

from The New Yorker

July 30, 2001
DEPARTMENT OF MOTOR VEHICLES

Free Lizzie!

by Malcolm Gladwell

In the early morning of July 7th, the thirty-year-old publicist Lizzie Grubman backed her father's brand-new Mercedes-Benz S.U.V. into a crowd outside a Southampton night club, injuring sixteen people. Shortly before the incident, Grubman had had a loud argument with the night club's bouncers, one of whom wanted her to move her car from the fire lane. She allegedly told him, "Fuck you, white trash," and then hit the accelerator hard. To the tabloids, the event has been irresistible--Grubman's father is a famous entertainment lawyer; she is a bottle blonde; she represents Britney Spears--and for the past two weeks the city has been full of gleeful philosophizing about entitlement, arrogance, and the perils of spoiled rich kids getting angry behind the wheel of Daddy's S.U.V. But what, exactly, happened in the Mercedes that night? As it turns out, Grubman's argument that it was an accident has foundation. She

appears to have been the victim of a well-understood problem known as "unintended acceleration," or "pedal error."

This does not mean, as some have surmised, that Grubman put the car in reverse, thinking that it was in drive. If that was the case, why didn't she just hit the brake as she sped backward across the parking lot? Pedal error, by contrast, occurs when a driver has her right foot on what she thinks is the brake but is actually the accelerator. When the car begins to move, the driver responds by pressing down on the pedal further still, in an attempt to stop the car. But that, of course, only makes the problem worse.

Why do people make pedal errors? In a comprehensive analysis of the phenomenon that appeared in the June, 1989, issue of the journal *Human Factors*, the U.C.L.A. psychologist Richard A. Schmidt argues that any number of relatively innocent factors can cause a "low-level variability in the foot

trajectory toward the brake"--meaning that a driver aims for the brake and misses. In "Unintended Acceleration: A Review of Human Factors Contributions," Schmidt writes, "If the head is turned to the left, as it might be while looking in the left side mirror, reaching for the seatbelt, or other, similar maneuvers in the initiation of the driving sequence, the result could be systematic biases to the right in the perceived position of the brake pedal. This bias could be as large as 6 cm in a driver of average height if the angular bias were 5 deg." That bias is more than enough to cause pedal error.

It is worth noting that there are five factors that have been associated with an increased probability of unintentional acceleration. It happens more frequently to older people, to women, to short people, to people who are unfamiliar with the cars they are driving, and to people who have just got into a car and started it up.

Grubman, who is on the short side and had reportedly driven her father's car only twice before, qualifies on four of those five grounds.

Here, then, is a perfectly plausible explanation for what happened that night. Grubman gets into the car, puts it in reverse, and then twists around to see if anyone is behind her, her foot slipping off the pedal as she does so. As a result, the trajectory of her right foot is thrown off by a few inches, and when she puts her foot back down, what she thinks is the brake is actually the accelerator. The car leaps backward. She panics. She presses harder on the accelerator, trying to stop the car. But her action makes the car speed up. Grubman was parked approximately fifty feet from the night club, and if we assume that she was accelerating at a rate of .4 g's (not unlikely, given her 342-horsepower vehicle), she would have covered that fifty feet in roughly 2.8 seconds. Wade Bartlett, an expert in mechanical forensics who has studied more than three dozen cases of unintended acceleration, says, "When faced with a completely new situation, it would not be unusual for someone to require three seconds to figure out what's going on and what to do about it." In

some instances, it's been reported, drivers have mistakenly continued to press the accelerator for up to twelve seconds. Grubman's accident is a textbook case of pedal error.

Understanding pedal error may help to explain Grubman's intent that night. Of course, nothing in the scientific literature explains why someone would park in a fire lane, swear at a bouncer, leave the scene of an accident, and dodge a Breathalyzer. For that, we have the lawyers and the New York Post.

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