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# THE MENACE OF FLIGHT

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## ABSTRACT

Hollywood has shown an unending affection for the airplane for nearly one hundred years. From fantasy, to war, to salvation, to heroism, to romance, to adventure, airplanes have been and continue to be a powerful symbol in American film. Two intertwined themes based on flight are menace and hope, and the tension between them has successfully driven many flying films. This may explain why film has featured the airplane as the archetypal machine of the twentieth century, just as, according to Leo Marx in *The Machine in the Garden*, the locomotive served as the archetypal machine in American literature of the nineteenth century. Specifically, this dissertation will focus on how cargo planes, bomber aircraft, commercial airliners, and all those aboard have been portrayed in film from 1950-2004. The current essay is chapter three of the dissertation.

## CHAPTER 3 THE MENACE OF FLIGHT

*For the 271 people aboard a regular afternoon service to Los Angeles, their departure from Chicago on the eve of a holiday weekend seemed normal and full of promise. Little could they know their gleaming widebodied jet concealed a fatal flaw — and that, only half a minute after liftoff, everyone of them would be dead.*

Macarthur Job describing crash of FL191<sup>1</sup>

Crisis in flight has long been the focus on Hollywood film. Prior to World War II, there were such dramas as *The Green Goddess* (1923), *Sinners in Heaven* (1924), *The Broken Wing* (1932), *Central Airport* (1933), *Thirteen Hours by Air and Ceiling Zero* (both 1936), *Lost Horizon*, and *Non-Stop New York* (both 1937). The years during and surrounding World War II, of course, were preoccupied with wartime stories, but in the 1950s mid-air crisis dramas resumed. Michael Paris argues in *From The Wright Brothers to Top Gun* that there

was a qualitative difference between pre- and post-war aviation crisis films. Prior to the war “the disaster or the danger averted constituted only one element in a film where the main focus was the growth of an airline, a record-breaking flight or the development of a new machine. The engine failure, crash or whatever, was an incidental, an element of added tension for the audience; a device by which the final achievement of the aviator could be heightened.” After the war, however, “the air disaster took on a life of its own.” Concurrent with the growth of civilian air travel, Hollywood’s tendency to exploit the common fear of flying grew as well. In this era, Paris argues, “The danger is no longer just one exciting incident in the story, it is the whole *raison d’etre* for the film.”<sup>2</sup>

Interestingly, Paris credits a pre-war “crisis in mid-air” film with establishing the template for the modern sub-genre. *Five Came Back* (1939) was a low-budget RKO thriller that told the story of a crash of a passenger plane in the South American jungle on a routine flight from Mexico City to Panama. Prior to the crash, an anthropologist on board describes the headhunters who live in the jungle below, thus establishing the basic tension once the crew and passengers become stranded. The pilot manages to land the plane without seriously damaging it, but it takes twenty-three days to repair the engine and build a runway through the jungle. The problem is, there is only enough fuel to take five people to safety, meaning those who remain will become the captives of the headhunters who have been slowly closing in.

What makes this film a model for subsequent aviation crisis movies is its use of cast. Lucille Ball and Chester Morris star as secretary and pilot, while other passengers include Ball’s boss, a detective and his political prisoner, and two elderly anthropologists, plus assorted other passengers. One reviewer hailed this film as “A rousing salute to melodrama, as suspenseful as a slow-burning fuse, exciting as a pin-wheel, [and] explosive as a bomb.” Not only was this basic framework imitated, it was remade only fifteen years later as *Back From Eternity*, where characters as colorful as a prisoner being sent home for execution (Rod Steiger), a “bullying coward,” and a hooker are featured. This use of widely varying characters is now a staple of such films.<sup>3</sup> Early examples of the postwar genre include *Seven Were Saved* (1947), *Miraculous Journey* (1948) and *Daughter of the Jungle* (1949). From these sprang some of the true classics of aviation films.

### Classics of the Genre

*No Highway in the Sky* (1951), adapted from Nevil Shute’s novel of the same name (Shute himself was an aircraft designer), became a gripping drama featuring James Stewart as a

Canadian aeronautical engineer named Theodore Honey who is deeply concerned with the problem of metal fatigue. While working in England at the Royal Aircraft Establishment at Farnborough, he calculates that after 1,400 hours of flying the (fictitious) Reindeer airliner will succumb to this physical malady and crash in flight. In fact, one of the airline's Reindeers does crash in Labrador, and Honey is sent to investigate. As fate would have it, he flies aboard a Reindeer and while in flight he determines that this plane too has reached its limits. Metal fatigue, he believes, will cause the tail to fail and they will crash into the Atlantic with no hope of survival.

At first he calmly tries to alert the cockpit crew, who take him somewhat seriously at first. Alarmed, they take due precautions, but when the time for metal failure has come and gone, they begin to consider Honey mentally unstable. After landing safely in Canada, no one will listen to his further pleas. To prevent the plane from taking off again, he deliberately retracts the landing gear while it is parked on the apron of Gander Airport in Newfoundland.<sup>4</sup> Only the sympathetic intervention of a stewardess and movie star (Marlene Dietrich) allows Honey a chance to prove himself, and in the end he is vindicated when a test results in metal fatigue failure within the limits he has predicted.

Metal fatigue, of course, is a very real problem in the aviation world, coming to public attention with the multiple failures in flight of the first passenger jet, Britain's de Havilland Comet. As the first commercial jetliner in production, the Comet had no rivals, so it stood an excellent chance of becoming a dominant force in post-war aviation. Unfortunately, just the opposite occurred. While suffering some "teething problems" during its first year in flight,<sup>5</sup> the Comet's real flaw was revealed in January of 1954 when a Comet broke up in flight at an altitude of 26,000 feet. This was quickly followed by a second in-flight breakup, resulting in the grounding of the Comet.<sup>6</sup> The storyline in *No Highway in the Sky* had been eerily prescient.

*Island in the Sky* (1953) was a worthy dry run for the director-actor team of William Wellman and John Wayne. Here Wayne plays veteran pilot Captain Dooley and is flying an Air Transport DC-3 when it crashes in Labrador. Dooley rallies his men as they fight the fierce elements while awaiting rescue. This film is a classic in its own right, with Pendo calling it "one of the best of the plane-crash films."<sup>7</sup> A year later, this team created one of the true classics of mayday films. *The High and the Mighty* (1954) is sometimes considered the best film of the in-flight emergency genre. The "grandfather of all airline disaster films," *The High and the Mighty* owes its authenticity to scriptwriter Ernest Gann, a former American Airlines pilot, and the seasoned directing of Wellman.<sup>8</sup> Starring Wayne as Dan

Roman and Robert Stack as the captain, the story revolves around an in-flight crisis over the Pacific as the Douglas DC-6 flies from Honolulu to San Francisco. A propeller mishap on one of the four engines results in a ruptured fuel tank and subsequent loss of range. Additional problems include navigation miscalculations as well as the cowardice of the pilot in charge.

As with other crisis in flight films, this one presents a dynamic mixture of characters and personalities. Though more experienced than the captain, Roman is relegated to right-hand seat in the cockpit because he was technically responsible for an earlier crash, one that took the life of his wife and child. The tension between him and the cowardly captain provides much of the drama, though the presence of passengers such as a maniac out to kill another passenger, a couple on their way home to get a divorce, a handicapped rich boy, and a disillusioned nuclear scientist add their share.<sup>9</sup>

In *Fate is the Hunter* (1964) Glenn Ford plays Sam C. McBane, Consolidated Airlines Director of Engineering and Maintenance, and he is intent on clearing the name of his close friend, the pilot of a plane that has crashed, taking fifty-three lives. A government investigation determines that the pilot's drinking had caused the crash. McBane finds the cause of the crash by interviewing the lone survivor. Rather than pilot error, the cause was coffee spilled over an instrument box. It is interesting to note here that the plane in this film was deliberately not based on any existing plane, as airlines were reluctant to have one of their models portrayed in crash scenes (more on this phenomenon below). Twentieth Century Fox solved this by converting a DC-6 to a swept-winged jet with engines added to the horizontal stabilizers. No real plane remotely resembled it. (The set, however, was so real that a commercial plane overflying the Culver City lot thought the shot was a real plane wreck and duly reported it.<sup>10</sup>)

*The Flight of the Phoenix* (1966) features James Stewart, former bomber pilot, again starring in a successful flying film. Playing Frank Towns, an aging transport pilot, Stewart is ferrying a group of oil workers over the desert in a C-82 Skytruck. His plane is forced down during a sandstorm and he and his assorted passengers must use their wits to survive. According to type, the film supplies a colorful group of personalities, beginning with the "fly-by-the-seat-of-the-pants" Towns, who mistrusts newfangled machinery, to the crisp and proper British officer Harris, to the simpleton played by Ernest Borgnine, to the coldly calculating German aircraft designer who helps save them. As Pendo notes, the film represents a coming to terms between the old (represented by working with one's hands) and the new (represented by working with one's head). Towns is the former, while the German

is the latter, but they still need each other if they are going to get out of their predicament alive.<sup>11</sup>

### *Airport*

To be sure, the preceding pictures all featured the menace of flight, and most of them were staged on commercial airline flights. Still, something changed between the time they were filmed and released, and the advent of one of the true blockbusters of flying films: *Airport*. What that change is, is hard to identify, possibly because it is probably a *collection* of changes that result in this perception. Take, for example, technological advances in flying between 1966 (*The Flight of the Phoenix*) and 1970 (*Airport*). After a series of manned space flights, America succeeded in putting a man on the moon, a feat that outshone earlier advances such as breaking the sound barrier and building jet airliners.

Another technology factor could be the advent of the jumbo jet, where passenger loads in one airplane would change from the low hundreds to between four and five hundred. Though *Airport* featured Boeing's venerable 707, its first jumbo, the 747, had already made its maiden flight by the time *Airport* opened and had been publicized heavily enough to believe that viewers were aware of its presence. Thus it is possible that at least subconsciously viewers feared for the safety of many hundreds of passengers. Adapted from Arthur Haley's novel of the same title, *Airport* not only refined the plots and techniques of earlier mayday films, it packaged them in such a way as to itself become a seminal portrayal of airliner in peril. After *Airport*, many other films owed their vernacular, as it were, to the drama in the original, including, of course, the sequels spawned by *Airport*.

*Airport* contains basic elements that allow its use in three chapters of this dissertation. First, it is certainly a "menace in flight" film in that a large hole has been blown in the fuselage while flying at altitude, putting the lives of all passengers and crew in serious danger. Second, a deranged passenger was responsible for blowing the hole in the aircraft, having detonated a briefcase bomb in a rear lavatory. Third, the film reified traditional gender and race roles, ironically just at a time when these roles were fast changing.

Because *Airport* is considered a classic, I will here give it attention with respect to its mayday features and leave the other two categories to their appropriate chapters. After dealing at some length with its portrayals of the perils of flight, I will discuss actual airline accidents that have taken place since the dawn of the jet age. I will do this to provide background and mood for the wide range of mayday films that came after *Airport* and to show that the inherent risk of flight is never wholly conquered.

*Airport* begins at “Lincoln International Airport” (most likely modeled after O’Hare in Chicago) on a snowy Christmas Eve, just as airport manager Mel Bakersfeld (Burt Lancaster) is about to leave. Unfortunately, an incoming Trans World Airlines 707 has turned improperly on a taxiway and become stuck in the accumulating snow, thereby shutting down the main runway. Meanwhile, a sister ship to the stuck airliner, also a 707, has taken off for its flight to Rome. Among the passengers is a former Army demolitions expert who has had psychiatric problems in the past and now intends to bring the aircraft down over the Atlantic so that his wife may receive his insurance benefits.

Character relationships — one of the hallmarks of films staged aboard passenger airliners, cargo planes, and military bombers — are both interesting and plausible in this film. First, relations between the sexes are both strained and romantic, often with respect to the same character. Bakersfeld, for example, is on the verge of divorce, yet his relationship with fellow airport employee Tanya Livingston is decidedly close. Meanwhile, his brother-in-law, Captain Vernon Demerest (Dean Martin) is romantically involved with a stewardess (Jaqueline Bisset) who has recently found herself pregnant by the captain.

Once airline authorities have become aware of the danger to the plane, they assemble a team of experts to deal with it. Here George Kennedy creates his classic role as cigar-chomping mechanic Joe Patroni, a no-nonsense man of the old school. By relating his own military experiences with the perils of depressurization at high altitude, he is able to graphically create in the viewers’ minds the impending threat. Seated next to a cut-away scale model of the 707, he explains to Bakersfeld and the others what might happen should the bomb explode. Because the bomber is seated next to the window, the blast will be directed against the side of the fuselage, sparing the vital control cables below. Because of this, the plane *might* get back.

The assorted listeners then act as uninitiated viewers — they ask questions so Patroni can educate us viewers about the likely scenario to follow:

Okay, so we know the kook is sitting in 23A, right here. My opinion is that they should get the hell back here as fast as they can.... The sudden decompression at 30,000 feet is something you’ve gotta see to believe.... Until that pressure equalizes, everything within twenty feet of him that’s not nailed down or strapped in is gonna get sucked right out that hole.... When I was a mechanic in the Air Force, I was being transferred on a MAT’s

plane at 20,000 feet — one of the windows shattered. The guy sitting next to me was about 170 lbs. He went through that little space like a hunk of hamburger going down a disposal. And right after him coats, pillows, blankets, cups, saucers.... [After that] everything fogs up just like that. And *THEN* watch out. At that altitude you can't breathe, so unless they get on oxygen in 45 seconds, it's *gooooo-d-bye*.

In the event, this is basically what transpires, although the blast takes place in a rear right lavatory rather than next to the man's seat on the left side of the plane.<sup>12</sup> The important point is that the blast has ripped open only the skin on the fuselage and has not critically damaged control cables, just as Patroni has hypothesized. And just as he said, the sudden decompression was a spectacle: Gwen, the stewardess-lover, is nearly sucked out the hole, other passengers are left gasping for breath, and the tail section of the plane may not stand the strain of a sudden dive to a safe altitude. Added to these immediate dangers is a raging snowstorm in the American Midwest, one that has closed an airport in Detroit, their closet, and hampered efforts to clear the runway back at Lincoln.

The dual drama of in-flight and airport crises consumes the remainder of the film. On the ground, airport manager Mel Bakersfeld would prefer to open the runway by destroying the stuck multi-million dollar 707 by pushing it with snowplows. Patroni, on the other hand, is determined to save it by manhandling it out of the way. He has his men place planks in front of the wheels of the buried jetliner, then brings all four engines up to power to try to move it forward. When that fails, Mel calls in the massive snowplows. Directly disobeying orders, Patroni refuses to abandon the airship and makes one last desperate effort by bringing all engines to maximum power. Slowly, the wheels rock forward and finally the whole plane moves away. The runway is now clear for landing, though blinding snow still makes a landing risky.

Tension builds as the 707 nears Lincoln. Once at a lower altitude, passengers can take off their oxygen masks and assume the crash position with their heads between their legs. Fearing death, some passengers cry out, providing the opportunity for one unforgettable comic relief scene. For whatever reasons, Catholic priests or nuns have become a staple in this crisis in flight films, and in this one the kindly old priest manages to smack one of the cowardly passengers in between cycles of saying the rosary; the bracing jab shuts up the coward.

As they near the airport, the pilots finally have the lights in sight. Whether their craft will remain intact upon touchdown is in question, but it does in fact hold together. The pilots



apply maximum thrust reverse and the plane comes to a full halt, much to the relief of all aboard. With the exception of the bomber himself, no one has died despite the grave threats posed by their crisis.

Compared to some of the other plots dreamed up for mayday films (*Airport '77* being among the least plausible), the original *Airport* is well within the range of the possible. In order to give the reader a sense of what emergencies and tragedies can in fact happen in flight, the next section describes a wide variety of real emergencies in the air.

### **The Real Perils of Flight**

The genius of Hollywood alone is not the only reason that a sense of danger in the air resonates with such a broad audience. This has more to do with the primordial feelings about the dangers of flight and the well-publicized accounts of aircraft emergencies and crashes in America and elsewhere. As one who has catalogued such commercial airline crashes, Malcolm MacPherson aptly describes the generalized fear many people display upon entering the cabin of an aircraft and leaving the safety of earth. He notes that the pilot may soothingly reassure nervous passengers that all dangers are being kept at bay, even when he is faced with crisis in the air; the reality may be far different, and the gut-level instincts of so many passengers may have been right:

At such times as these we may feel serene, while behind the forward-bulkhead door there is another reality we do not ever see. Usually when things go wrong in the air, they go wrong all at once, as one crippled and failed system collapses on another. Suddenly, horns sound in the cockpit to warn of an equipment failure, while recorded voices shout... in the pilot's ear and lights flash in front of his eyes. Often, confusion results; automatic responses are triggered. And in a truly amazing number of incidents, the crews bring their aircraft safely home, without the passengers knowing that their lives had been in such jeopardy.<sup>13</sup>

Hollywood, then, plays on existing fear to sell tickets, though in doing so, the usual elements of the filmmaker's craft are in evidence, often to stunning effect.

Though the public is repeatedly assured that flying is the safest form of travel, accidents do in fact occur. Even when there are no fatalities, the time between the start of an emergency and getting back safely on the ground can be a traumatic one. Take, for example, the 1993 case of a Japan Airlines cargo 747 that had just departed Anchorage International Airport en route to Chicago's O'Hare. Then imagine hearing the following

message from departure control just after takeoff: "Japan Air Four six Echo heavy, ah, Elmendorf Tower said that something large just fell off your airplane."

Not only had something large fallen off the plane, something large and *important* had fallen off: one of the four engines. In doing so, it critically damaged control surfaces on the left wing, putting the flight in serious jeopardy. Professional responses from those involved, along with the structural integrity of the Boeing 747 itself, allowed the plane to make an emergency landing. No deaths or injuries were sustained.<sup>14</sup> In many other instances, however, hundreds of lives have been lost in a single crash. Literature on the subject is abundant and can be found in the many books referenced in these pages.

As jumbo passenger jets began to take to the air in increasing numbers in the early 1970s, the risk of high casualties in the event of a crash also increased. Sadly, there have been many crashes in which loss of life was great, involved all three American-built jumbo jets — the Lockheed L-1011 Tristar, the McDonnell Douglas DC-10, and most prominently, the Boeing 747. One of the first major crashes of the new generation of jumbo jets came on March 3, 1974, when a new DC-10 belonging to Turkish Airlines lost control after a cargo door opened in flight, damaging hydraulic cables as the cabin floor collapsed. Three hundred and forty-six people lost their lives in what was to become a string of high-number fatalities. Two years later the worst aviation disaster occurred when a KLM 747 hit a taxiing Pan Am plane of the same model while trying to take off on a fog-shrouded runway in Tenerife, Spain. A total of 583 people died in the tragedy.

Later that decade, on November 11, 1979, an Air New Zealand DC-10 was on a sight-seeing trip over Antarctica when it slammed into Mount Erebus, killing all 257 aboard. This crash attests to the dizzying array of causes involved in the fatal crashes of even the most sophisticated flying machinery. A political cause for a crash can be found with the Soviet downing of Korean Air Flight 007 the night of September 1, 1983. Mistaken for an American spy plane, this 747 was shot out of the air by a Soviet fighter. Death was not instantaneous for crew and passengers flying at 35,000 feet, however. Rather, the pilots struggled for some time to understand the nature of their crisis and to cope with it. Ultimately, though, they were unsuccessful, and their aircraft spiraled down to the sea below, killing all aboard.

On the other side of the globe, Air India Flight 182 crashed off the Irish coast on June 23, 1985, sending 329 people to their deaths. The cause of the crash was determined to be a bomb, one of an unnerving number of such crashes. Later that year came the largest loss of life in a single-plane crash, that of Japan Airlines Flight 123, which cost the lives of 520 of the 524 people aboard the ill-fated flight. Because Japan has many short but dense routes,

Boeing designed a 747 that allowed for increased frequency of takeoffs and landings, calling it the 747SR for "short range." Lacking the extensive galleys of the normal long-range version of the plane, Japan Airlines was able to squeeze up to 528 passengers on the 747-100 model. Sadly, when the pressure bulkhead ruptured at the rear of the plane, a significant portion of the vertical stabilizer was blown off, and eventually all hydraulic control was lost, resulting in the crash of the plane.<sup>15</sup> This chain of events was almost impossible to predict.

One of the greatest fears of those in the air is fire, for it can spread in minutes and release toxic fumes which overcome passengers and crew trapped in the closed environment of a modern airplane. Such an end met crew and passengers aboard South African Airways Flight 295, a Boeing 747 "Combi," or combination passenger/freighter jet. In this model, passengers ride in the forward area of the main deck, while cargo is stored in the rear (and, of course, below). On November 28, 1987, on a long flight from Taiwan to South Africa, smoke was detected emanating from the cargo hold. The cockpit crew prepared for an emergency landing in Mauritius, but before they could land, fire either disabled the crew or the controls (or both), and the craft was lost.<sup>16</sup> A similar situation caused the crash of SwissAir Flight 111 on September 2, 1998.

In some cases, it may be the "culture" at an airline, which is sometimes shorthand for lack of familiarity with Cockpit Resource Management (CRM), that contributes to crashes. Korean Air, for example, has had a particularly poor record in modern aviation. In addition to losing the 747 mentioned above, on July 27, 1989, they lost a DC-10 on approach to Tripoli. The area was covered by fog, and eighty-two people were killed in the crash. Back in Asia, a Korean Air Flight 801, a Boeing 747 on approach to Guam, crashed just before 2:00 AM during a heavy storm. In this night crash of August 5, 1997, the glide slope transmitter on the island had been disconnected for maintenance reasons. At the time, it was raining heavily with broken clouds at 1,900 feet and overcast skies at 3,500 feet, resulting in possible pilot disorientation. The jumbo jet went down in dense jungle three miles from the airport, and of 254 passengers and crew, 228 died, while 26 survived.<sup>17</sup>

While the worst air disaster is still the ground collision that occurred on Tenerife, mid-air collisions are also a serious concern. On November 12, 1996, for example, a Saudi 747 and Kazakhstan Airlines IL-76 collided over Dadri, India, resulting in 349 dead. The Saudi plane had just taken off from Indira Gandhi International Airport when it hit an Ilyushin IL-76 of Kazakh Airlines that was making its landing approach. Given the increasingly crowded skies of the world's airways, such disasters may become more prevalent.

## Close Calls

In the movies, filmmakers are free to create all manner of effects for their airplane crash scenes. As we will see below, there is no shortage of vivid crash simulations in modern American film. In the case of a real crash, however, there are often no survivors, so the flow of events must be deduced by objective crash investigators, leaving out so much of the human drama and suffering involved. In the case of near crashes, however, most crew and passengers survive, and their harrowing accounts of their brushes with death provide a glimpse into the chaos and sheer terror of a mid-air crisis.

Hawaii has been the setting for two airline near-disasters, one of which was made into the TV movie discussed in the previous chapter. The second close call occurred on February 24, 1989, when an aging United Airlines Boeing 747 suffered a decompressive explosion when a cargo door blew out. Sixteen minutes after takeoff, the aircraft carrying 337 passengers to Auckland and Sydney was just passing through 22,000 feet. Suddenly, a loud thump was felt in the fuselage, and this was followed by "an enormous, mind-shattering explosion. The aircraft lurched violently to port, the wind noise instantly intensified, to a deafening level, there was an immediate and fierce decompression, with powerful suction, accompanied by a sudden misting of the flight deck and cabin interior, and the lights went out."<sup>18</sup> Fortunately, the jet remained flying, though a safe landing was far from guaranteed.

The damage was witnessed by the flight engineer, who had gone back to the upper cabin to assess the damage. He was "aghast to see a gaping hole in the starboard side fuselage skin. The major section missing extended up to the level of the cabin windows, leaving only the fuselage formers and stringers between the cabin and the outside air." Even worse was the damage down below in the business section. There, three meters of the starboard side of the fuselage had been torn away, and a block of ten seats was gone, along with a large section of the cabin floor. Nine passengers, never to be seen again, had occupied those seats.

Despite being able to fly, the condition of the 747 was still desperate as debris continued to shower over passengers and hurricane-like winds whipped through the open fuselage. In addition, both engines on the right wing seemed to be engulfed in flame after the explosion, forcing the pilots to shut down the third (inboard) engine. Though functioning, the fourth engine would still sometimes spit long tongues of fire backwards, at times reaching as far as the jumbo's tail. Passengers viewing this against the night sky were terrified.

As the crisis worsened, the pilots were forced to shut down the flame-throwing number four engine, creating drastic asymmetrical forces now that all the thrust was coming from the

left side. Under these conditions, the crew began dumping fuel in preparation for an emergency landing back in Honolulu. “After another 20 minutes of extreme anxiety... the welcoming lights of Honolulu hove in sight through misty rain in the distance.” Professionally, the pilot “retained accurate control, finally touching down very fast but smoothly... relying on heavy wheel braking to bring the 747 to a stop in a little over 2000m.”

What should be kept in mind in this instance is the knowledge that flight crew and many of the passengers must have had still fresh in their minds: just ten weeks prior, on December 21, 1988, a Pan American 747 leaving London for the United States had been blown out of the sky by a terrible explosion as it was passing over the tranquil town of Lockerbie, Scotland. Pan Am’s Flight 103 was carrying 259 people, all of whom died, and an additional eleven were killed on the ground. Later determined to have been caused by a bomb planted by Libyan agents, this tragedy underscores the seemingly irrational danger that can so unpredictably come from the sky. At just after 7:00 PM that evening, the Pan Am 747 slammed into a gasoline station and a row of houses in a village just north of the English border, sending a 200-foot fireball into the sky. The photograph of half of the nose section of the white and blue plane lying in a pasture remains an icon of aviation disasters.<sup>19</sup>

### ***Disaster in the Air***

Given the bewildering array of things that can go wrong in flight, it is no surprise Hollywood has concocted so many stories to explain their flying emergencies. While some of them are plausible or clearly mirror real-life incidents, others are so far-fetched as to invite ridicule. One that is chillingly plausible enough — simply recall the account of the Saudi Airlines 747 in-flight collision in India — comes in the immediate successor to *Airport*, *Airport '75*, where the Boeing 747 makes a dazzling debut. Preparing to land, the aircraft collides with a private plane, and a large hole is ripped into the right side of the cockpit. Two years later, however, *Airport '77* abandoned any pretense of realism when it portrayed a hijacked 747 making an unscheduled water landing in the ocean, whereupon it sank with survivors aboard. (This storyline was recycled in the TV-movie *Submerged*, starring Dennis Weaver.) *Airport '79: The Concorde* brought us a far-fetched tale of a missile downing a Concorde, which survives a crash landing on a snow-covered peak in Europe. Despite the presence of these unrealistic plots, other movies attempt a modicum of realism.

### **Crash of Flight 401 (1978)**

The first comment to make about this 1978 made-for-TV movie is that it is one of only

three examples of a movie that has used a Lockheed L-1011 Tristar as the setting.<sup>20</sup> The genre here is a straightforward menace in the sky scenario in which a planeload of innocent and unknowing passengers is dashed into the ground because some of the thousands of risks of flying had come together to bring about a fatal crash. A more detailed categorization of this airplane disaster movie is one where the complexity of the machine itself overwhelms the ability of humans to control it. Human malevolence is not a feature of this movie. Rather, it is risk posed by technologies too advanced for mankind to safely harness.

This teledrama was based on the crash of Eastern Airlines Flight 401, which left New York City on the night of Dec. 29, 1972, for Miami. Appropriately, darkness is a key feature in *Crash of Flight 401*. The opening scene shows an L-1011 cruising at altitude in a night sky. The narrator is William Shatner, who plays the lead investigator into the crash. His voiceover notes that the TriStar is one of the safest, most advanced airplanes in history, but there is a clear sense of foreboding in Shatner's narrative. This becomes explicit when he contrasts the relaxed mood of crew and passengers with the declaration that many aboard "only have two hours and twenty minutes to live."

After completing character introductions, the movie moves back to the airplane, showing a night view of Eastern's terminal. The mood is again foreboding as the music changes to a sharper-edged sound, and the camera pans to the plane on the ramp (erroneously, it shows an Eastern Boeing 727, which has all three engines at the rear, unlike the L-1011's wing — rear fin — wing arrangement). To drive home the point that the plane is doomed, the camera zooms in on the gate information as the music reaches a crescendo.

The concept of advanced technology beyond human control is introduced in a cockpit scene where a very senior captain (Eddie Albert as Captain Dunn) rebukes a younger colleague for an inadequate check procedure. Clearly tired and bothered by the panels of switches he must deal with, Captain Dunn then meets the personification of this advanced technology: the technical supervisor of the L-1011 happens to join them in the cockpit. Because he is a clear advocate of advanced technology, Captain Dunn vents his frustration on him, charging that he is the man responsible for taking the fun out of flying.

Next, the plane is shown taking off at night, headed for its destination in Miami. Darkness rules: the cockpit is dark, as is the control tower, where air traffic controllers are busy handling a possible emergency involving another plane. In one of the best pairings of darkness and danger, the movie makes multiple visits to the Florida Everglades, where two men on a small craft are hunting for frogs and snakes, all the while trying to avoid the jaws of nearby alligators.

Finally, darkness conspires to take the plane. After routinely lowering the landing gear, the co-pilot notices that the light for forward gear remains unilluminated. This problem with a thirty-cent bulb involves all four members of the cockpit crew in drama that will cost three of them and many passengers their lives. Convinced that the gear is in fact down, the captain still finds it prudent to solve the problem. Together with the co-pilot, he fiddles with the bulb and sends the navigator into the “hell hole” to see if he can visually confirm that the gear is locked in place. In this task, the navigator fails because it is too dark to verify anything. The technical supervisor then joins him in the hole, while the captain leaves his seat to work more closely on the still-dark bulb.

Such inattention to basic flying results in a crash into the everglades. According to the movie, the crash was caused by the pilot inadvertently bumping his yoke, which turned off the autopilot. Because of a very minor technical difference in sensitivities between the captain’s and co-pilot’s yokes, the auto-pilot off sign is not illuminated on the co-pilot’s side, so neither pilot realizes what has happened. As it drifts lower, it screams over the men hunting below and crashes in a fireball. Lights in the cabin flicker off and nearly two hundred people are thrown into the fury of a jumbo jet’s disintegration. Whole rows of strapped in passengers are flung into the swamp, while others are torn apart by jagged metal and wire cables. Ironically, a technically advanced aircraft flown by a highly trained crew crashed due to the malfunction of a lowly thirty-cent bulb. Such are the stakes when taking on manned flight.

### **Reel Crashes**

The crash of Flight 401 portrayed in the movie above was perhaps an understated portrayal of what the real crash must have looked like. In the movie, for example, bodies were not shown being torn apart by the violent forces that accompany the majority of airplane disasters. Still, Hollywood is capable of creating fictional images of airplanes crashing to the ground and has done so in a chilling manner in at least four recent examples. In two major motion pictures, one starring Jeff Bridges and the other Tom Hanks, the view from inside a disintegrating plane is presented, while two made-for-TV movies provide their own graphic scenes.

*Fearless* (1993) was one of the films mentioned earlier because its opening scene qualified as a “machine in the garden” sequence. Though the film ends on a message of hope and survival, the theme throughout the movie concerns the great dangers in commercial flight. Time is manipulated in *Fearless* through the flashbacks survivor Max Klein experiences,

which serves to gradually tell us what happened on that fateful Intercity flight. Max is on a business flight with his partner and he is very nervous about flying, jumping at every little sound. He also has a sense that something is amiss, a sentiment his partner dismisses. Suddenly, the plane is jerked away from level flight and a noisy commotion ensues in the cabin. A loss of hydraulic pressure has made the plane unstable and hard to control. Panic increases among the passengers.

In a final flashback at the end of the film, we see one of the most graphic depictions of an airliner crash. First, there is a blinding white light as Max looks out the plane's window and though he realizes they are going to die, he is not afraid. He leaves his seat to reassure terrified passengers, then sits next to a young boy who is all alone. Through the open cockpit door, we see the pilots struggling frantically to bring the nose of the plane up. Instrument lights are flashing red, but it is the looming ground filling the windshield that captures our attention. Impact is imminent.

In contrast to some crash scenes, this one features soothing classical music as the crash unfolds and the plane disintegrates. First, one side of the plane rips away and we see open sky, then overhead racks begin to fall. Next, an orange fireball roars from front to back of the cabin. The fuselage breaks into sections as seats are torn from the floor, the passengers still strapped to them, and debris flies everywhere. An intact part of the fuselage rolls many times, subjecting passengers still seated inside to deathly forces. The result is what we had seen in the movie's opening: the plane and its contents strewn through a cornfield, with only a handful of people surviving.

Based on Rafael Yglesias's novel of the same name, this story is almost certainly inspired by the real crash of a DC-10 into a cornfield at the Sioux City, Iowa, airport.<sup>21</sup> The novel also features a DC-10, though here it is flying from New York to Los Angeles (in the movie they are flying from San Francisco to Houston, and the plane is not a DC-10, as it has only a single aisle, versus the two in the wide-bodied DC-10). The loss of hydraulics in the film mirrors the cause of the Sioux City crash, which was initially caused by the explosion of the tail engine. This explosion severed the hydraulic lines and all normal steering controls were lost. Through brilliant teamwork, the pilots managed to use engine thrust to direct the United DC-10 from a height of 33,000 feet to an approach with the runway in Sioux City, but ultimately this technique was too blunt and the aircraft broke up upon impact with the runway and large sections of it tumbled or slid into the cornfields surrounding the runway. Remarkably, one hundred and eighty-five people survived this crash.

*Freefall: Flight 174* (1995) opens with two men in the cockpit of a modern jetliner.



Suddenly, warning lights go on, the engines stop, and the plane enters a vertical dive from which it will not recover. Fortunately, it turns out to be only a flight simulation, though, as the credits tell us, this scenario was “based on an actual event that occurred on July 23, 1983.” This event was the fuel starvation of a new Air Canada Boeing 767 jet caused by errors in the calculations regarding metric and English units of liquid measure. The plane departed Dorval Airport in Montreal without sufficient fuel to reach its intended destination, Edmonton, Alberta. In fact, it turned out that the plane lacked enough fuel to reach even Winnipeg Airport, its chosen emergency landing site. Both engines flamed out at cruising altitude, and the pilots were faced with the task of flying and landing a powerless jetliner weighing one hundred and fifty tons. That this was a real incident makes the docudrama all the more fascinating, as it drives home the point that no matter how sophisticated the technology, errors can still occur for the simplest of reasons. Or maybe it is just a confirmation of Murphy’s Law.

*Airspeed* (1997), a made-for-TV movie, uses a Boeing product that is not commonly seen, the commercially successful three-engine 727. Although a total of 1,832 were built between 1962 and 1984, this workhorse has been overshadowed by its long-range sister, the 707, and its much bigger brother, the 747. In *Airspeed*, a wealthy man’s spoiled daughter is aboard his private 727, trying to be as obnoxious as she can to get and keep the attention of the two adults charged with caring for her. When a lightning strike incapacitates the cockpit crew and blows a hole in the side of the plane, only she will be able to fly the plane. Given the fact that the 727 is caught in a fierce storm and its autopilot will not respond to commands, the chances for a safe outcome in this instance are slim.

The crisis aboard this 727 does recall another use of the plane in a film, though it was an incidental role rather than a central one. A year prior to the release of *Airspeed*, Arnold Schwarzenegger and James Caan starred in *Eraser*, a tense thriller about the work of U.S. Marshals and the Witness Protection Program. In *Eraser*, Schwarzenegger (U.S. Marshal John “The Eraser” Kruger) and Caan (U.S. Marshal Robert Deguerin) are aboard a government Boeing 727, when suddenly Deguerin executes one of the young marshals aboard and plans to kill Kruger as well. To escape this fate, Kruger jumps out of the plane. Debris gets sucked into one of the three engines, which explodes and begins to burn, forcing the pilot to initiate emergency procedures. Determined not to let his colleague live to tell what had happened, Deguerin demands that the pilot turn around and ram Kruger as he floats slowly to earth under his parachute.

The scene of the 727 turning back in the sky is impressive, smoke trailing from its

damaged engine, and its size growing quickly as it nears the viewpoint the audience shares with the threatened Kruger, who is able to aim a shot to the head of the pilot, thereby diverting the plane enough to survive.

In *Free Fall* (1999), another made-for-TV movie, we see a chilling computer-generated image of a fatal jetliner crash. Initially, all is normal aboard Trans Regional Flight 662. Attractive blonde flight attendants go about their business, while children run up and down the aisles. Then, without warning, a rudder malfunction sends the aircraft hurtling downward, as terrified passengers and crew grip their armrests in fear.<sup>22</sup> The two pilots try to bring their ship out of its dive, but it is too late. The earth rushes up at the pilots, and as they almost restore the plane to level flight, it begins to smash into the tops of trees in the Rocky Mountains. The side of the cabin rips away, then the belly is torn open by the trees. As the entire fuselage begins to break into separate pieces, seats are wrenched away and debris whips through the air.

The camera then cuts to the outside of the plane and shows it coming at us in slow motion. The plane's momentum keeps the major parts more or less moving together, but it is clear they no longer compose an intact aircraft. As the ensemble grazes the ground, the wings erupt as their tanks burst and we see the white nose section continue its journey toward us. It then bounces slightly and upon the second impact—which takes place in the forefront of the screen—it crumples and breaks up. This is how we are introduced to the first of three crashes in the movie.

*Final Destination* (2000), a horror flick aimed at youthful viewers, is not an airplane movie per se, but the crash sequence at the beginning of the film more than merits a mention. A group of high school French students are on their way to Paris, gathering at the airport to await boarding. As adolescents, they are full of mischief and energy, though one student, Alex, senses something wrong. For example, when the flight status displays turn over, he focuses on the word “terminal.” Soon after, when he hears a John Denver song in the background, he realizes that Denver had met his fate in a plane crash.

Nervous, Alex nonetheless boards Flight 180, a Boeing 747, with the other students. As he boards, however, he sees omens. First, a mother is holding up a screaming infant, but the baby's face has the strange appearance of an adult. Turning the corner, he sees a woman struggling with her severely handicapped son, tubes running down his nose and his limbs bent rigidly at odd angles. Next, trading his own seat for a classmate's, he notes that the clip holding his seat tray has come off, a minor but inauspicious symbol for their flight.

The plane takes off as planned but quickly meets some turbulence, which disturbs the

youthful first-time fliers. Flight attendants pooh-pooh the students' worries, though, and smooth flight resumes. Suddenly, the plane begins shaking much more violently and oxygen masks fall from the ceiling. This time even the flight attendants are afraid. As the panic spreads, the plane begins to come apart as an explosion rips open the side of the fuselage, sucking students and their seats to their deaths below. A fireball then erupts in the front of the cabin, roaring the length of the plane and incinerating the screaming passengers.

Alex then awakes in a sweat and realizes it was all a dream. He is still seated next to his friend, but the plane has yet to take off. Taking his dream as a realistic premonition, he screams for everyone to get off. "This plane is going to crash," he yells. With no reason to believe him, flight attendants remove him and some of the students who have begun to fight with him. They are all rudely deposited back in the terminal, where they can only watch as their friends depart for France. Just as the 747 has lifted off, however, it erupts in a great fireball, killing all 287 people aboard, including forty students and four teachers.<sup>23</sup> Naturally, authorities are anxious to know what Alex knew about this flight beforehand, and their investigation — seen post 9/11 — takes on a much grimmer demeanor a year after the film has been released. This is discussed further in the conclusion of this dissertation.

## **Die Hard 2**

Bruce Willis has been one of the most successful Hollywood actors of the last two decades. In 1988 he starred in *Die Hard*, a fast-paced action drama set in the new Los Angeles high-rise headquarters of the fictitious "Nakatomi" corporation. In that movie he played street cop John McClane and battled a squad of suave Euro-terrorists. In *Die Hard 2* (1990) he reprises his role, and this time the action takes place at Dulles Airport outside Washington, D.C. This film relies upon a focus on the standard dangers involved in flying: bad weather, poor communications with ground control, low fuel, etc.

The film begins with McClane's illegally parked car being towed from in front of the airport, a clear harbinger of the other troubles he will face with machines before the day is over. Further, a large band of renegade American soldiers have plans to free a notorious South American leader who is being flown to Washington to face prison time. To secure his release, they will electronically castrate the entire Dulles system, leaving ground controllers and pilots unable to contact each other. Given the worsening snowstorm that has struck, such a lack of communication means death for those unfortunate enough to be stranded in airliners stacked about Washington. As fate would have it, McClane's wife is aboard one of the planes, a Lockheed L-1011 Tristar that had taken off from Los Angeles earlier that day.

Early in the film, we see an allusion to the skies. The renegade soldiers have elected to set up their command post in a series of church buildings located on the perimeter of Dulles Airport. All of these buildings — the church in particular — have steeples or sharply pitched roofs, like hands reaching out to the skies, and a white covering of snow suggests an image of angels.

In order to show their seriousness and their power, the renegade commander recalibrates the coordinates of the airport and lures a fuel-starved jetliner into landing. Given the lack of visibility and the false altitude readings, the packed Boeing 707 slams into the runway, breaks apart, and burns. This is but a prelude to the explosion in the climax of the movie. The surviving renegade soldiers and the freed general have demanded and received a fully fueled 747. As they taxi out for takeoff, McClane climbs aboard the wing. One commando then engages him in hand-to-hand combat, and when he loses, McClane pushes him into one of the working engines. Finally, McClane opens one of the fuel valves on the wing, causing jet fuel to rush out, leaving a trail of volatile fuel in the plane's wake. Knocked off the wing onto the ground, McClane nonchalantly lights up a cigarette, then tosses the lighter onto the beginning of the fuel trail. The flame races back to the source of the fuel, and the airborne 747 erupts in a ball of flame, killing all aboard. Luckily, the burning fuel trail allows the waiting passenger jets to see the runway, and they all make safe landings.

### **Six Days Seven Nights**

This Hollywood film stars Harrison Ford and Anne Heche as an ill-matched pair stranded on a remote South Pacific island. Ford plays Quinn Harris, an independent, hard-drinking pilot whose social skills are not quite fit for the cosmopolitan Manhattan fashion magazine editor Robin Monroe (Heche). When she needs to connect to a flight on another island, though, only Harris is available. Taking off into the evening sky, the forecast is good and it should be a smooth flight. Into their flight, however, a tropical thunderstorm erupts, putting the lives of pilot and passenger in jeopardy. With his radio knocked out, Harris is forced to land his plane on a stretch of beach on a deserted island. Only sporadic lightning illuminates his way.

Though the plane remains their best hope for escape, it still represents a menace. One strut of the landing gear is broken, and the pontoons they rig for a water takeoff look suspect. Add to this mixture a scene in which they are attacked by modern pirates and all the dangers of flight stand out. The suspense builds as Harris is wounded by a shell fired from the pirate ship, and his chances of successfully taking off in his patched-up plane dwindle rapidly.

Bloodied and in pain, he has no choice but to attempt a takeoff and to do that he must head to sea — right at the attacking pirate ship. The shots from the pirate ship are now closing in on the accelerating plane, and there is a real danger that the next salvo will sink the plane. Fortunately, the gun jams, buying Harrison crucial seconds. He uses this time to gain enough speed to leave the water, flying directly over the ship. Following the plane in his sights, the leader of the pirates shoots straight up, missing the plane and bringing the shell back down onto the ship. For now, Queenie and Monroe have escaped.

Airborne, Queenie soon lapses into unconsciousness from loss of blood. It is up to city girl Monroe to take over. Recalling the few instructions Harris was able to give her, she makes a successful, though none-too-beautiful, landing in the lagoon in front of her resort hotel. This sub-genre where the male pilot loses control or dies and a woman takes over to land the plane has become a staple of modern flying films and will be discussed in depth later.

### **Complaints of Airline Officials**

One is hardly surprised that some of the more dramatic airline disaster films have upset airline officials. In 1936, for example, the release of *Ceiling Zero* was greeted by complaints from the airline industry. In this Warner Brothers film, James Cagney teamed up with Pat O'Brien to produce a suspense film about commercial flying. In a love triangle, one pilot gets lost in fog and dies in a spectacular crash when his plane hits high-tension wires when trying to land. His rival (Cagney) meets a similar fate when bad weather causes his wings to ice up, sending him and his passengers to their doom. Here is an account of airline executives' reaction to the movie:

[B]efore the movie's release, commercial airline officials nervously remembering that many potential air travelers were scared out of their wits during the plays' run on Broadway, sent emissaries to plead with the studio. They wanted the production company to withdraw the film.

It was an exercise in futility: the film couldn't be scrapped, there was... money at stake. However, studio chiefs did allow the airlines to inscribe a foreword.... "This picture depicts pioneer days in air travel," the caption read. "As a result of these heroic events, we have arrived at today's safety."... Needless to say, the airline disclaimer didn't help much.<sup>24</sup>

Three years later, a film *was* scrapped because of pressure, this time coming from the government rather than the airline industry. *Thirteen Go Flying* was to be based on the

crash of a flying boat. Studio mogul Samuel Goldwyn cancelled the film, saying "I certainly do not want to place any hindrance in the path of American aviation's fine progress." Some objected to *The High and the Mighty* as well.<sup>25</sup>

The film that caused the most consternation among American government and airline officials was the 1966 made-for-TV movie *The Doomsday Flight*, starring Jack Lord and Edmond O'Brien. In this Rod Serling script, a man blackmails an airline by planting an altitude-triggered bomb aboard an airliner. The passengers and crew are saved, however, by the decision to land the plane in Denver. This movie triggered a spate of hoaxes along the same lines. For example, Qantas Airlines paid half a million dollars to two extortionists who made such threats (they were later apprehended), and a B.O.A.C. 747 was diverted to Denver because of one such threat. Finally, the FAA requested that 500 TV stations refrain from showing this movie, showing the power of suggestion they believed television had.<sup>26</sup>

Perhaps this sums up the fascinating intersection between the real menace of flying and the way it is portrayed on the screen or on television. The relationship is clearly dynamic, with one always informing and affecting the other. At the heart of it may be a real concern among flyers and film audiences of the peril of flight.

## Notes

1. Macarthur Job, *Air Disaster: Volume 2* (Fyshwick, Australia: Aerospace Publications Pty. Ltd, 1996), 47.
2. Paris, *From the Wright Brothers*, 198.
3. Pendo, *Aviation in the Cinema*, 277, 279; Paris, *From the Wright Brothers*, 199.
4. Bob Serling, "Seen a Good Movie Lately? A Brief Guide to a Dozen Classic Films About Civil Aviation," *Airways Magazine*, December 1999, 47-53.
5. Prior to the crashes of the Comets due to metal fatigue, this de Havilland plane had met with other problems. Because the Comet lacked leading-edge slats, two aircraft crashed due to a tendency to stall on takeoff if the nose was raised too high. Five months after its debut in May 1952, one Comet was lost at Rome's Ciampino Airport, and four months after that, another was lost in Karachi. On May 2, 1953, a third Comet was torn apart by severe weather near Calcutta. See David Owen, *How Science is Making Flying Safer* (Somerset, England: Haynes Publishing, Ltd., 1998), 32-33.
6. Owen, *Air Accident Investigation*, 31-40.
7. Pendo, *Aviation in the Cinema*, 280.
8. The script is based on Gann's best-selling novel *The High and the Mighty*. See Serling, "Seen a Good Movie Lately?," 47-53.
9. Pendo, *Aviation in the Cinema*, 280-281.
10. Pendo, *Aviation in the Cinema*, 284-285.

11. Pendo, *Aviation in the Cinema*, 285-286.
12. This may in part be based on an actual event. On May 22, 1962, a Continental 707 flying out of Chicago was blown out of the sky by a bomb concealed in the lavatory. See Owen, *Air Accident Investigation*, 174.
13. MacPherson, *The Black Box: Cockpit Voice Recorder Accounts*, 10.
14. MacPherson, *The Black Box: All New*, 101-111.
15. Dennis R. Jenkins, *Boeing 747-100/200/300/SP* (North Branch, MN: Specialty Press Publishers, 2000), 39-41; see also Owen, *Air Accident Investigation*, 40-46.
16. MacPherson, *The Black Box*, 36-37.
17. For discussion of the crash of KAL 801, see James M. Walters and Robert L. Sumwalt III, *Aircraft Accident Analysis: Final Reports* (New York: McGraw-Hill, 2000), where they note that the National Transportation Safety Board determined that the captain's failure to heed clear warnings " could partly be due to ineffective Crew Resource Management training by KAL and an 'advocacy' mentality, or a reluctance to question an authority figure, found in the Korean culture (201-202). Additional KAL crashes are discussed pp. 204-205. An extensive discussion of human factors in airplane crashes can be found in David Beaty, *The Naked Pilot: The Human Factor in Aircraft Accidents*, (Shrewsbury, England: Airline Publishing Ltd, 1995). MacArthur Job is equally as censorious of China Airlines, particularly with respect to two crashes of Airbus A300-600s in nearly identical situations within the span of four years. "The degree of similarity — almost virtual repetition — of circumstances, data, and aircraft, between Nagoya and Taipei, less than four years apart, is nothing less than breathtaking" (*Air Disaster: Volume 3* [Fyshwick, Australia: Aerospace Publications Pty. Ltd, 1998], 154-155).
18. The account of this incident can be found in Job, *Air Disaster: Volume 3*, 31-36.
19. Owen, *Air Accident Investigation*, 178-184.
20. The others are *Passenger 57*, which I deal with in another chapter, and the 1989 docu-drama *Fire and Rain*, which is based on the crash of Delta Flight 191 at Dulles-Fort Airport in August 1985. The Lockheed Tristar also appears in *Die Hard 2* but it plays a minor role as most of the drama unfolds on the ground.
21. Rafael Yglesias, *Fearless* (New York: Warner Books, 1993). For an extended description of the crash of United Flight 232, see MacPherson, *The Black Box*, 162-186.
22. Most likely this scenario is taken from the two real-life crashes caused by suspected rudder malfunctions on Boeing 737s. The first was United Flight 585 on a final segment from Denver to Colorado Springs, Co., while the second crash occurred near Pittsburgh, PA, when a USAir 737 suddenly nose-dived on approach and buried itself eight feet into the ground. See Job, *Air Disaster: Volume 3*, 65-80; and MacPherson, *The Black Box*, 151-156.
23. This recalls the loss of students from a high school in rural Pennsylvania when TWA Flight 800 exploded and crashed off the coast of Long Island on the evening of June 17, 1996.
24. Pendo quoting Jim Greenwood, *Aviation in the Cinema*, 276.
25. See Pendo, *Aviation in the Cinema*, 277 and 281.
26. Pendo, *Aviation in the Cinema*, 288. Pendo also notes another hijack film that aroused the attention of aviation authorities. *Skyjacked* (1972) featured a madman who wanted to hijack a Boeing 707 to Moscow. Because the hijacker was not glamorized, the FAA approved of the film, but Australian authorities banned it for six months.