Aviation Act of 1958

In 1958, Congress vested the responsibilities of the Civil Aeronautics Administration and the CAB in the new Federal Aviation Agency. In 1967, this agency became the Federal Aviation Administration (FAA) that still exists today as part of the Department of Transportation (DOT), a cabinet-level department created at the same time as the FAA. Over the next forty-five years, the FAA evolved, adapting to the growth of air commerce and the emergence of new threats to airline safety. For example, airplane hijackings presented one of these “unexpected challenges.” Throughout this time, although the specific

18 Id.
20 Id. at 659–60.
21 Id.
22 Id. at 660.
23 See id.
24 FAA History, supra note 12.
25 Id.
26 Id.
27 Id.
threats to safety were changing, the FAA’s primary concern was always safety, with its main focus on air traffic control. However, the most basic safety function of the FAA—the certification of pilots—remains an issue, despite the emergence of the more complicated safety threats during the agency’s existence.

B. Deregulation

Within the FAA, the CAB continued to regulate airfare while the rest of the agency was concerned with safety. During the 1970s, the U.S. economy was in a recession and airfares were inconsistent. "The federal government consistently was slow to respond with funding and implemented necessary changes only when necessary to deal with an immediate crisis. The FAA, in particular, demonstrated this sluggish response by failing to implement new laws and enforce existing regulations concerning flight safety." The late Senator Edward “Ted” Kennedy of Massachusetts led an effort to reform the regulatory structure of the FAA, holding hearings to investigate high fares. The cause of the high fares seemed to be the lack of competition. The CAB, and its fare regulation, had to go. The Nixon, Ford, and Carter administrations all supported reform. As Justice Stephen Breyer later reflected on this bipartisan support, “The hearings brought together a Democratic senator and a Republican President in Gerald Ford. They created alliances among consumer groups, pro-competition business groups, economists, and regulatory reformers.” The Airline Deregulation Act (ADA) passed with overwhelming support in both the Senate and the House. President Carter signed it into law in 1978.

28 Id.
29 See, e.g., Sanderson, supra note 1.
30 Bubb, supra note 19, at 662–63 (citing ELIZABETH BAILEY, DAVID GRAHAM & DANIEL KAPLAN, DEREGULATING THE AIRLINES 31 (1985)).
31 Id. at 667.
32 Id. at 663; Stephen Breyer, Airline Deregulation, Revisited: Supreme Court Justice Stephen Breyer Reflects on the Benefits of Competition—and Its Hazards, BLOOMBERG BUS.WK., (Jan. 20, 2011, 5:00 PM), http://www.businessweek.com/bwdaily/dnflash/content/an20l1/db20110120_138711.htm.
33 Breyer, supra note 32.
34 See id.
35 Bubb, supra note 19, at 662–64.
36 Breyer, supra note 32.
37 Bubb, supra note 19, at 663–64 (The Senate and House votes in favor of the bill were “83 to 9” and “363 to 8,” respectively.).
38 Id.
Thus, beginning in 1978, the airline industry began a phase of “deregulation.” The purpose of the ADA, which amended the Federal Aviation Act of 1958, was “to encourage, develop, and attain an air transportation system [that] relies on competitive market forces to determine the quality, variety, and price of air services.” The legislation achieved this by eliminating the CAB, which had been setting commercial air prices for years. Congress emphasized that it did not intend for the law to lower the existing safety standards. As stated in Section 107 of the ADA, “The Congress intends that the implementation of the Airline Deregulation Act of 1978 result in no diminution of the high standard of safety in air transportation attained in the United States at the time of the enactment of such Act.”

But deregulation had unintended, harmful consequences. Competition increased, the market became saturated, and profits declined. As a result, airlines filed for bankruptcy and workers went on strike. Justice Breyer, who was a staffer for Senator Kennedy during the push for deregulation and “helped pass” the legislation, described these unintended results of deregulation as “unforeseen” consequences.

No one foresaw the industry’s spectacular growth, with the number of air passengers increasing from 207.5 million in 1974 to 721.1 million [in 2010]. As a result, no one foresaw the extent to which new bottlenecks would develop: a flight-choked Northeast corridor, overcrowded airports, delays, and terrorist risks consequently making air travel increasingly difficult. Nor did anyone foresee the extent to which change might unfairly harm workers in the industry.

For better or worse, airline prices are now deregulated and that is not likely to change.

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40 Id.
41 See Bubb, supra note 19, at 664.
42 See Airline Deregulation Act § 107.
43 Id.
44 See Bubb, supra note 19, at 663–64.
45 Id. at 664.
46 Id. at 664–65.
47 Breyer, supra note 32.
48 Id. After weighing these negative consequences of deregulation, Justice Breyer ultimately concluded that deregulation was “worthwhile” because even though airline revenue has gone down, “fares have gone down” and “the number of travelers has gone way up.” Id.
49 See id.
But over thirty years after the passage of the ADA, its unintended consequences continue to be discussed and its success continues to be assessed, showing that reactionary changes to aviation regulation, however well-intended, have lasting effects.\textsuperscript{50}

\section*{C. COLGAN CRASH OF 2009}

\subsection*{1. What Happened}

One crash in particular has attracted a lot of media attention over the last few years, causing significant public reaction and calls for changes to federal aviation regulation, particularly with respect to duty and rest requirements for pilots.\textsuperscript{51} “On February 12, 2009, a Colgan Air Bombardier Dash 8-Q400 (N200WQ) operating as Continental Connection Flight 3407, crashed during an instrument approach to Runway 23 at the Buffalo-Niagara International Airport. . . .”\textsuperscript{52} All of the passengers on board the plane and one person on the ground died.\textsuperscript{53} In the months that followed, concerns increased “about pilot fatigue, failed flying tests and cockpit warning systems.”\textsuperscript{54} The National Transportation Safety Board (NTSB) held hearings to determine the cause of the accident and make recommendations.\textsuperscript{55}

The NTSB hearings on the Colgan crash revealed that pilot error played a prominent role.\textsuperscript{56} As the plane experienced an aerodynamic stall, or a wing stall, the captain and co-pilot violated rules and “made critical errors” that rendered them unable to maneuver the plane correctly as it was crashing.\textsuperscript{57} Most importantly, “when Flight 3407’s stick-pusher kicked in, [Captain] Renslow pulled back on the plane’s control column, apparently trying to bring the aircraft out of the sudden dive by bringing the aircraft’s nose up.”\textsuperscript{58} If the plane had been in a “horizontal tail stall caused by tailplane icing,” the pull-back pro-

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{50} \textit{See id.}
\item \textsuperscript{51} \textit{See Colgan Air Crash Raises Many Safety Issues, supra note 2 (extensively covering “[t]hree days of testimony before the National Transportation Safety Board” held in May 2009 to determine the cause of the Colgan accident).}
\item \textsuperscript{52} \textit{Id.}
\item \textsuperscript{53} \textit{Id.}
\item \textsuperscript{54} \textit{Id.}
\item \textsuperscript{55} \textit{Id.}
\item \textsuperscript{56} \textit{See id.}
\item \textsuperscript{57} \textit{See id.}
\item \textsuperscript{58} \textit{Id.}
\end{itemize}
\end{footnotesize}
procedure used by Captain Renslow would have been proper. However, “[p]ushing forward to gain speed is the proper procedure for a wing stall” like the one this plane was experiencing.

The hearings revealed that, in addition to the maneuvering error by Captain Renslow, both the captain and the co-pilot violated “the 'sterile cockpit’ rule which prohibits extraneous conversation on the flight deck during landing approach.” The sterile cockpit rule is rarely the subject of litigation or controversy. Thus, these hearings did not involve allegations or implications that its violation led to the crash in any direct way. In fact, this violation was only mentioned in passing.

Instead, the focus of the hearings turned on whether the captain and co-pilot were adequately rested prior to the flight. The testimony showed two possibilities: either they both were adequately rested, or, if not, any fatigue they were experiencing was caused not by their work schedule but by their own choices prior to flight. According to Colgan, “Captain Renslow had nearly [twenty-two] consecutive hours of time off before he reported for duty on the day of the accident,” and “First Officer Shaw had been off work for three days since her last flight.” In the case of First Officer Shaw, fatigue was likely, but not because

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59 Id.
60 Id.
61 Id. The sterile cockpit rule is an FAA regulation prohibiting “any activity during a critical phase of flight which could distract any flight crewmember from the performance of his or her duties or which could interfere in any way with the proper conduct of those duties.” The rule lists examples of such prohibited activities “such as eating meals, engaging in nonessential conversations . . ., and reading publications not related to the proper conduct of the flight.” 14 C.F.R. § 121.542(b) (2011); 14 C.F.R. § 135.100(b) (2011).
62 See Elassaad v. Independence Air, Inc., 613 F.3d 119, 129–31 (3d Cir. 2010) (holding that FAA regulations do not preempt state law claims related to “disembarkation of passengers” and “not[ing] that [the sterile cockpit rule and other] regulations under the Aviation Act do not specifically regulate the conduct of the crew in connection with the loading or unloading of passengers,” but instead are directed at maintaining safety during flight); see also Rubin v. United Air Lines, Inc., 117 Cal. Rptr. 2d 109, 124 (Cal. Ct. App. 2002) (mentioning the rule in a case involving an unruly passenger, but only to emphasize the importance of avoiding distractions in the cockpit).
63 See Colgan Air Crash Raises Many Safety Issues, supra note 2.
64 See id.
65 Id.
66 Id.
67 Id.
68 Id.
of her flight schedule. She had not flown for three days prior to the flight, but "did not reserve adequate time to travel from her home to her base in order to ensure she was properly rested and fit for duty." 

2. Response from the Media and Congress

The Colgan accident was a salacious media story. Reports appealed to fear: a plane crashed, hitting a house, and causing an "intense fire at the site of the crash." Fifty people were killed, one of them a person minding his own business inside his home. Reports also provided mystery and intrigue, conjuring images of "investigators in Washington . . . comb[ing] through . . . tapes." 

Reports were not only scary and mysterious, but they were also heartbreaking. The reports described the death of a "human rights advocate," a widow whose husband had been killed in the September 11th attacks, and people traveling to birthday parties and reunions. They even covered "bitter ironies" such as the death of "a Vietnam veteran who had twice survived helicopter accidents during the war." And the "technical details" promised to be just as "chilling." The "painstaking" investigation would eventually reveal that the pilots "made critical errors," and that these errors were the cause of the crash.

Months and even years later, once it had become clear that pilot error contributed to the crash, the media continued to cover the story. Headlines attracted readers with mention of

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69. Id.
70. Id.
71. See Wald & Robbins, supra note 5.
72. See id.
73. Id.
74. See id.
75. See id.
76. See id.
77. See id.
78. See id. (quoting David Bissonette, Emergency Coordinator for the town of Clarence Center, New York, where the accident took place).
79. See Colgan Air Crash Raises Many Safety Issues, supra note 2.
“failed tests,” an airline that had “kept scores secret,” and “smoking gun emails.” Most recently, in October 2011, news regarding the crash included reports of emails sent during the months before the incident that discussed Captain Renslow’s training status and flight eligibility. According to an attorney representing families suing Colgan, these emails showed that Captain Renslow had demonstrated some deficiencies in training, and that Colgan knew of these deficiencies. For this reason, the attorney referred to them as the “smoking gun” in his clients’ case against the airline.

The media was not alone in its response to the Colgan crash. Congress responded as well by holding hearings and eventually passing legislation requiring the FAA to change its regulation of rest requirements and pilot training. These “hearings and the introduction of the Airline Safety and Pilot Training Improvement Act” arose “out of concern that improvements would take too long to implement in the FAA’s rulemaking process.” Then, over two years later, the release and media discussion of the “smoking gun” emails triggered yet another round of hearings. Because these “relevant emails were not shared” during the initial NTSB investigation, Senator Charles Schumer of New York requested this second round of hearings “to determine” whether “the investigation process that was conducted by the [NTSB] who found the cause to be pilot error, [could] be improved.”

III. CURRENT STATE OF THE LAW

A. FEDERAL AVIATION REGULATIONS

The Secretary of Transportation and the FAA Administrator have certain duties and powers “related to aviation safety” under 49 U.S.C. § 106(g). These include reporting to the President

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81 See Levin, supra note 80; Hill, supra note 80.
82 See Hill, supra note 80; Fairbanks, supra note 80.
83 Id.
84 Id.
85 Id.
86 Id.
87 Hill, supra note 80.
88 Schumer Calls for Hearing into Colgan Tragedy, Emails Released, supra note 6.
89 Id.
and Congress,\(^91\) participating in accident investigations,\(^92\) taking appropriate safety considerations,\(^93\) making decisions on the use of airspace,\(^94\) granting public interest exemptions from regulation,\(^95\) reporting on investigations and their conclusions,\(^96\) and conducting research and development.\(^97\) These duties and powers allow the FAA to regulate in order to promote air safety. FAA regulations have the "force and effect of law."\(^98\)

1. **Pilot Rest Requirements**

Duty and rest requirements issued by the FAA currently prohibit a pilot from flying in excess of "1,200 hours in any calendar year," "120 hours in any calendar month," or "34 hours in any 7 consecutive days."\(^99\) These requirements also prohibit a one-pilot flight crew from flying in excess of "8 hours during any 24 consecutive hours," and a two-pilot flight crew from flying in excess of "8 hours between required rest periods . . . for the operation being conducted."\(^100\) With some exceptions, each assignment must allow for a certain amount of rest "during the 24 consecutive hours preceding the scheduled completion of any flight segment."\(^101\) These amounts are "9 consecutive hours of rest for less than 8 hours of scheduled flight time"; "10 consecutive hours" for 8–9 "hours of scheduled flight time"; and "11 consecutive hours of rest for 9 or more hours of scheduled flight time."\(^102\) Rest periods are "period[s] free of all responsibility for work or duty should the occasion arise."\(^103\)

\(^98\) See Airplanes of Boca, Inc. v. United States ex rel. FAA, 254 F. Supp. 2d 1304, 1312 (S.D. Fla. 2003) (citing Tilley v. United States, 375 F.2d 678, 680, 684 (4th Cir. 1967); United States v. Schultetus, 277 F.2d 322, 327 (5th Cir. 1960)) (noting that air traffic "regulations have the force of law"); see also King v. NTSB, 362 F.3d 439, 441 (8th Cir. 2004); Cappello v. Duncan Aircraft Sales of Fla., Inc., 79 F.3d 1465, 1469 n.3 (6th Cir. 1996).
\(^100\) 14 C.F.R. § 135.265(a)(4)–(5).
\(^101\) 14 C.F.R. § 135.265(b)–(c).
\(^102\) 14 C.F.R. § 135.265(b)(1)–(3).
2. Pilot Training Requirements

A pilot must meet certain training requirements regulated by the FAA. Under the current rules, a pilot must pass a written or oral exam covering familiarity with "each type of aircraft to be flown by the pilot"; navigation systems; "air traffic control procedure"; meteorology, "including the principles of . . . icing"; familiarity with "severe weather situations"; and familiarity with "new equipment, procedures, or techniques, as appropriate." A pilot must also pass a "competency check," which "may include any of the maneuvers and procedures . . . appropriate to the category, class and type of aircraft involved." These maneuver and procedure checks must show "that the pilot [is] the obvious master of the aircraft, with the successful outcome of the maneuver never in doubt." Portions of [the] required competency check may be given in an aircraft simulator or other appropriate training device, if approved by the [FAA] Administrator. A pilot must also pass an "instrument proficiency check," which "may be substituted for the competency check."

B. Federal Aviation Regulations in the Courts

Courts review interpretations of aviation regulations only if they are final orders from the FAA. The final order requirement is interpreted broadly, including even letters written by FAA officials and orders issued "under the authority of the FAA though not by the Administrator himself." It "permits any

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105 14 C.F.R. § 135.293(a)(2)-(8).
106 14 C.F.R. § 135.293(b).
107 14 C.F.R. § 135.293(d).
108 14 C.F.R. § 135.293(f).
109 14 C.F.R. § 135.297(a) (2011); 14 C.F.R. § 135.293(c).
110 See, e.g., Zephyr Aviation, L.L.C. v. Dailey, 247 F.3d 565, 568, 571 (5th Cir. 2001) (holding that a "suit should not have been dismissed because of a failure to exhaust administrative remedies" where the plaintiff alleged "violations by individual FAA inspectors" only because the FAA "appeal structure does not . . . provide a forum for redressing" such violations).
111 S. Cal. Aerial Advertisers' Ass'n v. FAA, 881 F.2d 672, 675 (9th Cir. 1989) (holding that a "ban on fixed-wing aircraft travel" was not "outside the scope of" the Federal Aviation Act when issued by "an FAA official" other than the Administrator, in this case the "Assistant Manager of the Air Traffic Division for the Western-Pacific Region of the FAA"); New York v. FAA, 712 F.2d 806, 808 (2d Cir. 1983) (holding that "for purposes of review under [federal law], the term 'order' should receive a liberal construction," extending the rule to an operating certificate where it "imposes an obligation, denies a right, or fixes some legal relationship").
person ‘disclosing a substantial interest in an order issued by’ the FAA with respect to aviation safety matters to seek review in an appropriate court of appeals.'\textsuperscript{112} The court of appeals reviewing the order may then “affirm, amend, modify, or set aside any part of the order and may order the [Transportation] Secretary, Under Secretary, or [FAA] Administrator to conduct further proceedings.”\textsuperscript{113}

In these cases, courts review the FAA’s findings of fact as set out in the Federal Aviation Act, applying a deferential standard of review. \textsuperscript{114} The Federal Aviation Act establishes that “[f]indings of fact by the Secretary, Under Secretary, or Administrator, if supported by substantial evidence, are conclusive.”\textsuperscript{115} Therefore, a court “gives the agency the benefit of the doubt,” and sets those findings aside only if they are not supported by substantial evidence. \textsuperscript{116} “All other findings and conclusions are reviewed to determine whether they are ‘arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.’” \textsuperscript{117} Where a case concerns a violation of FAA regulations, it is reviewed first by an administrative law judge.\textsuperscript{118} After a hearing before an administrative law judge, an appeal goes to the NTSB, and an appeal from the NTSB goes to the federal courts of appeals.\textsuperscript{119} Federal courts of appeals “review an NTSB decision ‘only to determine whether it is arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.’”\textsuperscript{120}

\textsuperscript{112} Aviators for Safe & Fairer Regulation, Inc. v. FAA, 221 F.3d 222, 225–26 (1st Cir. 2000) (quoting 49 U.S.C. § 46110 (1994)) (holding that a “notice of enforcement policy” is a final order “ripe for judicial review”).

\textsuperscript{113} 49 U.S.C. § 46110(c) (2006). This section of the Federal Aviation Act permits judicial review by courts of appeals if the petitioner has properly filed his objection and the clerk of the court has notified the Secretary of Transportation, Deputy Secretary of Transportation, or Administrator of the FAA in compliance with 49 U.S.C. § 46110(a)-(b). 49 U.S.C. § 46110(c).

\textsuperscript{114} Id.; Flamingo Express, Inc. v. FAA, 536 F.3d 561, 567 (6th Cir. 2008) (holding that the FAA did not err in determining that a liability insurance requirement by a municipal owner was not unreasonable or discriminatory).

\textsuperscript{115} 49 U.S.C. § 46110(c).

\textsuperscript{116} Flamingo, 536 F.3d at 567 (quoting Wilson Air Ctr., L.L.C. v. FAA, 372 F.3d 807, 813 (6th Cir. 2004)).

\textsuperscript{117} Id. (quoting the Administrative Procedure Act, 5 U.S.C. § 706(2)(A) (2006)).

\textsuperscript{118} See Platt v. FAA, 45 F.3d 427, 427 (4th Cir. 1995).

\textsuperscript{119} See id.

\textsuperscript{120} Id. (quoting Hernandez v. NTSB, 15 F.3d 157, 158 (10th Cir. 1994); 5 U.S.C. § 706(2)(A)).
C. RULES IN TRANSITION

The FAA recently reported that “the fatality risk for commercial aviation in the United States” dropped by 83% from 1998 to 2008. Unlike general aviation statistics, which report that most accidents are caused by “loss of control in flight while maneuvering,” these commercial aviation statistics do not reveal a common cause. “Since there are few commercial aviation accidents and no common cause, more data points are needed.” Yet, the FAA advisory committee study of 2011 and the media response to it show that the cause of pilot error is of particular concern to the media and the public.

The DOT and the FAA responded to concerns about pilot performance, announcing a “sweeping final rule” affecting pilots and their capabilities in December 2011. But this sweeping final rule had little to do with the subject of pilot error from the earlier study. Instead, it changed rest requirements for pilots. Additionally, it proposed to spend $297 million on the “aggressive effort,” with the Secretary of Transportation calling it “a major safety achievement.”

1. Pilot Rest Requirements

Following the Colgan accident in 2009, congressional pressure led to a promise to explore pilot fatigue and a proposed new rule governing pilot rest requirements. By the end of

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122 FAA General Aviation Fact Sheet, supra note 121.

123 FAA Commercial Aviation Fact Sheet, supra note 121.

124 Id.

125 See, e.g., Lowy, supra note 3.


127 Id.

128 Id. Cost estimates later increased to $2 billion. Bigger Pilot Safety Issue: Automation or Fatigue?, supra note 7.

2011, the FAA was rolling out new rest regulations that would take effect two years later, citing the Colgan accident and the 2009 committee hearings as the driving forces behind the change. The most significant change was the establishment of "a [ten]-hour minimum rest period prior to the flight duty period, a two-hour increase over the old rules." At the time of the 2011 announcement, the cost of this and the other changes imposed by the "rule to the aviation industry [was] $297 million." The FAA explained that the rule only applied to passenger planes because extending its coverage to "cargo operators . . . would be too costly compared to the benefits generated in this portion of the industry."

For this reason, the "long-awaited . . . rule" came as a disappointment to some. Because the new duty and rest rule will apply only to pilots of passenger aircraft, the rule "completely ignores" pilots of cargo aircraft who experience the same fatigue and require the same amount of rest. The FedEx Master Executive Council (MEC), the FedEx branch of the Air Line Pilots Association, International (ALPA), expressed "outrage[,]" calling the new rule "a political failure." After all, cargo aircraft travel in the same airspace as passenger aircraft, so fatigue of cargo pilots is just as much a threat to air safety as fatigue of any other pilot. In fact, as the MEC pointed out, "the back side of the clock is exactly where the majority of cargo pilots find themselves operating aircraft," while the same cannot be said of passenger pilots.

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130 See FAA Press Release, supra note 126.
131 Id.
132 Id.
133 Id.
135 Id.
136 See id.
137 Id. "The back side of the clock" is a phrase that the press release attributed to a NTSB spokesperson. Id.
2. Pilot Training Requirements

Around the same time that pilot fatigue was in the spotlight, the FAA was also reportedly looking into pilot error. An FAA official tasked with conducting an agency study on pilot training was quoted as saying that pilots have an "automation addiction," and therefore need more mandatory manual flight training. Captain Rory Kay, the co-chair of an FAA advisory committee on pilot training, said, "We’re seeing a new breed of accident with these state-of-the-art planes. . . . We’re forgetting how to fly." But despite all the press attention this received, the study never made it to the public and was soon forgotten.

No one from the FAA has commented on it, aside from Captain Kay, who has been relatively quiet ever since, except to comment on airline mergers in his capacity as a representative for the United Airline Pilots Association in December 2011. Even more interestingly, Captain Kay was quoted making the same comment years earlier, before the study was ever mentioned to the press.

The aviation industry pushed back on the negative attention created by the study, calling out "some in the media" for disproportionate concern over the alleged "automation addiction." Dale Wright, Safety and Technology Director for the National Air Traffic Controllers Association (NATCA), said that the adoption of autopilot had created an "automation necessity" rather

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140 Lowy, supra note 3.

141 See id.


143 See ALPA Pays Homage, supra note 139.

than an “automation addiction.”145 The transition away from maneuvering and toward automation has made the airline industry “more predictable and more stable,” and has “taken many variables out of flying, allowing more precision and accuracy.”146 More importantly, the trend is “inevitable.”147 Pilots also “scoff[ed]” at Captain Kay’s statement.148 One Delta Air Lines pilot clarified the role of autopilot: “Automation in cockpits is there to assist pilots in maintaining the highest level of safety, and that’s why it’s there. If the autopilot failed, it would be no problem for the pilot.”149

Six months earlier, the FAA had addressed this very issue, saying that new rules on pilot training were also forthcoming.150 Then-FAA Administrator Randy Babbitt indicated that new proposed FAA rules would require pilots to use “advanced flight simulators” in training and would focus on “recognizing, avoiding and recovering from stalls and upsets.”151 The impetus for this change came from two sources, incorporating both the congressional training mandates from the Airline Safety and Federal Administration Extension Act of 2010 as well as the “3,000 pages of public comments” to the Notice of Proposed Rulemaking.152 The new rule was to be one of “the most far-reaching changes in training requirements in more than [twenty] years.”153 More than tweaking the current training requirements, it would “represent[ ] a shift in philosophy” in the field.154

Philosophical change is expensive and it takes time.155 The FAA first estimated that this one would cost airlines $230 million over ten years.156 By May 2011, the estimated cost increased to $391 million.157 This is in addition to the $2 billion per year that the airline industry says it will have to spend to comply with

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145 Id.
146 Id. This quote is attributed to Aviation Today rather than to Mr. Wright. Id.
147 Id. This quote is also attributed to Aviation Today rather than to Mr. Wright.
148 Bigger Pilot Safety Issue: Automation or Fatigue?, supra note 7.
149 See id.
151 Id.
152 Id.
153 Id.
154 Id.
155 See id.
156 Id.
157 Id.
the new duty and rest requirements that many believe will have no impact.\textsuperscript{158}

The timing of implementation of these and other new requirements was, and still is, uncertain.\textsuperscript{159} FAA Associate Administrator for Aviation Safety Peggy Gilligan told \textit{Aviation Week} in May 2011, “There are six rules altogether and we are moving as fast as we can.”\textsuperscript{160}

IV. ANALYSIS

A. THE CAMPAIGN AGAINST PILOT FATIGUE

What is more troubling than the political failure of the new duty and rest requirements is that, as a response to the Colgan crash, they miss the mark.\textsuperscript{161} All accounts indicate that any lack of rest on the part of the Colgan pilots had nothing to do with the requirements; the pilots had, in fact, been given ample time to rest.\textsuperscript{162} The new rest requirements were long-awaited, but had little to do with the problem at hand. In fact, they were more likely the result of “urging” by “safety advocates . . . for more than two decades” than they were an appropriate response to this accident.\textsuperscript{163} The campaign against pilot error comes closer to tackling the problems of the Colgan crash, though it will ultimately miss the mark as well.

B. CONSIDERING PILOT ERROR: THE CAMPAIGNS COMPARED

Given the relative speed and success (at least with respect to passenger pilots) with which the FAA tackled what it perceived to be a problem with pilot fatigue, the campaign against pilot error has been slow and misfocused on training requirements. The Colgan crash brought a frenzy of attention to pilot fatigue and pilot error, and from that point forward the response was swift. But at some point the response to the Colgan accident became focused on pilot fatigue and \textit{pilot training}, rather than

\textsuperscript{158} \textit{Bigger Pilot Safety Issue: Automation or Fatigue?}, supra note 7.

\textsuperscript{159} See Lynch, supra note 150.

\textsuperscript{160} \textit{Id.}

\textsuperscript{161} See \textit{Colgan Air Crash Raises Many Safety Issues}, supra note 2 (writing on the NTSB hearings held after the accident, showing the prominent role of pilot error in that crash, minimizing the role of pilot fatigue, and eliminating the possibility that any fatigue would have been a result of either pilot’s work schedule).

\textsuperscript{162} See \textit{id.}

on pilot fatigue and *pilot error*. Perhaps this is because pilot training is easier to change than inevitable pilot error.

Take, for example, another 2009 crash, the crash of a Pilatus PC-12/45, N128CM in Butte, Montana on March 22, 2009.\textsuperscript{164} The NTSB accident report covering the Pilatus crash suggested three likely causes, all essentially related to pilot error: "the pilot’s failure to ensure that a fuel system icing inhibitor was added to the fuel before the flights on the day of the accident"; the pilot’s "failure to take appropriate remedial actions after a low fuel pressure state (resulting from icing within the fuel system) and a lateral fuel imbalance developed"; and "a loss of control while the pilot was maneuvering the left-wing-heavy airplane near the approach end of the runway."\textsuperscript{165}

Despite these findings, the NTSB recommendations to the FAA and the European Aviation Safety Agency addressing the safety issues involved in the crash did not include anything to address pilot error.\textsuperscript{166} Instead, these recommendations addressed only aircraft certification and a point of clarification for pilots to prevent future icing problems.\textsuperscript{167} The report also included some previous "open" recommendations to the FAA relevant to the crash.\textsuperscript{168} However, the report did not include any recommendation addressing the actions the pilot failed to take.\textsuperscript{169} Nor did it include any recommendation pertaining to pilot maneuvering or pilot training.\textsuperscript{170}

There are two possible explanations for the lack of focus on pilot training in the Pilatus report. It could be that the report mistakenly blames equipment certification rather than pilot certification and training. Or it could be an accurate reflection of the fact that pilot training is not at issue wherever there is pilot error because pilot error, and more specifically human error, cannot be eliminated. The latter explanation for the Pilatus report seems more likely because, just as a pilot can have three days off and still suffer from fatigue, a pilot may have all the


\textsuperscript{165} Id.

\textsuperscript{166} Id. at 78–79.

\textsuperscript{167} Id. at 78.

\textsuperscript{168} Id. at 79.

\textsuperscript{169} See generally id.

\textsuperscript{170} Id.
training available to him and still not maneuver a plane properly during an accident.\textsuperscript{171}

As the Colgan crash shows, a pilot can know what to do and simply not do it.\textsuperscript{172} This is a problem not of pilot training deficiencies but of pilot error and plain human error, one unlikely to be solved by NTSB recommendations and new regulations. It is slightly more likely to be solved by increased personal responsibility on the part of pilots. But most likely this problem will not be solved at all. Human error in the cockpit may be simply a tragic inevitability that the airline industry, the government, and the traveling public must accept.

C. THE REAL POLITICAL FAILURE: IGNORING THE HUMAN ELEMENT OF PILOT ERROR

Ignoring the human element of pilot error was a greater "political failure" than any other in the new pilot rules.\textsuperscript{173} According to Colgan's statement at the 2009 NTSB hearings, "Captain Renslow and First Officer Shaw did know what to do, had repeatedly demonstrated they knew what to do, but did not do it."\textsuperscript{174} Thus, even with a reaction to this accident more focused on training, the element of personal responsibility remains unaddressed, both by government and media reports following the crash.

Colgan also stated: "We cannot speculate on why they did not use their training in dealing with the situation they faced."\textsuperscript{175} Truthfully, neither can anyone else—not the media, not Congress, and not the FAA. This is evident in the regulation that followed the incident. Bulky, costly, and slow as it has been, it will never address the real problem of that flight—human error.\textsuperscript{176} Though the term "human error" is used interchangeably with "pilot error" in the field of aviation, a distinction should be

\textsuperscript{171} See Colgan Air Crash Raises Many Safety Issues, supra note 2.
\textsuperscript{172} See id.
\textsuperscript{173} See FedEx Pilots Press Release, supra note 134 (calling the new rest rule in particular "a political failure").
\textsuperscript{174} Colgan Air Crash Raises Many Safety Issues, supra note 2.
\textsuperscript{175} Id.
\textsuperscript{176} Lynch, supra note 150. After working on the new training rule for almost two years, the timing of its implementation is still uncertain, though FAA Associate Administrator for Aviation Safety Peggy Gilligan told Aviation Week, "There are six rules altogether and we are moving as fast as we can." Pilot training changes were estimated to cost the airlines $391 million as of May 2011. Id. Duty and rest changes were estimated to cost the airline industry another $2 billion each year. Bigger Pilot Safety Issue: Automation or Fatigue?, supra note 7.
made between the two. Generally, pilot error can involve deficiencies in training and skills as well as human factors such as the inadvertent failure to correctly apply training and skills. However, for the purposes of this comment, human error describes only the latter, because "[e]rrors are not de facto evidence of lack of skill or conscientiousness." "Skill, vigilance, and conscientiousness are essential but not sufficient to prevent error."

Thus, even with a complete "shift in philosophy" focused more on pilot training, flight simulations would not have prevented the Colgan crash. The pilots had no shortage of training using flight simulators. Indeed, "Renslow had failed several flight simulator tests before and after he was hired by Colgan Air." But even despite Captain Renslow's failed tests, it seems that he knew what to do in the situation he faced; he simply incorrectly assessed the circumstances and performed the wrong maneuver. This human error was the real problem of the Colgan crash, it is one that cannot be solved simply by changing the training curriculum, and it is something every industry and profession must deal with.

In other professions, the inevitability of human error is acknowledged. The field of medicine is famous for its use of checklists, and those in business and other fields strive to emulate them in order to be profitable and successful. Interestingly, it is an idea "borrowed...from the aviation industry," with the pilot's checklist serving as the model and inspiration for the surgeon's checklist. The goal behind such checklists is

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178 See id. at 6.
179 Id. at 7.
180 Lynch, supra note 150.
181 Colgan Air Crash Raises Safety Issues, supra note 2.
182 Id.
183 See id.
186 Henig, supra note 185.
simply to “get the stupid stuff right.” But the medical checklist has not eliminated human error in medicine. Doctors sometimes fail to follow the checklists available to them. Sometimes, they “get the stupid stuff right,” but then fail to get the more complicated stuff right. They make mistakes. They are only human.

Patients are aware of this human element of medical care and the inherent risk involved, and yet patients still seek out the care of doctors. The small possibility that a doctor may unintentionally cause harm to a patient is far outweighed by the likelihood that a doctor will make the patient better. And if a doctor does cause harm, the patient has little recourse available except to sue and attempt to recover in court. This same standard, complete with public acceptance of risk, should be the one the traveling public applies to pilots. But overregulation has stymied the public acceptance of the inherent risks of air travel. With every accident, the media plays to the public’s fears and Congress is pressed to respond with more regulation, however pointless it may be in relation to the subject of the media attention.

D. **LEARNING FROM HISTORY: UNINTENDED CONSEQUENCES AND OTHER LESSONS**

In the days of the Air Commerce Act, the purpose of federal regulation was practical. With aircraft traveling from state to state, it would have been impractical to continue to regulate them through state and local laws. One federal body of law was needed to govern licensing pilots, ensuring consistent routes, and avoiding accidents. Similarly, the Civil Aeronautics Act of 1938, the next monumental piece of air legislation, was practical because it directed necessary government attention toward accidents and sought to prevent them. Later, the CAB and Civil Aviation Authority, instead of simply controlling pilot and aircraft certification and accident investigation, became

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187 Id.
188 See id.
189 See id.
190 See id.
191 See Flores, supra note 13, at 15–16.
192 See FAA History, supra note 12.
193 See id.
194 See id.
examples of bureaucracy gone wrong—“spotty,” “unfocused,” and “flawed.”

And then a terrible accident changed aviation regulation forever. The 1956 mid-air collision of the TWA and United planes over the Grand Canyon put the already flawed bureaucracy under the microscope. Ironically, the response was to bulk up the regulation. Newspaper articles pointing to a “government . . . unequipped to handle the rapidly expanding air traffic” created an angry and critical public.

Congress responded the only way that it could by passing the Federal Aviation Act of 1958. With the new DOT and FAA in charge of air traffic control, incidents like the one in 1956 surely would be avoided, but new threats would constantly emerge over the next thirty years.

The FAA describes these constant new threats as “unexpected challenges.” Yet it seems that focusing on the unexpected led the government astray. In the twenty-first century, the subject of media controversy and congressional grandstanding is not over “unexpected challenges,” such as airplane hijackings, but rather the challenge of properly training pilots and making sure that they are fit to fly—something the FAA and its predecessor agencies have been tasked with for almost one hundred years.

The one constant in all the changes the FAA has experienced is that it is responsible for air safety. At its most basic level, air safety is about instilling confidence in travelers that when they board a plane in the United States, the aircraft and the person flying it are both fit to fly. But after the media attention given to the Colgan accident, a traveler might feel more assured walking into a hospital and submitting himself to the mercy of a tired and busy doctor with a checklist.

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195 See Bubb, supra note 19, at 661 (quoting Rochester, supra note 19, at 291).
196 See id. at 659.
197 See id. at 660.
198 See id.
199 See id.
200 See id.
201 See FAA History, supra note 12 (describing “unexpected challenges” the agency faced in the second half of the twentieth century, chief among them airplane hijackings).
202 See id.
203 See id.; Sanderson, supra note 1; Lowy, supra note 3.
204 See FAA History, supra note 12.
205 See, e.g., Wald & Robbins, supra note 5.
206 See Henig, supra note 185.
Deregulation cannot resolve the shortcomings of recent regulatory efforts. The narrow deregulation that the airline industry experienced in the last century remains controversial.207 Thus, to mark the thirty-fifth anniversary of the hearings that led to deregulation, Justice Breyer reminds us that we still might not be sure, as he is still asking rhetorically, “Was this effort worthwhile?”208 And even though Justice Breyer supported deregulation, and still does today, some clearly disagree.

While deregulation is not the answer to the issues facing commercial aviation today, two lessons of deregulation are valuable. First, tough economic conditions and other frustrations can trigger overwhelming support for legislative overhaul.209 But such overwhelming support does not legitimize an overhaul. In the 1970s, the frustrations with air travel were primarily economic, as they are today.210 Another frustration was that the “government consistently was slow to respond,” which is a fair assessment during any era.211 Certainly, any reform that offers to save people money and speed government up is going to be popular. The new FAA rules discussed here actually offer opposite results,212 yet they are relatively uncontroversial at this time.213 This does not mean that thirty-five years down the road the effort will appear to be worthwhile, as it may have with respect to deregulation.214

In fact, this reform will not have been worthwhile—not only because it does not address the real problems of the Colgan crash—but also because some consequences of costing the airlines billions in the current economy are certain to have a negative impact. The economic status of the airlines is uncertain and volatile.215 American Airlines filed for bankruptcy in November 2011 and is in the process of restructuring,216 making pay and

207 See Breyer, supra note 32.
208 See id.
209 See Bubb, supra note 19, at 662–64; see also Breyer, supra note 32.
210 See Bubb, supra note 19, at 662–63; see also Breyer, supra note 32.
211 See Bubb, supra note 19, at 667.
212 Pilot training changes were estimated to cost the airlines $391 million as of May 2011. Lynch, supra note 150. Duty and rest changes were estimated to cost the airline industry another $2 billion each year. Bigger Pilot Safety Issue: Automation or Fatigue?, supra note 7.
213 See Bigger Pilot Safety Issue: Automation or Fatigue?, supra note 7.
214 Breyer, supra note 32.
216 See id.
benefit cuts to its employees almost certain.\textsuperscript{217} Even the airlines that are currently profitable are so because they have become leaner, partially by opting for “higher ticket prices and more fees.”\textsuperscript{218} Thus, the extra costs imposed by new regulation have the foreseeable consequence of making the uncertainty and volatility of the airline industry worse.\textsuperscript{219} Unfortunately, the foreseeable negative consequences are not all the industry must worry about.

The second and more important lesson of deregulation is that any legislative change, particularly an overhaul, always has “unintended consequences.”\textsuperscript{220} The columnist Thomas Sowell has written about the unintended consequences of regulation and other types of government action, warning that “wonderful-sounding ideas” sometimes have “disastrous results.”\textsuperscript{221} Others less skeptical of regulation than Mr. Sowell also take note of these unintended consequences.\textsuperscript{222} For example, Cass Sunstein and Thomas Miles warn against considering only “ex ante consequences” because “the ex post perspective matters as well.”\textsuperscript{223} And Justice Breyer acknowledges the inevitability of unintended consequences, calling them “new, sometimes unforeseen,

\begin{footnotes}{\footnotesize
\textsuperscript{218} Mouawad, \textit{supra} note 215 (listing United Continental Holdings, Delta Air Lines, US Airways, and Southwest Airlines as profitable airlines in 2011 because they employed this “recipe for success,” for which the primary ingredients are “fewer airlines, fewer planes and fewer seats combined with higher ticket prices and more fees”).
\textsuperscript{219} Breyer, \textit{supra} note 32 (discussing the “unforeseen” consequences of deregulation).
\textsuperscript{220} See Thomas Sowell, \textit{Parade of Intended Consequences}, \textit{Wash. Times}, June 10, 2001, at B1 (observing that use of the term “unintended consequences” has come up with increasing frequency, as more and more wonderful-sounding ideas have led to disastrous results”).
\textsuperscript{221} \textit{Id.} (discussing the unintended consequences of dichlorodiphenyltrichloroethane (DDT)); \textit{see also} Thomas Sowell, \textit{Testing, Testing}, \textit{Nat’l Rev. Online} (Nov. 14, 2007), http://www.nationalreview.com/articles/222821/testing-testing/thomas-sowell (discussing the unintended consequences of the autism spectrum).
\textsuperscript{222} \textit{See, e.g.,} Cass R. Sunstein & Thomas J. Miles, \textit{Depoliticizing Administrative Law}, \textit{Duke L.J.} 2193, 2215 (2009) (discussing the unintended consequences of striking down regulatory agency decisions); Breyer, \textit{supra} note 32 (discussing the unintended consequences of deregulation, including “the extent to which new bottlenecks would develop: a flight-choked Northeast corridor, overcrowded airports, delays, and terrorist risks consequently making air travel increasingly difficult”).
\textsuperscript{223} \textit{See} Sunstein & Miles, \textit{supra} note 222.
\end{footnotes}
problems” characteristic of “every major reform.”\textsuperscript{224} In the case of deregulation, the unintended consequences of over-saturating the market and driving airlines into bankruptcy were high prices to pay, though the goal of deregulation was simply to bring prices down and make air travel more widely used.\textsuperscript{225} Just as Senator Kennedy and the other deregulation reformers had the best of intentions, so too did the leaders of the most recent reform in airline regulation.\textsuperscript{226}

E. The Solution: Legislative Restraint

The answer then, is not to deregulate, but to pause before regulating. The answer is to stop being so responsive to media pressure and to begin considering unintended consequences. Because the Colgan crash was a salacious media story—scary, mysterious, and heartbreaking—it was only natural that concerns about pilot fatigue and pilot training came to the forefront as details of the crash were revealed.\textsuperscript{227}

Though these concerns and the subsequent increased attention to them were fair, further examination shows they were not reflective of what caused the crash.\textsuperscript{228} The cause of the crash was not pilot fatigue caused by the pilots’ flight schedules.\textsuperscript{229} NTSB testimony shows the pilots had each had a significant amount of time off prior to the flight.\textsuperscript{230} So either both pilots were adequately rested or First Officer Shaw was fatigued due to poor scheduling choices she made prior to flight.\textsuperscript{231} Also, the violation of the sterile cockpit rule was most likely inconsequential.\textsuperscript{232} Pilot training was closer to the source of the problem as shown by the revelation of Captain Renslow’s training failures, such as his failure of “several flight simulator tests before and after he was hired by Colgan Air.”\textsuperscript{233} At worst, however, the real culprit was his failure to meet training requirements rather than

\textsuperscript{224} See Breyer, supra note 32.
\textsuperscript{225} See id. (recalling the story of “an East Boston constituent ask[ing] Kennedy, ‘Senator, why are you holding hearings about airlines? I’ve never been able to fly,’” to which Senator Kennedy reportedly “replied: ‘That’s why I’m holding the hearings.’”).
\textsuperscript{226} See Schumer Calls for Hearing into Colgan Tragedy, Emails Released, supra note 6.
\textsuperscript{227} See Wald & Robbins, supra note 5.
\textsuperscript{228} See Colgan Air Crash Raises Many Safety Issues, supra note 2.
\textsuperscript{229} See id.
\textsuperscript{230} Id.
\textsuperscript{231} Id.
\textsuperscript{232} See id.
\textsuperscript{233} See id.
the inadequacies of the requirements themselves. More likely, it was simply a mistake—he "reacted the wrong way to a stall warning and crashed the plane."234 Captain Renslow should have pushed forward, but he pulled back.235

The current laws and regulations are adequate to address what ultimately turned out to be the non-issues of pilot fatigue and pilot training in the Colgan crash. Investigations revealed that neither Captain Renslow nor First Officer Shaw flew in excess of "34 hours in any 7 consecutive days" or in excess of "8 hours between required rest periods" as the flight time limit for a two-person crew prohibited. 236 Both of their assignments allowed for a "period free of all responsibility for work" well in excess of the FAA requirement during the twenty-four hours before their flight.237 Surely, from an objective point of view, twenty-two hours is a sufficient period for rest, and if it is, then three days must be much more than sufficient.238

No one questions that these two pilots both passed a written exam covering familiarity with the aircraft and equipment they were using.239 Since these are required to cover meteorology, "including the principles of . . . icing"240 and familiarity with "severe weather situations,"241 Captain Renslow had been properly trained with respect to the ice he mistakenly believed the plane was encountering.242

However, Captain Renslow's training related to competency checks could have violated FAA requirements.243 One of those requirements provides that a pilot must pass a "competency check," including maneuver and procedure checks showing "that the pilot [is] the obvious master of the aircraft, with the

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235 See Colgan Air Crash Raises Many Safety Issues, supra note 2.
237 See 14 C.F.R. § 135.265(b); 14 C.F.R. § 135.273(a) (2011); Colgan Air Crash Raises Many Safety Issues, supra note 2.
238 See Colgan Air Crash Raises Many Safety Issues, supra note 2.
240 See 14 C.F.R. § 135.293(a)(6) (emphasis added).
241 See 14 C.F.R. § 135.293(a)(7)(i).
242 See Colgan Air Crash Raises Many Safety Issues, supra note 2 (discussing cockpit transcripts revealing that Captain Renslow believed the plane was encountering ice and therefore performed a maneuver appropriate for responding to ice when systems failed).
243 See generally id.; 14 C.F.R. § 135.293(b)–(d).
successful outcome of the maneuver *never in doubt.* Investigation of the Colgan crash revealed that the “successful outcome of the maneuver[s]” he conducted were indeed “in doubt.” The NTSB investigation showed that Captain Renslow “had flunked numerous flight tests during his career and was never adequately taught how to respond to the emergency that led to the airplane’s fatal descent.” Particularly, he had failed the required tests “given in an aircraft simulator.”

Unfortunate as these facts may be, a change in training requirements and training curriculum would not change them. These facts could possibly prove to be useful to the families with lawsuits pending against Colgan, but they do not justify sweeping regulatory change in the unrelated areas of pilot fatigue and pilot training. There is no need for a “sweeping final rule” affecting pilot fatigue such as the one announced in December 2011. There is no need to cost the airlines billions through an unnecessary rule change, particularly when even the new rule “completely ignores” the pilots who are the most fatigued—the cargo pilots that fly “the back side of the clock.”

Further, there was nothing to indicate a verifiable “automation addiction” that necessitated changing federal training regulations. Captain Kay may have been correct in identifying “a new breed of accident” associated with automation and noting that pilots are “forgetting how to fly.” But as the pilots who “scoff[ed]”

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244 See 14 C.F.R. § 135.293(b)-(d) (emphasis added).
245 See 14 C.F.R. § 135.293(d); *Colgan Air Crash Raises Many Safety Issues,* supra note 2.
246 Andy Pasztor, *Captain’s Training Faulted in Air Crash that Killed 50,* WALL ST. J., May 11, 2009, at A1; see also *Colgan Air Crash Raises Many Safety Issues,* supra note 2.
247 See 14 C.F.R. § 135.293(f); Pasztor, *supra* note 246.
250 See FedEx Pilots Press Release, *supra* note 134 (“The back side of the clock” is a phrase the press release attributed to a NTSB spokesperson).
251 See *Bigger Pilot Safety Issue: Automation or Fatigue?,* supra note 7. Captain Kay first made this statement in 2009. *ALPA Pays Homage,* *supra* note 139.
252 Lowy, *supra* note 3.
at Captain Kay's statement pointed out, automation in flying is also essential to safety at the same time that it could be marginally harmful.\textsuperscript{253}

Despite all this, concerns stemming from the Colgan accident led to legislation and regulation.\textsuperscript{254} There is one virtuous kernel in the forthcoming new rules on pilot training mandated by the Airline Safety and Federal Administration Extension Act of 2010: a new FAA rule requiring pilots to use “advanced flight simulators” in training focused on “recognizing, avoiding[,] and recovering from stalls and upsets” is likely to be helpful in avoiding similar accidents.\textsuperscript{255} However, because it does “represent[ ] a shift in philosophy” in the field, it may be part of an overall effort that goes too far.\textsuperscript{256} Certainly, it goes too far in that it will cost the already-suffering airlines $391 million to comply.\textsuperscript{257}

\section*{V. CONCLUSION}

Controversy surrounding supposed hidden dangers of autopilot has been the subject of public focus for many years, and likely will be for many years to come.\textsuperscript{258} Student comments like this one from ten to fifteen years ago warned of the dangers of pilot fatigue, a danger due in part to pilots' prolonged inactivity on increasingly automated airplanes.\textsuperscript{259} In the last two years, interest in this topic has been reignited, as allegations made by the media and by Congress led to an expensive overhaul of aviation regulation seeking to tackle pilot fatigue and pilot training requirements.\textsuperscript{260} And the FAA was forced to embrace a “shift in philosophy.”\textsuperscript{261}

Ironically, an airplane crash in which neither pilot fatigue nor pilot training were real issues brought these two non-problems associated with the autopilot controversy to the forefront.\textsuperscript{262}

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\item See Bigger Pilot Safety Issue: Automation or Fatigue?, supra note 7.  
\item See FAA Press Release, supra note 126.  
\item See Lynch, supra note 150.  
\item Id.  
\item Id.  
\item See generally id. at 567–68.  
\item See Lynch, supra note 147.  
\item See id.  
\item See Colgan Air Crash Raises Many Safety Issues, supra note 2 (discussing (1) the fact that Renslow’s employer allowed him to fly even though he had routinely  
\end{enumerate}
\end{footnotesize}
The campaign to change regulation in these areas was only strengthened by the catchy statement by an FAA official publicly announcing an "automation addiction." Though the FAA has yet to make the "automation addiction" study public, through its advisory committee, it added fuel to a fire of controversy in two areas already under the public eye: pilot fatigue and pilot training.

In response to the media coverage, Congress held hearings and was left with seemingly no choice but to direct the FAA to implement new regulations to take the place of the old ones, even though change was not necessary and would not have prevented the crash that triggered their promulgation. The intended impact was safer flight. But the unintended impacts will be a cost to the airlines in billions of dollars and the alienation of non-passenger pilots, who feel ignored and unappreciated by the new regulations. As with the era of aviation deregulation that began in the 1970s, other unintended consequences are certain to follow. In the meantime, the problems that led to the Colgan crash remain.

Even with rules in place—old or new—pilots will make mistakes, just as everyone else does, sometimes unintentionally endangering lives. This inevitable problem can only be resolved in two ways. First, it may be resolved through increased personal responsibility, something that cannot be legislated or regulated. It can, however, be litigated; thus, recourse in the courts is the second way to address mistakes and rule-breaking. Here, neither solution seems to be a perfect fit, but both are preferable to a regulatory overhaul mandating that airlines throw money at other problems entirely. If we are going to embrace a failed flight simulation tests and (2) cockpit transcripts revealing that Captain Renslow believed they were encountering ice and therefore performed a maneuver appropriate for responding to ice when systems failed).

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268 Lowy, supra note 3.
264 See id.
265 See Colgan Air Crash Raises Many Safety Issues, supra note 2; FAA Press Release, supra note 126.
266 FAA Press Release, supra note 126.
267 Pilot training changes were estimated to cost the airlines $391 million as of May, 2011. Lynch, supra note 150. Duty and rest changes were estimated to cost the airline industry another $2 billion each year. Bigger Pilot Safety Issue: Automation or Fatigue?, supra note 7.
269 Breyer, supra note 32.
“shift in philosophy,” we should be willing to pause and determine first whether it will solve the problems we face and whether it is worth the unintended consequences that follow.