

Accidents Up Despite Safeguards in New, Faster Amusement Park Rides

By *Dan Eggen*

The Washington Post

Spurred on by customer demand and dramatic leaps in computer technology, roller coasters and other amusement park attractions are bigger, faster and louder than ever.

The latest coasters scream along at nearly 100 mph. Another popular attraction drops passengers in a free fall from heights comparable to a mid-size skyscraper. And in Ohio, one theme park is building the tallest coaster in the world -- one that would take riders 310 feet above the surface of the Earth.

But after four deaths this year aboard amusement park rides, many of those who love the new thrills also are beginning to wonder if those thrills are safe.

Experts say the same technology that has improved the rides has led to major advances in rider safety, allowing computers and electronic switches to monitor speeds, locations and whether everyone is buckled in properly.

The measures are aimed at protecting people from a variety of mishaps and mistakes, industry representatives said, though little can be done to stop thrill seekers determined to thwart precautions, as may have been the case this week at Paramount's Kings Dominion in Virginia.

Timothy Fan, a 20-year-old college student from New York, rode the Shockwave roller coaster Monday night as it climbed 95 feet before plunging its standing riders through a steep vertical loop and a sideways spiral. As his train was slowing before returning to the station, investigators said, Fan wriggled free of the safety harness, then fell accidentally to his death.

"If I undo my seat belt and open the door of my car when it's going 70 mph down the highway, you can just imagine the dangers I'd face," said Chance Hester, safety manager at Kings Dominion. "We instruct riders to follow the rules, but we can't make them follow the rules."

Yet with the number of amusement-park injuries nearly doubling in the past five years, some experts say too many modern rides depend on riders to ensure their own safety. Recent deaths and mishaps have prompted legislators to call for tougher regulation of the amusement park industry.

"The public is expecting more and more and more, and the park operators are giving them more and more and more," said William Avery, a veteran safety manager who runs an Orlando consulting firm. "That's OK to do that. But when you reach the point that personal safety relies on participation from the rider, then you've probably gone too far. We may have reached that point."

Manufacturers, designers and safety experts say modern amusement rides are built to avoid nearly all-foreseeable problems. Industry studies also show that about 80 percent of all injuries are the result of rider error.

Jerry Aldrich, an Orlando amusement safety consultant, said the restraints on many newer rides include a microchip sensor that tells the operator whether the safety bars are latched. The computer controlling the ride won't allow it to proceed until all of the restraints are locked in place, he said.

"The casual mistake won't result in a problem," said Aldrich, who worked for Disney Corp. for 27 years. "You have to want to get around it. ... I can't think of any rides that could not be gotten out of if you really wanted to do it."

Hester said that the Shockwave's hydraulic lock system, which operates the safety harnesses, is designed with fail-safe measures that allow for almost complete failure of the harnesses while keeping riders locked into the trains.

This story was published on Saturday, August 28, 1999.

Volume 119, Number 34

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