New Orleans among them. But as the season stretched on toward late summer, its period of greatest menace, the hurricane jokes and expressions of sophisticated indifference or resignation did not entirely conceal a sense of dread that crept over people who had been through their share of these things. Couples, without quite knowing why, would find themselves wondering again if New Orleans was really the place where they wanted to grow old. Or might it be time to unload the big, vulnerable house with all the gingerbread, and downsize into a condo in some bunker of a building? Just a thought. But one that did not go away after a big storm. Because unlike earthquakes, which tended to ease seismic pressure deep beneath the earth, at least for a few decades or centuries, the hurricane's gun to the skull was fully reloaded after each and every storm. It could happen again next year. Hell, it could happen next month.

By late Thursday, the snake in the satellite image had coiled suddenly tighter, and a disorganized tropical storm floundering east of Miami had reached hurricane strength, if just barely. In a matter of hours, Katrina tore across the tip of the Florida peninsula, feeding on a hurricane's usual diet: trailer-park housing, loose shingles, bug-weakened trees, poorly moored yachts. In one respect, Katrina revealed a freakish side: Forecasters had expected the storm to move west across the peninsula and at a snail's pace—maybe 6 miles per hour. Instead, inexplicably, it sped up to 12 miles per hour and shifted onto a diagonal course that carried it in a more southerly direction until the storm reached the Gulf shortly after midnight.

Scientists do not like to have their projections go wrong, but a fast-tracking hurricane is a friendlier beast than a slow one. A lingering storm has more time to tear up the landscape—and usually compounds wind damage with greater amounts of rain. On her tangent, Katrina was across Florida in a hop and a jump. About a hundred homes were damaged by buffeting winds or flooded out in the rain that followed. A 727 cargo plane was pushed along a runway fence like an unwelcome club patron shoved and shoved again by a bouncer. Six people died in Florida, half of them crushed under falling trees.

Katrina, in other words, had all the makings of a flop, a minimal hurricane, a Category 1 event. Her winds upon making landfall in Florida had been just barely above the 75 mph threshold that turns a tropical cyclone

from seriously bad weather into an event worthy of at least grudging respect. In an age of billion-dollar storms, Katrina's ravages in Florida were pegged at a mere $600 million.

New Orleanians knew better than to revel in Florida's misfortune, but then, it being Friday night in the Crescent City, they reveled anyway, if only to escape the deep, sometimes unacknowledged, sense of unease that hung over the hurricane season. The gregarious among them streamed into the Superdome to guzzle beer with cheese nachos and watch the Saints blunder to a preseason 21–6 loss against Baltimore. Others crowded into bars in the French Quarter and the downriver faubourgs Marigny and the Bywater or gathered more privately on patios and terraces in Uptown and along the lakefront to sip wine, eat skewered shrimp, and commune around the topic of the storm, sometimes by sedulously avoiding it altogether. Because for all the merriment and distraction provided by the hurricane season's latest incarnation, there were other things to talk about. Donald Trump for one.

Among the real estate barons and everyone else who had come to measure their financial well-being by the vigor of the local real estate market, the big news in the morning paper had been Trump. The Donald—or at least his son—was behind a plan to build a $200 million luxury condo tower on Poydras Street. At seventy stories, it would be the tallest building in the city. Indeed, it would be the first major tower of any size since the oil crash of the mid-1980s. Overnight, the 1984 crash had ended a veritable frenzy of high-rise construction that had followed the belated discovery that you could actually build modern skyscrapers in the miles-deep muck of a delta city floating on silt.

Jazz clarinetist Alvin Batiste was booked into Snug Harbor that Friday night. Swamp rock blues sensation Coco Robicheaux had the early gig at d.b.a, another hot club. Kermit Ruffins, more commonly to be found at the ramshackle Vaughn's, way down Dauphine, almost to the Industrial Canal, had taken his trumpet up to Ray's over the River. Ray was Ray Wooldridge, a newcomer in a city often leery of them. Wooldridge had recently sold his interest in New Orleans's freshly minted NBA franchise, the Hornets, to concentrate on the high life. His club looked out over the river from the top

of the World Trade Center, the one built years before New York's at the instigation of Clay Shaw. That gave it a certain dark cachet. Shaw was the hapless bon vivant and business leader who had been prosecuted unsuccessfully on false charges: that he conspired with another sometime New Orleanian, Lee Harvey Oswald, in the assassination of a president, John Fitzgerald Kennedy.

Those of a religious persuasion celebrated more quietly, dropping to their knees to pray that the city would be spared. It was a moment of supplication that quite quickly yielded to Christian guilt during the storm season. Because when the misfortune you were praying to be spared was a Gulf hurricane, one city's salvation necessarily was perdition in the place where that storm came ashore, as all of them eventually did, in Katrina's case more than once. But even without divine intervention, there was reason to think New Orleans might catch another break.

There had been the chance, more a faint hope, that Katrina would do her damage to Miami and then weaken, perhaps even disintegrate, in passing over the Florida peninsula. The odds looked better on paper than they really were, because only on paper did Florida seem to interpose a storm-killing landmass between Katrina's Atlantic origins and the Gulf, where she yearned to quench her thirst for water, the warmer the better, a hurricane's addiction. The reality, of course, was that south Florida was not dry land but a swamp, and only more so in an age of rising seas. The Everglades were a reservoir vast enough to fill pipes in Dade County, and Broward too. But, as would be quickly demonstrated, no matter how many toilets were flushed and Jacuzzis roiled up and scotches lightly watered in hotel towers along Miami Beach, the Everglades were still wet enough to provide at least starvation rations to Katrina until she reached the Gulf. And now, as the evening news made clear, she had. The red icon still rotated in the corner of the TV screen, and the satellite found Katrina's coil of clouds a hundred miles or so off Key West. The hurricane had not simply survived the Everglades, it had been deeply refreshed in transiting south Florida.

As the ten PM news came on Friday night, Katrina's winds had stiffened to 105 mph, Category 2 strength, and the storm was sidling away from the Keys at 8 mph on a west-southwest trajectory. South was not necessarily bad for Louisiana, though due north, a beeline to the Panhandle, would have

been better. The problem was the storm's westward drift. Hundreds of the nation's offshore oil platforms lay to the west, as did an appalling concentration of its refining capacity. And like a bull's-eye on all too many of the storm-tracking maps, New Orleans lay to the west—the Big Easy, once the richest city in America, "the city that care forgot," to use another sobriquet that seemed as old as Bourbon Street but that in fact first saw its way into print in a 1938 Federal Writers' Project guidebook. There were other handles on this strange and improbable place: "cradle of jazz" being one; "crescent city" another, reflecting the giant arc the Mississippi River made at New Orleans, in its sinuous and continent-long search for the sea. Now a majority black city, it was, on a per capita basis, one of the poorest, but New Orleans remained the center of the nation's most distinctive regional culture, a mix of music and food and parades and masquerade that many people, rich and poor, found irresistible.

MAYOR RAY NAGIN'S CONCERN FRIDAY NIGHT WAS THAT THE CITY THAT CARE forgot had forgotten to care. Here was this monster storm out in the Gulf, and everyone was watching the Saints game, he told TV reporters, his loose-limbed affability not quite disguising real concern. Nagin still wasn't calling for an evacuation, not even a voluntary one. That was an option he said he'd weigh the following morning at a meeting with emergency managers from across the area. But he warned people to be ready. And he got ready himself, arranging flights for his family to Dallas, should the need arise.

Kathleen Babineaux Blanco needed no convincing. As of Thursday, Louisiana's chief executive was still scheduled to go to Atlanta to be sworn in as the new chair of the Southern Governors' Association. A lifetime in Acadiana, Louisiana's soft coastal underbelly, had well acquainted the governor with the fury of hurricanes, and as she and her husband watched the weather reports, their initial concern had been to wonder if Katrina's projected landfall at Apalachicola Bay might make for messy weather in central Georgia and trouble with their flight. In hindsight, it would amuse Raymond Blanco—"Coach" Blanco, as he was usually called, both because he had been a high school and college football coach and because of his importance as one of his wife's key advisers—that the vagaries of a

gathering storm could be so hard to predict. By midafternoon that Friday, Blanco formally declared a state of emergency in Louisiana and canceled plans to go to the governors' meeting. She placed the National Guard and state agencies on alert—a full day before Mississippi and two full days before President Bush did the federal equivalent, Blanco would find occasion to remind her critics.

There was still a chance the storm would turn. Hope for New Orleans was vested in a high-pressure system that had settled over the city and the Gulf Coast. Were that system to lift, as there was reason to think it would, a trough of low pressure easing southeast across the Great Plains could be expected to slide out over the Gulf in time to intercept the hurricane and steer it to a landing well east of New Orleans, somewhere between Biloxi and Mobile.

That's what Georges had done in 1998, deviating just hours before landfall from the worst possible course: right up the river and into Lake Pontchartrain, which would then have been lifted over the city's northern levees to turn New Orleans into Atlantis. Instead, just before dawn, Georges had bobbled ever so slightly and come ashore at Ocean Springs, a Mississippi coastal hamlet some ninety miles to the east. Ivan, in 2004, had also obliged New Orleans with a hook shot to the northeast, and had laid waste to barrier islands off Alabama and Florida before wading ashore to ravage Mobile, Pensacola, and Panhandle beachfront towns. Ivan had been the fourth major storm to clobber Florida in a single season. It being an election year, the quadruple whammy had been eerie enough to kindle political hope among Democrats of a superstitious bent. Fate, if not the Lord himself, seemed none too happy with the Bush brothers, not with Jeb, Florida's governor, nor with George W., then seeking to distract voters from the gathering winds of another catastrophe, the war in Iraq, and extend his lease on the White House by another four years.

By late Friday, Katrina's alarming shift to the west had been briefly checked, and it looked like Jeb might be in for yet another trip to the heavenly woodshed. The National Hurricane Center acknowledged an eastward shift in its projections for Katrina's landfall. Bar patrons in New Orleans still sober enough to grasp the implications raised their glasses to the weatherman, then drained them and headed for home.

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MARK SCHLEIFSTEIN DID NOT NEED TO BE REMINDED OF THE WISDOM IN PREPARing for the worst. By profession and by temperament, he was one of the people who did the reminding. And that Saturday morning he was in good form. News boxes across the metropolitan area framed the headlines above his bylined report on the storm's threat. He would repeat the message personally to anyone who cared to listen as he and his wife, Diane, mingled with friends after services at Shir Chadash Congregation.

Three years earlier, Schleifstein had led his colleagues at the local newspaper, *The Times-Picayune,* in putting together a multi-day report warning that the city's storm-protection infrastructure—essentially a ring of levees—was shockingly inadequate. In vivid detail, he laid out just how devastating a direct hit by a major hurricane might be: "hundreds of billions of gallons of lake water pouring over levees into an area averaging 5 feet below sea level with no natural means of drainage," he had written in an article coauthored with his colleague John McQuaid. "That would turn the city . . . into a lake as much as 30 feet deep, fouled with chemicals and waste from ruined septic systems, businesses and homes. Such a flood could trap hundreds of thousands of people in buildings and in vehicles. At the same time, high winds and tornadoes would tear at everything left standing," they wrote. A Red Cross official quoted in the series predicted a death toll of between twenty-five thousand and one hundred thousand—and this scenario didn't even require levee breaches, just overtopping. The carnage would leave corpses floating in the streets, others bloated and rotting in attics, where people would seek refuge from the rising water, and then get trapped. The filth and corpses would set the table for a wave of plagues and pestilence of unparalleled severity, Schleifstein warned.

Some of his colleagues had snickered at the earnestness of Schleifstein's doomsaying, as they did at his daily, sometimes hourly, interoffice e-mails that forwarded National Weather Service updates on the latest dips and turns of every approaching storm. And indeed, there was an obsessiveness in Schleifstein's attention to hurricanes, that of an Old Testament prophet possessed of a vision and the need to warn his people. The office joke was that he suffered ever so slight a pang of regret each time a monster storm bore down

on New Orleans only to pull its punch. If so, it was not out of any need for vindication. Schleifstein was too certain of the science behind his reporting to require that. A deeply religious man, an owlish gray-bearded journalist with a devoted wife and two grown children, he lived an observant, unpretentious life in a modest two-story brick house in the city's Lakeview district. Schleifstein's hurricane kit—candles, flashlights, and the like—was always at hand. As Katrina approached, he swapped cars with his son. Mike would take the good car, a Toyota Prius hybrid, and drive his young wife to Atlanta to stay with Schleifstein's daughter. Dad took Mike's junker, an old Mazda. They put Diane's car on the upper deck of a high-rise garage. Otherwise, Schleifstein had made no special preparations based on his premonitions of doom. As reporters and editors were expected to do, he would ride out the storm at the newspaper's main office, in an industrial district fast by the interstate and less than a mile from the Superdome and city hall. And Diane would be with him. He had lost that argument a few storms ago. She wasn't going to leave the city without him. Schleifstein's fate, whatever it might be, would be shared with the people he had been warning all these years.

On Saturday morning, one of the people Schleifstein warned was his rabbi's wife, heavily pregnant and a newcomer to New Orleans. Schleifstein had been on the search committee that recruited Rabbi Ted Lichtenfeld. True to form, in offering this man a congregation in New Orleans, Schleifstein had felt an obligation to caution him about what he was getting into. Schleifstein presented the Lichtenfelds with a copy of his series on hurricanes. The Lichtenfelds had pondered it and, to Schleifstein's delight, elected to come anyway. The rabbi had taken charge at Shir Chadash that very month, on August first. They were due to add the baby to their nursery—a son, the doctors had told them—in another several weeks. Schleifstein greeted the rabbi's wife and then got quite quickly to the point. "Y'all need to start thinking about where you're going to go," he told her that Saturday morning in New Orleans. "You don't want to stay on here."

What Schleifstein knew from his contacts at the National Hurricane Center was that, overnight, Katrina had taken on the trappings of a perfect storm, the Big One, an event long foreseen and dreaded and yet somehow impossible to fathom. Warm water, a hurricane's lifeblood, had been unusually abundant in the Gulf as Katrina took form in the mid-Atlantic early in

August and began working her way west. To the Cassandras of environmentalism, it was further proof, if proof were needed, that global warming was an onrushing reality, though Schleifstein had a more nuanced understanding of the way warmer seas both strengthened and inhibited hurricanes, by tearing at the swirling perimeter of what was called their "eye wall."

Whatever the reason, without doubt the Gulf was hot. Its usual influx of cool northern water from the Mississippi River had been choked off by a Midwest drought—the worst in twenty years. The drought had shrunk the Missouri River and, farther downstream, the Mississippi itself. And air temperatures along the Gulf Coast had been scorching in the preceding weeks, helping drive water temperatures above 85 degrees in many places. Not only was the Gulf water hot, the hot water ran deep—two hundred feet deep in one area sampled—thanks in part to the presence of a "loop current," an appendage of the Gulf Stream that had broken free and was rotating around the Gulf of Mexico, spreading the superheated water.

These conditions, eminently favorable for hurricane development, might have been checked by two countervailing forces: wind shear that can rip apart the upper levels of a swirling storm system, and dry air sufficient to sap the cyclone of its self-sustaining moisture. Instead, two days before landfall, for all her sprawling girth, Katrina had begun to manifest some of the nerve-racking precision of a tight and deadly tornado, a tornado not yards-wide like the funnels that spin across the dusty Great Plains but hundreds of miles in diameter. The hurricane had entered what meteorologists call the "eye-wall replacement cycle," spinning the clouds at its center—the fastest moving part of the whole dreadful machine—faster and faster until they flew apart, only to be replaced after a brief lull in wind velocity by a new eye wall, spinning as fast or faster still. The cyclone, in other words, had begun to pulse, almost to pant with thirst.

To slake that thirst, the Gulf had welled up into a dome of water as vast and wide as the storm itself, a huge and churning vortex that lifted sea levels yards above normal as the water was sucked skyward into the vacuum at the storm's very center. The strength of that vacuum was reflected in the plunging barometric pressures characteristic of a hurricane, 920 millibars in Katrina's case, one of the lowest readings on record. In deeper seas, the

dome of Gulf water offered up to Katrina rolled over on itself endlessly like a boiling cauldron. But as the storm churned into coastal shoals, the bubble of rolling water would rise suddenly higher, knocking aside massive billion-dollar oil platforms and lesser jack-up rigs like flotsam. On such a course, within hours the dome of water would roll ashore, instantly crushing coastal communities. The direct storm surge would be a hurricane's most immediately destructive water, a towering wave that would first hurl houses and boats and parked cars and trucks and giant live oaks ahead of itself. Its forward motion exhausted within a mile or so of the shoreline, the surge would sweep back into the Gulf in an outrush powerful enough to uproot most anything it hadn't taken in the initial sweep.

New Orleans, many miles from the open Gulf, could assume it would not feel the brunt of that first wall of water. The city's doom—if it came to that—would lie in a secondary phenomenon: Even if the storm's eye glanced away from the immense lakes and the river that made New Orleans essentially an island, the dome of water in the open Gulf could drive huge tides through the narrow inlets that connected these waterways. And like an obese bather lowering herself into a bath, Katrina would slosh waves of water up against the sides of the tub—the Orleans levee system—overtopping it in many places, perhaps even breaching it in others.

And therein lay Katrina's—or any storm's—greatest threat to the city: not the winds, though they could be horrific, perhaps even powerful enough to twist skyscrapers off their foundations, an alarming new study had suggested. But skyscrapers, even toppled skyscrapers, were discrete phenomena that an otherwise intact city could then address. The worst-case scenario for greater New Orleans was the death-by-drowning of the city itself. With water filling a saucerlike landscape, much of it below sea level, the levees that ordinarily make that landscape habitable would become barriers against floodwaters ebbing back into the lake or the river and then into the Gulf. Every raindrop that fell in New Orleans, not to mention every gallon of treated sewage, had to be pumped up and over the levees and out into the surrounding water world. Swamp the pumps themselves or the electrical generators that power them, and New Orleans would become the large lake that Schleifstein and McQuaid had envisioned. Endless blocks of one-story

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cottages and ranch-style houses would be largely concealed beneath an expanse of oily water, broken only by downtown towers. The towers would stand like reeds along the river, the occasional bridge or elevated expressway looping up out of the water like the dorsal ridge of a giant sleeping alligator.

Katrina had that potential, the forecasters were saying. She was on a path of potentially maximum destruction, and since passing Florida her winds had jumped to Category 5 strength. For reference points of comparable menace, you had to hark back to the 1960s, to Betsy, the most destructive storm to have hit New Orleans in at least a half century, and to Camille, four years later, the most powerful U.S. hurricane ever recorded.

BETSY WAS A SLOW-MOVING STORM VICIOUS ENOUGH TO HAVE KILLED SEVENTY-five people—the greatest loss of life to a hurricane since 1957, when Audrey killed three hundred ninety in south-central and southwestern Louisiana. Betsy had flooded to depths of ten feet or more not just Patrina Peters's Lower Ninth Ward but vast stretches of the newly developed eastern New Orleans. And Betsy had been by no means a direct hit. The storm had trekked some seventy miles west of the city, west even of Baton Rouge. Camille, in 1969, plowed ashore about the same distance to the east of the city to make landfall near Gulfport, neatly erasing whole swaths of beachfront villas at Pass Christian, a summer retreat that had been favored by New Orleans gentry for a century or more. An entire apartment building at the Pass, the Richelieu, had vanished, along with a group of diehards who had stocked booze and decks of cards to ride out the storm. One family, that of a prosperous shipping executive, would never forget the post-storm sight of their place along the coast road at Pass Christian. Camille had left behind the slab—but only the slab—on which their spacious house had once stood, rather like a dance floor or roller-skating rink dropped from the sky into a tangle of brush and broken trees. Otherwise, about the only trace of their former retreat ever found was a chandelier, a memento of a time when they had lived in Germany. It fetched up in the sand-filled swimming pool to the rear of the house.

Camille was a top-of-the-chart Category 5 storm, meaning that it packed winds above 155 miles per hour as it made landfall. An hour's worth

of the howling winds of a Category 5 storm, one scientist calculated, is equivalent in force to five atomic bombs of the size dropped on Hiroshima. Another measure of Camille's strength was this: Hurricanes feed on water, and as they hit coastal shoals, they ordinarily begin to wither and die. Betsy, for example, had weakened to Category 3 strength, with winds between 111 and 130 mph, by the time she made landfall at Grand Isle, about seventy miles south of the city, and began moving to the northwest. Flooding aside, Betsy at seventy miles' distance was still strong enough to rip off roofing throughout much of New Orleans. But Camille, two categories stronger as she came ashore, was still carrying enough water to cause record-breaking rains and flooding when she petered out on the far side of the Appalachians, hundreds of miles later. Betsy, though weaker than Camille, had been more destructive to New Orleans because the city lay on the eastern edge of the storm's circular wind pattern, invariably the more violent side of the giant counterclockwise centrifuge of wind and water that is a hurricane.

On Saturday, as Katrina bore down on southeast Louisiana, the emergency director in Jefferson Parish, the suburb just to the west of New Orleans, neatly wrapped up forty years of storm lore and tied a ribbon around it. Katrina, Walter Maestri said, was as strong as Camille and on the same track as Betsy.