

Probability Pipeline
(Rudy Rucker & Marc Laidlaw)

The trouble started in Surf City, and it ended in another dimension.

Delbert was loud and spidery; Zep was tall and absent and a year older. Being in different grades, they didn't see each other much in the winters, but in the summers they were best friends on and off the beach. When Zep graduated, he spent a year at UC Santa Cruz before drugging out—he said he'd overfed his head. Delbert didn't like drugs, so when he graduated he didn't bother going to college at all. Now it was summer all year long.

It was November in Surf City and the pipeline was coming in steady. For the last few weeks they'd been without a surfboard, though these days the word was "stick," not "board," meaning Del and Zep were stickless. The way this particular bummer had come down was that Del had been bragging about his escape from a great white shark, and no one had believed him, so maximum Zep had cut a big sharkbite shape out of the dinged longboard he and Delbert shared, and still no one had believed. Basically Zep had thrashed the board for nothing, but at least Delbert was able to sell it to the Pup-Tent, a surfer snack shop where his girl Jen worked—not that Jen was really Delbert's *girl* in any intense physical sense of the word, and not that the Pup-Tent had actually *paid* anything for the shark-bit board that Delbert had mounted on the wall over the cash register. But it looked rad up there.

Often, in the mid-morning, when things were slow at the Pup-Tent, Jen would grill Zep and Delbert some burgers, and the three of them would sit on the bench out in front of the Pup-Tent, staring through their shades at the bright, perfect sky, or at the cars and people going by, or across the street at the cliffs and the beach and the endlessly various Pacific ocean, dotted with wet-suited surfers. Zep sat on the left, Jen on the right, and Delbert in the middle; Delbert usually talking, either rapping off what he saw or telling one of his long, bogus stories, like about the time when he'd been flying a kite on the beach and a Coast Guard plane had swooped down low enough to suck his kite into its jet and he'd been pulled out to sea about half a mile, dangling twenty feet above the water until he'd flashed to let loose of the string.

One particular day that November, Delbert was telling Jen about a book on hypnotism he'd read the day before, and how last night he'd tried to activate Zep's thrashed genius by putting Zep in a trance and telling him he was a great scientist and asking him to invent invisibility.

"He did that, Zep?" asked Jen, briefly interested. "Did it work?"

"I, uh, I...thought of peroxide," said Zep. Peroxide was a big thing with Zep; he'd stripped his hair so often that its color was faintly ultraviolet. When Zep felt like somebody might understand him, he'd talk a lot about the weird science stuff he'd learned at Santa Cruz, but just now he wasn't quite *on*.

"We put seven coats of it on a sheet of paper," said Delbert, "and for a second we thought it was working, but it was really just the paper falling apart."

“Oxo wow,” said Jen, suddenly pointing out at the horizon. “Outsider.” That was the traditional word for a big wave. “Far outsider...and ohmigod!...like ...” Jen often ended her sentences that way, with a “like” and a gesture. This time it was her Vanna White move: both hands held out to the left side of her body, left hand high and right hand low, both hands palms up. She was watching one of the Stoke Pilgrims out there carve the outsider.

It was Lex Loach—Delbert could recognize him from the red-and-white checkerboard pattern on his wet suit. Loach executed a last nifty vertical snap, shot up off the face of the ripped outsider, and flew through the air, his wing squash turbo board glued to his feet by the suction cups on his neoprene booties.

Jen sighed and slowly turned her hands palms down. The Vanna White move, if done with the hands palms down, was known as Egyptian Style. Jen gave Delbert a sarcastic little neck-chop with her stiff left hand. “I wish you could ride, Delbert. I wish you had a stick.”

“This surf’s mush, Jen. Dig it, I saw a tidal wave when I was a kid. I was with my dad on Hawaii, and this volcano blew up, and the next minute all the water went out to sea and formed a gigantic—” He held out his arms as if to embrace a weather balloon.

“You saw that in a movie,” said Zep.

“Did not!” yelled Delbert. He was always yelling, and consequently he was always hoarse.

“Yo, dude. *Krakatoa East of Java.*”

“I never saw that movie, it really happened! We got stranded on the edge of the volcano and they had to come get us in a hot air balloon. Listen up, dude, my dad—”

Delbert jabbered on, trying to distract Jen from Lex Loach’s awesomely stoked breakouts. By the time a customer showed up, she seemed glad to go inside.

“Do you think she likes me?” Delbert asked Zep.

“No. You should have gone to college.” Zep’s voice was slow and even.

“What about you, brain-death?” challenged Del.

“I’m doing my detox, dude.” Zep got a tense, distant look when people questioned his sanity. But his voice stayed calm and disengaged. “The programs are in place, dude. All I need is run time. Chaos, fractals, dynamics, cellular automata. I did ten years’ research in two weeks last spring, dude. It’s just a matter of working out the applications!”

“Like to what?”

“You name it, bro.”

“Waves,” said Del. “Surfing. The new stick I need to bang Jen.”

Zep stared out at the horizon so long that Delbert thought he was lost in a flashback. But suddenly Zep's voice was running tight and fast.

“Dig it, Del, I'm not going to say this twice. The ocean is a chaotic dynamical system with sensitive dependence on initial conditions. Macro info keeps being folded in while micro info keeps being excavated. In terms of the phase-space, it works by a kneading process, continually doubling the size of a region and folding it over on itself like saltwater taffy with the ribbon layers of color all shot through. Big waves disappear in the chop and the right small ripple can amp on up to make an outsider. If you do the right thing to the ocean, it'll do whatever you want back. The thing about a chaotic system is that the slightest change in initial conditions produces a big effect—and I mean right away. Like on a pool table, dude, after ten bounces the position of the ball has been affected by the gravity from a pebble in a ring of Saturn. There's a whole space of dynamic states, and the places where the system settles down are called chaotic attractors. We do right, and the ocean'll do right by us.”

Del was like: “Chaos attractor? How do we control it?”

“There's no formula because the computation is irreducibly complex. The only way to predict the ocean is to simulate it faster than real time. Could be done on a gigahertz CA. By the right head. The ocean... Delbert, the ocean's state is a point in ten-trillion-dimensional surfspace.”

“Surfspace?” Delbert grinned over at his long blond friend with the dark, wandering eyes. When Zep got into one of his head trips he tended to let his cool, slow surfer pose slide. He'd been a punk before a surfer, and a science nerd before that.

“You gotta relate, babe,” enunciated Zep, as he tore on into the rest of his riff. “The wave pattern at any time is a fractal. Waves upon waves upon waves. Like a mountain range, and an ant thinks he's at the top of a hill, but he's only at the top of a bump on rock on an outcrop on a peak on the range on the planet. And there's a cracky crack between his six legs. For our present purposes, it's probably enough to take ten levels of waves into account.”

“Ten levels of waves?”

“Sure man, like put your nose near the water and there's shivers on the ripples. The shivers have got kind of sketchy foam on them too. So sketchy foam, shivers, ripples, wads, and slidy sheets, now we be getting some meat to carve, uh, actual waves, peaks—those choppy peaks that look like Mr. Frostee's head, you wave—steamers and hollow surf, mongo mothers, outsiders and number ten the tide. So the wave pattern at any given spot is a ten-dimensional quality, and the wave patterns at a trillion different spots make a point in ten-trillion-dimensional surfspace.”

“What's all the trillions for?” Out on the sea, Lex Loach and four other Stoke Pilgrims were riding in from the break. Loach, Mr. Scrote, Shrimp Chips, Squid Puppy, and Floathead, same as usual. They usually came up to the Pup-Tent for lunch. Delbert and Zep usually left before the Pilgrims got there. “Talk faster, Zep.”

“I’m telling you, dude. Say I’m interested in predicting or influencing the waves over the next few minutes. Waves don’t move all that fast, so anything that can influence the surf here in the next few minutes is going to depend on the surfspace values within a neighboring area of, say, one square kilometer. I’m only going to fine-grain down to the millimeter level, you wave, so we’re looking at, uh, one trillion sample points. Million squared. Don’t interrupt again, Delbert, or I won’t build you the chaotic attractor.”

“You’re going to build me a new stick?”

“I got the idea when you hypnotized me last night. Only I’d forgotten till just now. Ten fractal surf levels at a trillion sample points. We model that with an imipolex CA, we use a parallel nerve-patch modem outset unit to send the rider’s surfest desires down a co-ax inside the leash, the CA does a chaotic back simulation of the fractal inset, the board does a jiggly-doo and ...”

“TSUUUNAMIIIIII!” screamed Delbert, leaping up on the bench and striking a boss surfer pose.

Just then Lex Loach and the Stoke Pilgrims appeared, up from the beach. Lex looked at Delbert with the usual contempt. “*Ride* that bench, gnarly geek. Been puffing some of Zep’s KJ?”

Lex Loach had been boss of Surf City as long as Delbert could remember. He lived here all year long, except when he went to snowboard at Big Bear in short pants and no shirt. Delbert thought he looked like a carrot. He was tall and thin like a carrot, narrow at the bottom and very wide at the shoulders; and like a carrot, his torso was ribbed and downy.

Loach’s aging sidekick, Mr. Scrote, darted forward and made a vicious grab for Delbert’s balls. Mr. Scrote was wrinkled and mean. He had bloodshot eyes and was half deaf from surfer’s ear, and all his jokes had to do with genital pain. Delbert fended him off with a kick that missed. “Couldn’t help myself,” said Mr. Scrote to the other Pilgrims as he danced back out of reach. “Dude looks soooo killer on his new stick.”

“I am getting a new stick,” cried Delbert furiously. “Chaos Attractor. Zep’s building it.”

“What does a junkie know about surf?” put in Shrimp Chips, a burly young guy with bleached hair. “Zep can’t even stand to take a bath.”

“Zep’s clean,” said Delbert loyally. “And he knows all about surf just from sitting here and watching.”

“Same way you know about girls, right, weenie?” said Loach. “Want to watch me and Jen get it on?”

Delbert leaped off the bench and butted his head right into the middle of the carrot washboard of Loach’s abdomen. Loach fell over backward, and suddenly there were kids everywhere, screaming, “It’s a fight!”

Zep pulled Delbert back before Loach could pulverize him. The Stoke Pilgrims lined up around their chief carrot, ready to charge.

“Wait a minute,” Delbert yelled, holding out his hand. “Let’s handle this like real men. Lex, we challenge you to a duel. Zep’ll have my new gun ready by tomorrow. If you and your boys can close us out, it’s yours. And if we win, you give me your wing squash turbo.”

Loach shook his head and Mr. Scrote spoke up for him, widening his bloodshot eyes. “I doubt Lex’d want any piece of trash you’d ride. No, Delbert, if you lose, you suck a sea anemone and tell Jen you’re a fag.” The Stoke Pilgrims’ laughter was like the barking of seals. Delbert’s tongue prickled.

“Tomorrow by the San Diablo N-plant where the surf’s the gnarliest,” said Lex Loach, heading into the Pup-Tent. “Slack tide, dudes. Be there or we’ll find you.”

Up on the cliff, the N-plant looked like a gray golf ball sinking into a sand trap. The cliff was overgrown with yellow ice plant whose succulent, radiation-warmed leaves were fat as drowned men’s fingers. A colonic loop of cooling pipe jagged down the cliff, out into the sea, and back up the cliff to the reactor. The beach was littered with fish killed by the reactor’s thermal pollution. Closer to the sea, the tide’s full moon low had exposed great beds of oversize sea anemones that were bright, mutated warm-water sports. Having your face pushed into one of them would be no joke.

“Trust me, bro,” said Zep. He was greasy and jittery. “You’ll sluice roosters in Loach’s face. No prob. And after this we stalk the big tournament moola.”

“The surf is mush, Zep. I know it’s a drag, bro, but be objective. Look the hell at the zon.” The horizon was indeed flat. Closer to shore were long rows of small, parallel lines where the dead sea’s ripples came limping in. Delbert was secretly glad that the contest might well be called off.

“No way,” shouted Zep, angrily brandishing the nylon case that held the new board. “All you gotta do is plug in your leash and put Chaos Attractor in the water. The surf will definitely rise, little dude.”

“It’s mush.”

“Only because *you* are. Dig it!” Zep grabbed his friend by the front of his brand new paisley wet suit and shook him. “You haven’t looked at my new stick!” Zep dropped to his knees and unzipped Chaos Attractor’s case. He drew out a long, grayish, misshapen board. Most of it seemed actually transparent, though there were some dark, right-angled shapes embedded in the thing’s center.

Delbert jerked back in horror. For this he’d given Zep two hundred dollars? All his saving for what looked like a dime store Styrofoam toy surfboard that a slushed druggie had doused in epoxy?

“It...it’s transparent?” said Delbert after a time. In the dull day’s light you could see Zep’s scalp through his no-color hair. Del had trusted Zep and Zep had blown it. It was sad.

“Does that embarrass you?” snarled Zep, sensing Delbert’s pity. “Is there something wrong with transparency? And screw your two hundred bucks ‘cause this stick didn’t cost me nothing. I spent your money on crank, mofo, on clean Hell’s Angels blow. What else, Delbert, who do you think I am? Yeah! Touch the board!”

Delbert stroked the surface of the board uncertainly. “It’s rough,” he said finally.

“Yeah!” Zep wanted to get the whole story out, how he’d immediately spent the money on crank, and how then in the first comedown’s guilt he’d laid meth on Cowboy Bob, a dope-starved biker who hung around the meth dealer’s. Zep had fed Cowboy Bob’s head so Bob’d take him out breaking and entering: First they hit the KZ Kustom Zurf Shop for a primo transparent surfboard blank, then they barreled Bob’s chopped hog up to Oakland to liberate imipolex from the I. G. Farben research labs in the wake of a diversionary firebomb, and then they’d done the rest of the speed and shot over the Bay to dynamite open the door of System Concepts and score a Cellular Automaton Machine, the CAM8, right, and by 3:00 A. M. Zep had scored the goods and spent the rest of the night wiring the CAM board into the imipolex-wrapped blank’s honeyheart with tiny wires connecting to the stick’s surface all over, and then finally at dawn Zep had gone in through the back window of a butcher shop and wedged the board into the huge vacuum meat packer there to vacuum-sputter the new stick’s finish up into as weird a fractal as a snowflake Koch curve or a rucked Sierpinski carpet. And now lame little Delbert is all worried and:

“Why’s it so rough?”

Zep took a deep breath and concentrated on slowing down his heartbeat. Another breath. “This stick, Del, it uses its fractal surface for a realtime surfspace simulation. The board’s surface is a fractal CA model of the sea, you wave?”

“Zep, what’s that gray thing in the middle like a shark’s skeleton? Loach is going to laugh at us.”

“Shut up about Loach,” snarled Zep, losing all patience once again. “Lex Loach is like a poisonous mutant warty sculpin choked by a plastic tampon insert at the mouth of an offshore toxic waste pipe, man, thrashing around and stinging everybody in his spastic nowhere death throes.”

“He’s standing right behind you.”

Zep spun around and saw that Delbert was more or less correct, given his tendency toward exaggeration. Loach was striding down the beach toward them, along with the four other Stoke Pilgrims. They were carrying lean, tapering sticks with sharp noses and foiled rails. Loach and Mr. Scrote wore lurid wet suits. The younger three had painted their bodies with Day-Glo thermopaints.

“Gonna shred you suckers!” yelled Loach.

“Stupid clones!” whooped Zep, lifting Chaos Attractor high overhead. “Freestyle rules!”

“What kind of weird joke is this?” asked Loach, eyeing the new stick.

“Care to try it out?”

“Maybe. I’m gonna win it anyway, right?”

Zep nodded, calm and scientist-like now that the action had finally begun. It was good to have real flesh-and-blood enemies to deal with. “Let me show you where to plug it in. This might sting a bit a first.”

He knelt down and began to brush sand from Loach’s ankle.

“What’re you doing?” Loach asked, jumping back when he saw Zep coming at him with a wire terminating in sharp pins.

“You need this special leash to ride the board,” Zep said. “Without human input, the board would go out of control. The thing is, the fractal surface writhes in a data-simulation altered by the leash input. These fang things are a parallel nerve-port, wave? It feeds into the CAM8 along with the fractal wave analyses, so the board knows what to do.”

Mr. Scrote gave Zep a sharp kick in the ribs. “You’re gonna stick that thing in his ankle, you junkie, and give him AIDS?”

Zep bared his teeth in a confused grin. “Just hold still, Lex. It doesn’t hurt. I’d like to see what you can do with it.”

Loach stepped well back. “You’re whacked, dude. You been over the falls one too many times. Your brain is whitewater. Yo, Delbert! See you out at the break. It’s flat now, but there’ll be peaks once the tide starts in—believe it!” Loach and the Stoke Pilgrims hit the mushy warm water and began paddling out.

Zep was still crouched over Chaos Attractor. He glanced slyly up at Delbert. “You ready?”

“No.”

“Look, Del, you and my stick have to go out there and show the guys how to carve.”

“No way.”

“Get rad. Be an adventurer. You’ll be part of the system, man. Don’t you remember how I explained about waves?”

“I don’t care about waves,” said little Delbert. “I want to go home. It’s stupid to think I would ever be a major surfer. Who talked me into this, anyway? Was it you?”

Zep stared out at the zon. Loach and the Stoke Pilgrims were bobbing on the mucky water, waiting for a set. Suddenly he frowned. “You know, Del, maybe it’s not such a great idea for you to use this board.”

“What do you mean? It’s my stick isn’t it? I gave you two hundred dollars.”

“You still don’t have the big picture. At any moment, the relevant sea-configuration is ten trillion bits of analog info, right? Which folds up to one point in the ten-trillion-dimensional surf-space. As the ocean dynamically evolves, the point traces out a trajectory.

But Del! The *mind*, Del, the mind is meanwhile and always jamming in the infinite-dimensional *mindscape*. Mindscape being larger than surfspace, you wave. My good tool Chaos Attractor picks up what you're looking for and sends tiny ripples out into the ocean, pulsing them just right, so that they cause interference way out there and bounce back where you want. The coupled system of board and rider in the mindscape are riding the surfspace. You sketch yourself into your own picture."

"So why can't I ride the board?"

"Because, Delbert, because ..." Zep gave a long, shuddery sigh and clamped the leash's fangs into his own ankle. "Because you have a bad attitude and you'll deal a mess and thrash the board before it gets burnt in. Because it's mine. Because right now I'm plugged in and you're not. Because ..." Zep paused and smiled oddly. "I don't like to say the word for what you are."

"What word?"

"Ho-dad."

Delbert's tense frame sagged. "That's really depressing, Zep." In the distance a car had begun insistently to honk. At a loss for words, Delbert craned up the cliff at the N-plant parking lot. There was a girl up there, standing next to a car and waving and reaching in through the car window to honk. It was Jen! Delbert turned his back to Zep and waved both arms at Jen. "Come on down, baby," he screamed. "Zep's gonna break the board in for me and then I'll shut down this beach for true!" Jen began slowly to pick her way down the steep cliff path. Delbert turned back to Zep. All smiles. "Be careful, my man. The Pilgrims'll probably try to ram you."

"I'm not afraid of Loach," said Zep softly. "He's a clone surfer. No sense of freestyle. We're both 'dads, man, but we're still avant-garde. And you, man, you go and put some heavy physical moves on Jen while she's standing here."

Zep padded down to the water's edge, avoiding the lurid, overgrown anemones. Clams squirted dark brown water from their holes. Sand crabs hid with only their antennae showing, dredging the slack warm water for the luminous plankton indigenous to the San Diablo break.

The N-plant made for an empty beach. There was plenty of room in the water, even with the five Stoke Pilgrims out there in a lineup. Floathead and Shrimp Chips were playing tic-tac-toe in the body paints on each other's chests, and Squid Puppy was fiddling with a wristwatch video game.

Chaos Attractor lit up the instant it hit the water. Zep found himself looking into a percolating, turbulent lens. The board was a window into surfspace. Zep could see the swirling high-dimensional probability fluid, tiny torsion curls composed of tinier curls composed of tinier torsions. It made him almost high on life. Zep flopped belly-down on the board and began paddling out through the wavelets that lapped the shore.

"Hang ten trillion!" called Delbert.

Ripples spread away from Zep's stick, expanding and crossing paths as they rushed toward the open sea. The water was laced with slimy indigo kelp. Zep thought of jellyfish. In this quap water, they'd be mongo. He kept paddling. The sun looked like the ghost of a silver dollar. He splashed through some parallel lines of number-three wavier. Stroke followed stroke, and finally he was far enough out. He let himself drift, riding up and down on the humping wave embryos. Chaos Attractor was sending out ripples all the time and now things were beginning to ...

"Check the zon!" shouted Squid Puppy.

Zep sat up. Row upon row of waves were coming in from the zon, each wave bigger than the one before. The sea was starting to look like a staircase. Remain calm, carver. Nothing too big and nasty. A few even test waves would do nicely. Something with a long, lean lip and a smoothed-under ledge.

"Curl or crawl," Loach called, glancing sidelong at Zep with a confident sneer.

Zep could feel the power between his legs. The surface of Chaos Attractor was flexing and rippling now, a faithful model of the sea's surface. Looking down, Zep could see moving beads of color that matched the approaching waves. Wouldn't it be great if ...

The leash fed Zep's thought to the CAM8. The CAM8 jived the imipolex. The imipolex fed a shudder to the sea. The surface band-pattern changed and ...

"Mexican beach break!" screamed Zep.

The huge blue wall came out of nowhere and crashed onto Loach and his glittering board—all in the space of an exclamation point.

Zep aimed into the churning stampede of white foam, endured a moment of watery rage, and shot effortlessly out into calm tides. The real wave-set was marching in now. Zep decided to catch the seventh.

Loach surfaced a few meters off, all uptight. "Carve him, Pilgrims!"

Zep grinned. Not likely.

As the war-painted sea dogs huffed and puffed against the current, he calmly bent his will toward shaping that perfect seventh wave. The Stoke Pilgrims yelled in glee, catching waves from the set. Squid Puppy and Shrimp Chips came after Zep, dogsledding it in zigzags over the curl and down the hollow. Near miss. Here was Zep's wave. He took his time getting to his feet after a slow takeoff, and looked back to see the prune-faced Mr. Scrote snaking after him, befouling the wave in his eagerness to slyve Zep.

It was time to hang ten.

Zep took a ginger step toward the nose and watched the gliding water rise up. Perfect, perfect... aaauuuuummm. A shadow fell over Zep. He leaned farther out over the nose, and the shadow grew—like an ever-thicker cloud closing over the sun.

Zep looked back, and he saw that the sky was green and alive with foam, a shivering vault of water. Floating amid that enormous green curved world, which looked like some fathomless cavern made from bottle glass, was a lurid, red-eyed giant—a Macy's Parade Mr. Scrote.

Zep flicked around, banked back toward the behemoth, and cruised up the slick green tube until he was at Scrote's eye level. The sight of the bulging capillaries sickened him, and he stretched his arms straight out ahead of him, gripping the very tip of the board with his naked toes. He had all the time in the world. The wave didn't seem to be breaking anymore.

The green expanse spread out around him. The curve above flowed like melting wax, drawing him into it. Rationally, he knew he was upside down, but it felt more like he was sliding down one side of a vast, translucent bowl. Under the board he could see a shimmering disk of white light, like a fire in the water: Was that the sun? He stepped back to the middle of Chaos Attractor, tilting the board up for greater speed, plunging ever deeper in the maelstrom spiral of the tube. He was nearing the heart of pure foam: the calm, still center of the ever-receding void.

Suddenly, a huge stain came steaming toward him out of the vortex. Gelatin, nausea, quaking purple spots, a glutinous leviathan with purple organs the size of aircraft carriers. Mile upon mile of slithery stinging tendrils drifted behind the thing, stretching clear back to the singular center that had been Zep's goal.

It was a jellyfish, and...Zep was less than a centimeter tall. It figured, Zep thought, realizing what was up—it figured that he'd shrink. That's what he'd always wanted from the drugs he couldn't quite kick: annihilation, cessation of pain, the deep inattention of the zero. The jellyfish steamed closer, lurid as a bad trip, urgently quaking.

Zep sighed and dug in his stick's back rail. Water shot up, and Zep grew. The jellyfish zoom-lensed back down to size. Chaos Attractor shot up out of the tube, and Zep fell down into the warm gray-and-green sea.

He surfaced into the raging chop and reeled Chaos Attractor in by the leash. Mr. Scrote was behind a crest somewhere, screaming at Loach. "He disappeared, Lex! I swear to God, dude—I had him, and he shrunk to nothing. Flat out disappeared!"

Zep got back on Chaos Attractor and rode some whitewater toward shore. There were Del and Jen, waving and making gestures. Del had his arm around her waist. Off to the right was the stupid N-plant cooling pipe. Zep glared up at the plant, feeling a hot, angry flash of righteous ecological rage. The nuke-pigs said no N-plant could ever explode, but it would be so rad if like this one went up, just to show the pigs that ...

Ripples sped over the cooling pipe, and suddenly Zep noticed a cloud of steam or smoke in the air over the N-plant. Had that been there before? And was that rumbling noise thunder? Had to be thunder. Or a jet. Or maybe no. What was that he'd been thinking about an explosion? Forget it! Think pro-nuke, Zep baby!

When Zep was near shore, Delbert gave Jen a big kiss, dived in, and came stroking out, buoyed by his wet suit. He ducked a breaker or two and then he was holding onto the side of Chaos Attractor, totally stoked.

“I saw that, Zep! It was awesome! It does everything you said it does. It made great waves—and you shrank right up like you were surfing into a zero.”

“Yeah, Del, but listen—”

“Let me try now, Zep. I think I can do it.”

Zep back-paddled, gripping the board between his thighs. “I don’t think that’s such a hot idea.”

Delbert reddened. “Yeah? You know, Zep, you’re a real wipe sometimes. What is this, huh? You get me to fork over all my savings so you can go and build a board that didn’t cost you a cent in the first place—and now you act like it’s yours! You took my money for a board you would have made anyway!”

“It’s not that, Del. It’s just that—it’s more powerful than I thought. We maybe shouldn’t be using it around here. Look at the nuke.”

“Oh, yeah, try to distract me. What a bunch of crap! Give me that board, Zep. Come on, and the leash, too.”

“Del, look—”

Another spurt of steam went up from the plant. Zep gave thanks that the wind wasn’t blowing their way.

“You two dudes are maka sushi!” yelled Loach.

The Stoke Pilgrims cried out in unison, “Shred ‘em!”

Zep looked away from the board just long enough for Del to grab it away from him. Delbert got up on the board and pushed Zep under, holding him down with his feet and reeling in on the leash. Zep’s foot surfaced, and Delbert ripped the leash fangs out of his ankle. By the time Zep got his head back in the air, Delbert had installed the leash on himself and was paddling away, triumph in his eyes.

“It’s my stick, dude,” called Del.

“Oh, no, Delbert. Please, I swear I’m not goofing. If you do it, you’d better stay really, really cool. Go for the little waves. And don’t look at the N-plant. And if you do look, just remember that it can’t possibly explode. No fancy tricks, dude.”

“Bull!” screamed Delbert, shooting over a small peak. “This gun was built for tricks, Zep, and you know it. That’s the thrill, man! *Anything* can happen! That’s what this is all about!”

Delbert was belly to the board, stroking for the horizon. Back on the beach, Jen had noticed the N-plant's activity, and she was making gestures of distress. Zep dog-paddled, wondering what to do. Suddenly four of the surf punks surrounded him.

"He looks kind of helpless down there, don't he," said Floathead.

"Watch him close," said Mr. Scrote. "He's slippery."

"Let's use his head for water polo," suggested Squid Puppy darting the sharp end of his board at Zep.

Zep dove to the bottom and resurfaced, only find the Stoke Pilgrims' boards nosed in around him like an asterisk with his head at the center. "Mess with my mind, I don't care," said Zep. "But just don't put Delbert uptight."

"We won't bother bufu Delbert," said Mr. Scrote. "He's Lex's now."

"I know this is going to sound weird," Zep began. "But ..."

"Holy righteous mother of God," interrupted Floathead. "Check out the zon, bros."

"Far, far, faaar outsider," someone whispered. The horizon looked bent in the middle, and it took an effort of will to realize that the great smooth bell-curve was an actual wave of actual water. It swelled up and up like a droplet on a faucet, swelled so big that you half expected it to break free of the sea and fly upward into great chaotic spheres. It was far enough off that there still might have been time to reach the safety of the cliffs...but that's not what the surfers did. They broke formation and raced farther out to sea, out to where they guessed the monster wave would break.

Zep power-stroked out after the others, out toward where Loach and Delbert were waiting, Delbert bobbing up and down with a dismayed expression as Loach kept shouting at him. Just as Zep got there, Loach reached over and smacked Delbert in the face.

Delbert screamed in anger, his face going redder every second. "I'm gonna kill you, Loach!"

"Hoo-hoo-hoo!" cried the Stoke Pilgrims, forming their lineup. "Delbert is a ho-dad!"

"You can't always bully me, Loach," continued Delbert. "If you get near me one more time—if you snake in while I'm riding this super wave, *my* wave—it's all over for you."

"Oh, I'm shaking," Loach said, slapping the water as he laughed. "Come on, paddle boy. Do your worst—and I do mean megaworst." Loach grinned past Del at the other Stoke Pilgrims. "Contest's over, guys! Let's take this dip's board right now!"

Zep watch Delbert's face run through some fast changes, from helpless to terrified to grim to enraged to psychotic. It was as if some vicious bug had erupted from shy caterpillar Delbert. Some kind of catastrophic transition took place, and Delbert was a death's head moth. All the while Chaos Attractor was churning out a moiréed blur of weird ripples, making the oncoming wave grow yet more monstrous.

Zep felt himself sucked up into the breast of a mountainous wall of water, a blackish green fortress whose surface rippled and coiled until it formed an immense, godlike face glaring down on all of them. Zep had never seen such cold eyes: The black depths of space had been drawn into them by the chaotic attractor. Sky had bent down to earth, drawing the sea up to see. Del and the Pilgrims and Zep all went rushing up toward a foamy green hell, while below ...

Below was the rumbling, and now a ferocious cracking, accompanied by goutts of radioactive steam. Sirens and hooters. High up on the god-wave, Zep looked down and saw the N-plant rocking in its bed, as if nudged from beneath by a gigantic mole. Blue luminescence pulsed upward through the failing N-plant's shimmering veils of deadly mist, blending into the green savagery of the spray trailing down from their wave. Frantic Jen had flung herself into the surf and was thrashing there, goggling up at the twin catastrophes of N-plant and Neptune's wave.

Looking up, Zep saw Delbert streaking down the long beaked nose of Neptune while Loach and the Pilgrims skidded down the cheeks, thrown from their boards, eating it.

Zep felt proud. *Delbert, I didn't know you had it in you. Shut the beach DOWN!*

Cracks crazed the surface of the N-plant. It was ready to blow. Way down there was Jen, screaming, "Save me!" like Olive Oyl. Del carved the pure surf-space, sending up a rooster of probability spray, jamming as if he'd been born on silvery, shadowy Chaos Attractor. He looked like he'd been to the edge of the universe and back already. He raved down deep to snatch up his Jen and set her in the board's center; and then he snapped up the wall to wrap a tight spiral around floundering Zep.

"Latch on, dude!"

Zep clamped onto Chaos Attractor's back rail and pulled himself aboard. The stick reared like a horse and sent them scudding up over the lip of the tsunami, out over the arching neck of the slow-breaking wave. Del glanced back through the falls and saw the filtered light of the San Diablo Nuclear Plant's explosion, saw the light and the chunks of concrete and steel tumbling outward, borne on the shock-wave's A-bomb energy.

The two waves intermingled in a chaotic mindscape abstraction. Up and up they flew, the fin scraping sparks from the edges of the unknown. Zep saw stars swimming under them, a great spiral of stars.

Everything was still, so still.

And then Del's hand shot out. Across the galactic wheel a gleaming figure shared their space. It was coming straight at them. Rider of the tides of night, carver of blackhole beaches and neutron tubes. Bent low on his luminous board—graceful, poised, inhuman.

"Ohmigod!" said Jen. "The Silver Surfer!"