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Investigator Worries NASA Won't Change

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CAPE CANAVERAL, Fla. -- A Nobel Prize-winning member of the board investigating the space shuttle Columbia disaster says he fears NASA may be doomed to suffer more tragedies unless it changes the culture that has led to flawed decision-making.

The "same faulty reasoning" that led to the 1986 Challenger accident also led to Columbia, said Douglas Osheroff, one of the 13 board members wrapping up the report on the Columbia accident.

"No matter how good the report looks, if we don't do something to change the way NASA makes its decisions, I would say that we will have been whistling in the wind," Osheroff told The Associated Press in a telephone interview this week.

"At the moment, I'm in a state of depression," he said from his office at Stanford University.

Several Columbia board members have said the space agency needs dramatic change, but Osheroff is pessimistic that can be accomplished.

"Look, I think it's been clear for a long time that what has to change is not NASA's policies and procedures or management structure. I suppose they have to change as well, but it's culture," he said. "Culture is a very funny thing, of course. It is the way people intuitively behave to a situation."

Board members and former NASA employees have pointed to attitudes of superiority, fear of retribution by lower-level employees, communications problems and strained relationships between key divisions of NASA as part of its difficult culture. Osheroff is also troubled that some managers who made crucial decisions during Columbia's flight seem unwilling to accept individual blame.

NASA Administrator Sean O'Keefe has promised things will change. Just last week, he said he was committed to "creating an atmosphere in which we're all encouraged to raise our hand" and speak out when there are life-threatening hazards.

But Osheroff's own experience tells him how hard it will be to accomplish that.

"I was at Bell Laboratories at the time of the breakup of the Bell system, and they had industrial psychologists come in trying to change the culture," he said. "I don't think it was at all successful, at least certainly not in the research area where I was."

In NASA's case, Osheroff and other board members have noted the similarities between February's Columbia accident, in which seven astronauts died on their way home, and the Challenger tragedy, which killed seven on their way to space.

Challenger's loss also led to a hard-hitting report on NASA.

Yet, Osheroff notes, "the same faulty reasoning led to both accidents, right? I mean, in both cases, it was a failure to recognize the potential hazards posed by an in-flight anomaly."

With Challenger, faulty O-ring seals in the solid-fuel rocket boosters were to blame. With Columbia, it was foam insulation that broke off the fuel tank and gouged a hole in the shuttle's left wing, letting in the searing gases of re-entry.

In both cases, worried engineers were not heard -- or were ignored.

Foam repeatedly broke off shuttles during launch, but the problem was never fixed. With Columbia's final launch on Jan. 16 the biggest foam chunk ever struck with deadly force.

Boston College sociology professor Diane Vaughan, author of "The Challenger Launch Decision," sympathizes with the worried Osheroff.

"Challenger, like Columbia, was an institutional failure. That is, it wasn't just a matter of the decision-making structure. It had to do with the entire organization and its culture, and the critical parts of that really didn't get changed," Vaughan said Thursday night.

She suggested NASA's leaders "may not understand how their organization works and therefore may not know how to fix it, and it's up to the board in its report to point them in the right direction."

From the start, NASA head O'Keefe has promised to carry out all of the accident board's recommendations. Already, he has begun setting up an engineering and safety center in Virginia to take an independent look at a wide range of problems and trends.

But Osheroff calls it "easy to be receptive six months after a major accident. The question is whether it's going to last."

The physicist, who won the Nobel in 1996, was named late to the Columbia board after the chairman decided he wanted some heavyweight scientists. Osheroff was a student of the late Richard Feynman, another Nobel-winning physicist who was an outspoken NASA critic when he served on the Challenger commission.

Columbia's accident board chairman, retired Navy Adm. Harold Gehman Jr., declined to respond to Osheroff's remarks, and attempts to reach other board members were unsuccessful. (Members have been urged to keep a low profile until the report is out.)

NASA's chief is bracing for harsh criticism and has been warning employees it will be "really ugly."

"I'm trying to find the Kevlar suit that I had somewhere," O'Keefe told Kennedy Space Center workers earlier this summer.

Key members of Congress have asked Gehman to reconvene his panel in a year to see if NASA is heeding its advice, a suggestion the members embrace given NASA's tendency to shelve shuttle program reports.

"NASA takes it and says, 'Thanks for your input into manned spaceflight,' and then nothing happens," Air Force Brig. Gen. Duane Deal, a board member, observed at a news conference in mid-July.

Osheroff worries that NASA's new task force that will assess when shuttles can return to space may feel pressure to hurry because of the needs of the international space station. That's why it's vital to reconvene the board as often as necessary, he said.

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