Korean culture may offer clues in Asiana crash

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Marcio Jose Sanchez / AP
In this Saturday, July 6, 2013 aerial photo, the wreckage of Asiana Flight 214 lies on the ground after it crashed at the San Francisco International Airport, in San Francisco. The pilot at the controls of airliner had 43 hours of flight time in the Boeing 777 and was landing one for the first time at San Francisco International.

Investigators combing through the debris and data recordings from the Asiana Airlines jet that crashed in San Francisco Saturday may learn more about what happened inside the cockpit of the Boeing 777 aircraft by studying an unlikely clue: Korean culture.

South Korea's aviation industry has faced skepticism about its safety and pilot habits since a few deadly crashes beginning in the 1980s. But despite changes, including an improved safety record, Korea's aviation sector remains rooted in a national character that's largely about preserving hierarchy—and asking few questions of those in authority.

"The Korean culture has two features—respect for seniority and age, and quite an authoritarian style," said Thomas Kochan, a professor at the Sloan School of Management at the Massachusetts Institute of Technology. "You put those two together, and you may get more one-way communication—and not a lot of it upward."

In the Korean language, you speak to superiors and elders in an honorific form that requires more words and can be more oblique than in English, for example. It's less, "Yo! You want water?"; and more, "It's a warm day for a nice refreshment, no?" This may sound trivial. But put this in the context of a cockpit, where seconds and decision-making are crucial, and communication and culture can matter.

The Asiana pilots on Flight 214 apparently did not discuss their predicament, the *Los Angeles Times* reported Tuesday, citing cockpit voice recordings.

It's still early in the the investigation of the flight from Seoul, South Korea. It will be months before the National Transportation Safety Board can say what happened inside the cockpit, and who communicated what to whom.

But as the details unravel, expect Korea's cockpit culture and training to be scrutinized further. With two Chinese teenagers dead and 180 injured out of more than 300 passengers, the crash

offers an abrupt reflection on South Korea's tarnished aviation legacy, which officials there had hoped was behind them.

On Tuesday, Asiana Airlines Chief Executive Yoon Young-doo said the carrier has plans to improve training for its pilots. He said the pilot and co-pilot on the aircraft were qualified. "The two pilots on the plane have enough qualifications, having flown to San Francisco 33 times and 29 times respectively," he said.

It was pilot Lee Gang-guk's first time landing a Boeing 777 at San Francisco International Airport. Lee Jung-min, 49, the senior co-pilot in the cockpit with the younger Lee, had more experience flying 777s into San Francisco.

Video: Investigators from the National Transportation Safety Board have spent a second day on the runway at San Francisco International Airport looking at the remains of Asiana flight 214. On Monday, the investigation focused on what was happening in the cockpit just before the crash. NBC's Tom Costello reports.

Investigators have started interviewing the Asiana crew, and hope to wrap up interviews Tuesday, Deborah Hersman, chairwoman of the National Transportation Safety Board, which is investigating the crash, told CNBC Tuesday. The 46-year-old pilot will be interviewed later Tuesday, said Hersman.

A long-standing flying adage is: aviate, navigate, communicate. "You have to have great communication among people in a team, especially in high-risk environments," said Kochan, also co-director of the MIT Sloan Institute for Work and Employment Research.

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The crash Saturday was Asiana's third accident involving fatalities since its founding in 1988. As data recordings were collected on those previous crashes, a trend emerged. "What came up was the military culture in which the South Korean pilots grew up in," said John S. Park, an expert on the Koreas and a Stanton Nuclear Security junior faculty fellow at MIT.

Young men in South Korea must serve mandatory military service, so some air force veterans transition to civilian aviation careers. (Some American veterans, who have served after Sept. 11, are also transitioning into aviation jobs.)

But sometimes that transition into the private sector comes with military baggage.

Korea's authoritarian structure, not surprisingly, is reflected in its industries including aviation, where co-pilots traditionally have not been encouraged to challenge senior pilots. Military training only adds to constant self-awareness about where you are in an organization's pecking order—and not speaking out of turn.

While workplace trends are modernizing, many Korean companies still promote and reward seniority—over merit and achievements. And it's this constant reminder of a pecking order that can grip a military unit, an aviation cockpit—even a national soccer system.

In 2002, South Korea became the only Asian nation to make the World Cup tournament's semifinal round of four after a foreigner—Guus Hiddink, a Dutch coach—squashed cronyism and rewarded players on talent. "They couldn't have made a successful team under the old Korean leadership," said Choe Yong Ho, a University of Hawaii emeritus history professor, at the time.

South Korea's aviation industry has brought in new blood, too. After the crashes during the '80s, Western pilots were hired to bring in fresh blood and ideas. But a culture shift did not come in time for a fatal 1997 Korean Air flight.

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The most recent crash involving a South Korean carrier was in 1997, when a Korean Air 747 slammed into a hill while approaching the airport in Guam, killing 225 people and later prompting a downgrade of South Korea's aviation rating by the U.S. Federal Aviation Administration to category 2.

The rating was restored to Category 1 in December 2001, enabling Korean carriers to open new routes, which they were not allowed to do under the lower category.

In a chapter titled "The Ethnic Theory of Plane Crashes," author Malcolm Gladwell in "Outliers" dissects the flight recorder transcript of the final minutes of KAL Flight 801 between the captain and first officer. As the weather worsened, Gladwell argues culture influenced the way in which the pilots communicated. The first officer politely referred to "weather radar"—instead of using a more direct, Western-style of communication, i.e., "there's trouble ahead."

In 2000, a Delta Air Lines executive was brought in to run KAL's flight operations. The Delta executive made aviation English a priority, Gladwell notes. He also brought in Alteon, a subsidiary of Boeing, to take over company training and instruction programs. A Boeing spokesman declined to comment on that KAL training given the ongoing nature of the current Asiana investigation.

As Korean pilots broadly have worked to improve operations, Korean flight attendants undergo rigorous training with constant evaluation. The Asiana crew on Flight 214 are being praised for their timely response in ushering passengers off the plane. Clad in high-heeled pumps and pencil skirts, the women coolly carried out rescue tasks, NBC News reported. "It's remarkable that on one plane you can have two different cultures," said Park, an MIT fellow.

The larger question for investigators is how on a good weather day, an experienced Asiana crew was flying too slow, and clipped the end of the runway before crashing. Early information from data recordings suggests no mechanical problems, NTSB's Hersman said.

"We really do need to understand, 'Who was the pilot in command?' 'Who was the pilot flying at the time?' 'What kind of conversations were they having?' " Hersman told CNBC Monday. "There is an expectation that anyone who's putting themselves out there to provide passenger service meets minimum safety standards," she said in an additional CNBC interview Tuesday.

The key pilot in question, Lee Gang-guk, had logged 43 hours flying the 777 over nine flights. It was his first landing of a 777 at SFO. It takes 60 hours and 10 flights to be considered fully qualified, the airline told NBC News. When a pilot learns a new type of aircraft, the status before full qualification is known as transition training.

Lee had a long, otherwise untarnished career, including nearly 9,700 hours clocked flying the Airbus A320 and the Boeing 737 and 747, NBC News reported. The senior co-pilot, Lee Jung-min, had more than 3,000 hours on the 777.

—NBC News, the Associated Press and Reuters contributed to this report.

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