In the sixth and last match of the day, Watson trailed Bernbach, $16,200 to $21,000. The computer landed on a Daily Double in the category Colleges and Universities, which meant it could bet everything it had on nailing the clue. A $5,000 bet would have brought it into a tie with Bernbach. A larger bet, while risky, could have catapulted the computer toward victory. "I'll take five," Watson said.

Five. Not $5,000, not $500. Five measly dollars of funny money. The engineers in the observation booth were stunned. But they kept quieter than usual; the cameras were rolling.

Then Watson crashed. It occurred at some point between placing that lowly bet and attempting to answer a clue about the first Catholic college in Washington, D.C. Watson' "front end," its voice and avatar, was waiting for its thousands of processors, or "back end," to deliver an answer. It received nothing. Anticipating such a situation, the engineers had prepared set phrases. "Sorry," Watson said, reciting one of them, "I'm stumped." Its avatar displayed a dark blue circle with a single filament orbiting mournfully in the Antarctic latitudes.

What to do? Everyone had ideas. Maybe they should finish the game with an older version of Watson. Or perhaps they could hook it up to another up-to-date version of the program at the company's Hawthorne labs, six miles down the road. But some worried that a remote connection would slow Watson's response time, causing it to lose more often on the buzz. In the end, as often happens with computers, a reboot brought the hulking *Jeopardy* machine back to life. But Ferrucci and his team got an all-too-vivid reminder that their *Jeopardy* player, even as it prepared for a debut on national television, could go haywire or shut down at any moment. When Watson was lifted to the podium, facing banks of cameras and lights, it was anybody's guess how it would perform. Watson, it was clear, had a frighteningly broad repertoire.

Only four years earlier, in 2006, Watson was a prohibitive long shot, not just to win at *Jeopardy* but even to be built. For more than a year, the head of IBM Research, a physicist named Paul Horn, had been pressing a number of teams at the company to pursue a *Jeopardy* machine. The way he saw it, IBM had triumphed in 1997 with its chess challenge. The company's machine, Deep Blue, had defeated the reigning world champion, Garry Kasparov. This burnished IBM's reputation among the global computing elite while demonstrating to the world that computers could rival human beings in certain domains associated with intelligence.

That triumph left IBM's top executives hungry for an encore. Horn felt the pressure. But what could the researchers get a computer to do? Deep Blue had rifled through millions of scenarios per second, calculated probabilities, and made winning moves. It had aced applied math. But it had skipped the far more complex domain of words. This, Horn thought, was where the next challenge would be. Far beyond the sixty-four squares on a chess board, the next computer should charge into the vast expanse of human language and knowledge. For the test, Horn settled on *Jeopardy*, which debuted in 1964 and now attracted some nine million viewers every weeknight. It was the closest thing in the United States to a knowledge franchise. "People associated it with intelligence," Horn later said.

There was one small problem. For months, he couldn't get any takers. *Jeopardy*, with its puns and strangely phrased clues, seemed too hard for a computer. IBM was already building machines to answer questions, and their performance, in speed and precision, came nowhere close to that of even a moderately informed person. How could the next machine grow so much smarter?

And while researchers regarded the challenge as daunting, many people, Horn knew, saw it precisely the other way. Answering questions? Didn't Google already do that?

Horn eventually enticed David Ferrucci and his team to pursue his vision. Ferrucci, then in his midforties, wore a dark brown beard wrapped around his mouth and wire-rimmed glasses. An expert in Artificial Intelligence (AI), he had a native New Yorker's gift of the gab and an openness, even about his own life, that was at times jolting. ("I have a growing list of potentially mortal diseases," he said years later. "People order an MRI a week for me.") But he also had a wide and