

leagues assisted him, Ballinger remained responsible for multiple flights. See Ed Ballinger interview (Apr. 14, 2004). American Airlines' policy called for the flight dispatcher to manage only the hijacked flight, relieving him of responsibilities for all other flights. On American Airlines' policy, see Craig Marquis, Craig Parfitt, Joe Bertapelle, and Mike Mulcahy interview (Nov. 19, 2003). United Airlines had no such "isolation" policy. UAL System Operations Control briefing (Nov. 20, 2003).

70. On FDR, see NTSB report, "Specialist's Factual Report of Investigation—Digital Flight Data Recorder" for United Airlines Flight 93, Feb. 15, 2002; on CVR, see FBI report, "CVR from UA Flight #93," Dec. 4, 2003; Commission review of Aircraft Communication and Reporting System (ACARS) messages sent to and from Flight 93 (which indicate time of message transmission and receipt); see UAL record, Ed Ballinger ACARS log, Sept. 11, 2001. At 9:22, after learning of the events at the World Trade Center, Melody Homer, the wife of co-pilot Leroy Homer, had an ACARS message sent to her husband in the cockpit asking if he was okay. See UAL record, ACARS message, Sept. 11, 2001.

71. On FDR, see NTSB report, "Specialist's Factual Report of Investigation—Digital Flight Data Recorder" for United Airlines Flight 93, Feb. 15, 2002; on CVR, see FBI report, "CVR from UA Flight #93," Dec. 4, 2003; FAA report, "Summary of Air Traffic Hijack Events: September 11, 2001," Sept. 17, 2001; NTSB report, Air Traffic Control Recording—United Airlines Flight 93, Dec. 21, 2001.

72. The 37 passengers represented a load factor of 20.33 percent of the plane's seating capacity of 182, considerably below the 52.09 percent for Flight 93 on Tuesdays in the three-month period prior to September 11 (June 11–September 4, 2001). See UAL report, Flight 93 EWR–SFO load factors, undated. Five passengers holding reservations for Flight 93 did not show for the flight. All five were interviewed and cleared by the FBI. FBI report, "Flight #93 'No Show' Passengers from 9/11/01," Sept. 18, 2001.

73. INS record, Withdrawal of Application for Admission for Mohamed al Kahtani, Aug. 4, 2001.

74. See FAA regulations, Admission to flight deck, 14 C.F.R. § 121.547 (2001); UAL records, copies of boarding passes for United 93, Sept. 11, 2001. One passenger reported that ten first-class passengers were aboard the flight. If that number is accurate, it would include the four hijackers. FBI report of investigation, interview of Lisa Jefferson, Sept. 11, 2001; UAL record, Flight 93 passenger manifest, Sept. 11, 2001. All but one of the six passengers seated in the first-class cabin communicated with the ground during the flight, and none mentioned anyone from their cabin having gone into the cockpit before the hijacking. Moreover, it is unlikely that the highly regarded and experienced pilot and co-pilot of Flight 93 would have allowed an observer into the cockpit before or after takeoff who had not obtained the proper permission. See UAL records, personnel files of Flight 93 pilots. For jumpseat information, see UAL record, Weight and Balance Information for Flight 93 and Flight 175, Sept. 11, 2001; AAL records, Dispatch Environmental Control/Weekly Flight Summary for Flight 11 and Flight 77, Sept. 11, 2001.

75. Like Atta on Flight 11, Jarrah apparently did not know how to operate the communication radios; thus his attempts to communicate with the passengers were broadcast on the ATC channel. See FBI report, "CVR from UA Flight #93," Dec. 4, 2003. Also, by 9:32 FAA notified United's headquarters that the flight was not responding to radio calls. According to United, the flight's nonresponse and its turn to the east led the airline to believe by 9:36 that the plane was hijacked. See Rich Miles interview (Nov. 21, 2003); UAL report, "United dispatch SMFDO activities—terrorist crisis," Sept. 11, 2001.

76. In accordance with FAA regulations, United 93's cockpit voice recorder recorded the last 31 minutes of sounds from the cockpit via microphones in the pilots' headsets, as well as in the overhead panel of the flight deck. This is the only recorder from the four hijacked airplanes to survive the impact and ensuing fire. The CVRs and FDRs from American 11 and United 175 were not found, and the CVR from American Flight 77 was badly burned and not recoverable. See FBI report, "CVR from UA Flight #93," Dec. 4, 2003; see also FAA regulations, 14 C.F.R. §§ 25.1457, 91.609, 91.1045, 121.359; Flight 93 CVR data. A transcript of the CVR recording was prepared by the NTSB and the FBI.

77. All calls placed on airphones were from the rear of the aircraft. There was one airphone installed in each row of seats on both sides of the aisle. The airphone system was capable of transmitting only eight calls at any one time. See FBI report of investigation, airphone records for flights UAL 93 and UAL 175 on Sept. 11, 2001, Sept. 18, 2001.

78. FAA audio file, Cleveland Center, position Lorain Radar; Flight 93 CVR data; FBI report, "CVR from UA Flight #93," Dec. 4, 2003.

79. FBI reports of investigation, interviews of recipients of calls from Todd Beamer, Sept. 11, 2001, through June 11, 2002; FBI reports of investigation, interviews of recipients of calls from Sandy Bradshaw, Sept. 11, 2001, through Oct. 4, 2001. Text messages warning the cockpit of Flight 93 were sent to the aircraft by Ed Ballinger at 9:24. See UAL record, Ed Ballinger's ACARS log, Sept. 11, 2001.

80. We have relied mainly on the record of FBI interviews with the people who received calls. The FBI interviews were conducted while memories were still fresh and were less likely to have been affected by reading the accounts of others or hearing stories in the media. In some cases we have conducted our own interviews to supplement or verify the record. See FBI reports of investigation, interviews of recipients of calls from Todd Beamer, Mark Bingham, Sandy Bradshaw, Marion Britton, Thomas Burnett, Joseph DeLuca, Edward Felt, Jeremy Glick, Lauren Grandcolas, Linda Gronlund, CeeCee Lyles, Honor Wainio.