Collision Physics for the Math-Averse

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Abstract
Timing Scenario 1: The hit absorbed by the small car with excellent safety features prevented the big car from hitting a third, uninvolved car, an aged hatchback that would’ve crumpled like a wadded sheet of paper. In that car would be small children, a young mother cavalier with seatbelts. Her cigarette inches from the child in the passenger seat. The collision would push the glowing cherry directly into the child’s eye. The collision that could’ve happened a mile up the road, but was prevented by the driver of the small car leaving five minutes late (Timing Scenario 2). There was coffee to be drunk, email to be checked, breakfast nearly forgotten but a piece of bread quickly toasted, quickly eaten. An email reconsidered, edited carefully, then reworded. The momentary regret of hitting “send.” The clock checked, the panic of where-are-some-socks.

Keywords
collision, car, timing, mass, gravity, pitch, frequency
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**Mass:** Bigger cars have more mass. In a collision with a Crown Vic, the Crown Vic wins. Always. A massive car. It owns the road, even – especially – when it runs a stop sign, pushing the mass of the smaller car into the mass of a pine tree. First rolling over a big clunky object, the mass of the front bumper. When the wrecker arrived, pine boughs sprinkled needles that amassed in small piles on the wet winter ground. The car dislodged easily as a tooth.

**Gravity:** Items traveled about the car cabin before landing about the floorboards. Open purse scattered its contents (wallet, receipts, the doctor form), a CD (Peter Tosh, “Legalize It”), cell phone. At the moment of impact, the driver saw only the backs of her own eyelids. Meanwhile, inside the cabin,
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the possessions hovered in a perfect equation of flight.

Pitch & Frequency: No scream. Just a single word shouted repeatedly, then hoarsely. No! No! No! No! No! The airbag’s pop and hiss, smoke rising, the scent of gunpowder. A wheezy-whistle breath. No! No! No! No! No! See how much a person wants to live. Hear the fuss a person makes over death. Like death is a very, very bad dog.

Parallel Universe: The driver of the smaller car remained in bed, skipping the doctor visit entirely, opting instead for the latest issue of People, a pot of coffee, a couple cigarettes smoked next to the cracked bedroom window. Bored, the driver eventually climbed into the small car for a trip to the drugstore, where she purchased dark chocolate, US Weekly, an embarrassingly large box of Super Plus tampons. Returned home, watched Seinfeld and Golden Girls reruns. Slept easily, not dreaming of the sound of crushed metal.

Escape Velocity: A bent frame maligns the driver’s side. A shove, a crank, and the door slivers open. Had the car ever stopped moving, had the driver? But there she is, doubled over on a stranger’s lawn beneath a stranger’s pines, free.
