

FEIGENBAUM NUMBER (v1.1)

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In the mirror I saw her eyes narrow, her mouth tighten. The other woman turned from the window, laughing, one slim graceful arm pushing back a tendril of chestnut hair.

Diane skinned her brown hair back from her face. "Is it too much to ask, Jack, honey, that just once after we make love you don't go rushing off like there's a three-alarm fire? Just once?"

I didn't answer.

"I mean, how do you think that makes me feel? Slambam-thank-you, ma'am. We have an actual relationship here, we've been going out for three months, it doesn't seem a lot to ask that after we make love you don't just -- "

I didn't interrupt. I couldn't. The dizziness was strong this time; soon the nausea would follow. Sex did that. The intensity. Diane ranted, jerking herself to a kneeling position on the bed, framed by lumpy maroon window curtains opened a crack to a neighbor's peeling frame house and weedy garden. Across the room the other Diane stood framed by crimson silk draperies opened a crack to a mellowed-wood cottage riotous with climbing roses. She blew me a light-hearted kiss. Her eyes glowed with understanding.

The nausea came.

" -- can't seem to understand how it makes me feel to be treated like "

I clutched the edge of the dresser, which was both a scratched pressed-board "reproduction" and a polished cherrywood lowboy. Two perfume bottles floated in front of me: yellow plastic spraybottle and clean-lined blown glass. I squeezed my eyes shut. The ghostly Diane disappeared in the act of sauntering, slim and assured, toward the bathroom.

" -- don't even really look at me, not when we make love or -- "

Eyes shut, I groped for the bedroom door.

"Jack!"

I slammed the doors, both of them, and left the apartment before Diane could follow. With her sloppy anger, her overweight nakedness, her completely justified weeping.

Outside was better. I drove my Escort to campus. The other car, the perfectly engineered driving machine with the sleek and balanced lines, shimmered in and out around me, but the vertigo didn't return. I'd never gotten very intense about cars, and over the years I'd learned to handle the double state of anything that wasn't too intense. The rest I avoided. Mostly.

The Aaron Fielding Faculty Office Building jutted boxlike three stories from the asphalt parking lot, and it blended its three floors harmoniously with a low hillside whose wooded lines were repeated in horizontal stretches of brick and wood. The poster-cluttered lobby was full of hurried students trying to see harried advisers, and it was a marble atrium where scholars talked eagerly about the mind of man. I walked down the corridor toward my cubicle, one of a row allotted to teaching assistants and post-docs.

But Dr. Frances Schraeder's door was open, and I couldn't resist.

She sat at her terminal, working, and when I knocked on the doorjamb (scarred metal, ghostly graceful molding), she looked up and smiled. "Jack! Come look at this!"

I came in, with so much relief my eyes prickled. The material Fran's long, age-spotted

fingers were held poised over her keyboard, and the ideal Fran's long, age-spotted fingers echoed them. The ideal Fran's white hair was fuller, but no whiter, and both were cut in simple short caps. The material Fran wore glasses, but both Frans' bright blue eyes, a little sunken, shone with the same alert tranquility.

She was the only person I'd ever seen who came close to matching what she should have been.

"This is the latest batch of phase space diagrams," Fran said. "The computer just finished them -- I haven't even, printed them, yet."

I crouched beside her to peer at the terminal.

"Don't look any more disorganized to me than the last bunch."

"Nor to me, either, unfortunately. Same old, same old." She laughed: in chaos theory, there is no same old, same old. The phase space diagrams were infinitely complex, never repeating, without control.

But not completely. The control was there, not readily visible, a key we just didn't recognize with the mathematics we had. Yet.

An ideal no one had seen.

"I keep thinking that your young mind will pick up something I've missed," Fran said. "I'll make you a copy of these. Plus, Pyotr Solenski has published some new work in Berlin that I think you should take a look at. I downloaded it from the net and e-mailed you."

I nodded, but didn't answer. For the first time today, calm flowed through me, soothing me.

Calm.

Rightness.

Numbers.

Fran had done good, if undistinguished, work in pure mathematics all her life. For the last few years she -- and I, as her graduate student -- had worked in the precise and austere world of iterated function theory, where the result of a given equation is recycled as the starting value of the next repetition of the same equation. If you do that, the results are predictable: the sequences will converge on a given set of numbers. No matter what initial value you plug into the equation, with enough iterations you end up at the same figures, called attractors. Every equation can generate a set of attractors, which iterations converge on like homing pigeons flying back to their nests.

Until you raise the value plugged into the equation past a point called the Feigenbaum number. Then the sequences produced lose all regularity. You can no longer find any pattern. Attractors disappear. The behavior of even fairly simple equations becomes chaotic. The pigeons fly randomly, blind and lost.

Or do they?

Fran -- like dozens of other pure mathematicians around the world -- looked at all that chaos, and sorted through it, and thought she glimpsed an order to the pigeons' flight. A chaotic order, a controlled randomness. We'd been looking at nonlinear differential equations, and at their attractors, which cause iterated values not to converge but to diverge. States which start out only infinitesimally separated go on to diverge more and more and more ... and more, moving toward some hidden values called, aptly enough, strange attractors. Pigeons from the same nest are drawn, through seeming chaos, to points we can identify but not prove the existence of.

Fran and I had a tentative set of equations for those idealized points.

Only tentative. Something wasn't right. We'd overlooked something, something neither of us could see. It was there -- I knew it -- but we couldn't see it. When we did, we'd have proof that any physical system showing an ultra dependence on initial conditions must have a strange attractor buried somewhere in its structure. The implications would be profound -- for chaos mathematics, for fluid mechanics, for weather control.

For me.

I loved looking for that equation. Sometimes I thought I could glimpse it, behind the work we were doing, almost visible to me. But not often. And the truth I hadn't told Fran, couldn't tell her, was that I didn't need to find it, not in the way she did. She was driven by the finest kind of intellectual hunger, a true scientist.

I just wanted the peace and calm of looking. The same calm I'd found over the years in simple addition, in algebra, in calculus, in Boolean logic. In numbers, which were not double state but just themselves, no other set of integers or constants or fractals lying behind these ones, better and fuller and more fulfilled, Mathematics had its own arbitrary assumptions -- but no shadows on the cave wall.

So I spent as long with Fran in front of the terminal as I could, and printed out the last batch of phase space diagrams and spent time with those, and went over our work yet again, and read Pyotr Solenski's work, and then I could no longer put off returning to the material world.

As soon as I walked into Introduction to Set Theory, my nausea returned.

Mid October. Two more months of teaching this class, twice a week, 90 minutes a session, to keep my fellowship. I didn't know if I could do it. But without the fellowship, I couldn't work with Fran.

Thirty-two faces bobbed in front of me, with 32 shimmering ghostly behind them. Different. So different. Jim Mulcahy: a sullen slouching 18-year-old with acned face and resentful eyes, flunking out -- and behind him, the quiet assured Jim, unhamstrung by whatever had caused that terrible resentfulness, whatever kept him from listening to me or studying the text. Jessica Harris: straight As, thin face pinched by anxiety, thrown into panic whenever she didn't instantly comprehend some point -- and behind her, the confident Jessica who could wait a minute, study the logic, take pleasure in her eventual mastery of it. Sixty-four faces, and 64 pieces of furniture in two rooms, and sometimes when I turned away to the two blackboards (my writing firm on the pristine surface, and quavery over dust-filled scratches), even turning away wasn't enough to clear my head.

"The students complain you don't look at them when you talk," my department chair had said. "And you don't make yourself available after class to deal with their problems."

He'd shimmered behind himself, a wise leader and an overworked bureaucrat.

Nobody had any questions. Nobody stayed after class. Nobody in the first 32 students had any comments on infinite sets, and the second 32 I couldn't hear, couldn't reach.

I left the classroom with a raging headache, and almost tripped over a student in the hall.

Chairs lined the corridor walls (water-stained plaster; lively-textured stucco) for students to wait for faculty, or each other, or enlightenment. One chair blocked fully a third of my doorway, apparently shifted there by the girl who sat, head down, drawing in a notebook. My headache was the awful kind that clouds vision. I banged my knee into a corner of the chair (graffiti on varnish on cheap pine; clean hand-stained hardwood). My vision cleared but my knee throbbed painfully.

"Do you mind not blocking the doorway, Miss?"

"Sorry." She didn't look up, or stop drawing.

"Please move the damned chair."

She hitched it sideways, never raising her eyes from the paper. The chair banged along the hall floor, clanging onto my throbbing brain. Beside her, the other girl shrugged humorously, in charming self-deprecation.

I forced myself. "Are you waiting for me? To see about the class?"

"No." Still she didn't look up, rude even for a student. I pushed past her, and my eyes fell on her drawing paper.

It was full of numbers: a table for binomial distribution of coin-tossing probabilities, with x as the probability of throwing n heads, divided by the probability of throwing an equal number of heads and tails. The columns were neatly labeled. She was filling in the numbers as rapidly as her pen could write, to seven decimal places. From memory, or mental calculation?

I blurted, "Most people don't do that."

"Is that an observation, an insult, or a compliment?"

All I could see of both girls were the bent tops of their heads: lank dirty blonde, feathery golden waves.

She said, "Because if it's an observation, then consider that I said, 'I already know that.'"

The vertigo started to take me.

"If it's an insult, then I said, 'I'm not most people.'"

I put out one hand to steady myself against the wall.

"And if it's a compliment, I said, 'Thanks.' I guess."

The hallway pulsed. Students surged toward me, 64 of them, except that I was only supposed to teach 32 and they weren't the ones who really wanted to learn, they were warped and deformed versions of what they should have been and I couldn't teach them because I hated them too much. For not being what they could have been. For throwing off my inner balance, the delicate metaphysical ear that coordinates reality with ideal with acceptance. For careening past the Feigenbaum number, into versions of themselves where attraction was replaced by turbulent chaos ... I fell heavily against the wall, gulping air.

"Hey!" The girl looked up. She had a scrawny, bony face with a too-wide mouth, and a delicate, fine-boned face with rosy generous lips. But mostly I saw her eyes. They looked at me with conventional concern, and then at the wall behind me, and then back at me, and shock ran over me like gasoline fire. The girl reached out an arm to steady me, but her gaze had already gone again past me, as mine did everywhere but in the mirror, inexorably drawn to what I had never seen: the other Jack shimmering behind me, the ideal self I was not.

"It affects you differently than me," Mia said over coffee in the student cafeteria. I'd agreed to go there only because it was nearly empty. "I don't get nauseated or light-headed. I just get mad. It's such a fucking waste."

She sat across from me, and the other Mia sat behind her, green eyes hopeful in her lovely face. Hopeful that we could share this, that she was no longer alone, that I might be able to end her loneliness. The physical Mia didn't look hopeful. She looked just as furious as she said she was.

"Nine times out of ten, Jack, people could become their ideal selves, or at least a whole lot fucking closer, if they just tried. They're just too lazy or screwed up to put some backbone into it."

I looked away from her. "For me," I said hesitantly, "I guess it's mostly the unfairness of it that's such a burden. Seeing the ideal has interfered with every single thing I've ever wanted to do with my life." Except mathematics.

She squinted at me. "Unfairness? So what? Just don't give in to it."

"I think it's a little more complicated than -- "

"It's not. In fact, it's real simple. Just do what you want, anyway. And don't whine."

"I'm not -- "

"You are. Just don't let the double vision stop you from trying anything you want to. I don't." She glared belligerently. Behind her, the other Mia radiated determination tempered by acceptance.

"Mia, I do try to do the things I want. Math. My dissertation. Teaching." Not that I wanted to be doing that.

"Good," she snapped, and looked over my shoulder. "Double vision doesn't have to defeat

us if we don't let it."

I said, "Have you ever found any others like us?" What did my ideal self look like? What strengths could she see on his face?

"No, you're the only one. I thought I was alone."

"Me, too. But if there's two of us, there could be more. Maybe we should -- "

"Damn it, Jack, at least look at me when you're talking to me!"

Slowly my gaze moved back to her face. Her physical face. Her mouth gaped in anger; her eyes had narrowed to ugly slits. My gaze moved back.

"Stop it, you asshole! Stop it!"

"Don't call me names, Mia."

"Don't tell me what to do! You have no right to tell me what to do! You're no different from -- "

I said, "Why would I look at you if I could look at her?"

She stood up so abruptly that her chair fell over. Then she was gone.

I put my hands over my eyes, blotting out all sight. Of everything.

"What was this system before it started to diverge?" Fran said.

She held in her hands a phase space diagram I hadn't seen before. Her eyes sparkled. Even so, there was something heavy around her mouth, something that wasn't in the Fran behind her, and for a minute I was so startled I couldn't concentrate on the printouts. The ideal Fran, too, looked different from the day before. Her skin glowed from within, almost too strongly, as if a flashlight burned behind its pale fine-grained surface.

"That was rhetorical, Jack. I know what the system was before it diverged-the equations are there on the desk. But this one looks different. See ... here ... "

She pointed and explained. Nonlinear systems with points that start out very close together tend to diverge from each other, into chaos. But there was something odd about these particular diagrams: they were chaotic, as always around a strange attractor, but in non-patterns I hadn't seen before. I couldn't quite grasp the difference. Almost, but not quite.

I said, "Where are those original equations?"

"There. On that paper -- no, that one."

"You're using Arnfelser's Constant? Why?"

"Look at the equations again."

I did, and this time I recognized them, even though subatomic particle physics is not my field. James Arnfelser had won the Nobel two years ago for his work on the behavior of electron/positron pairs during the first 30 seconds of the universe's life. Fran was mucking around with the chaos of creation.

I looked at the phase space diagrams again.

She said, "You can almost see it, can't you? Almost ... see ... "

"Fran!"

She had her hand to her midriff. "It's nothing, Jack. Just indigestion on top of muscle tension on top of sleeplessness. I was up all night on those equations."

"Sit down."

"No, I'm fine. Really I am." She smiled at me, and the skin around her eyes, a mass of fine wrinkles, stretched tauter. And behind her, the other Fran didn't smile. At all. She looked at me, and I had the insane idea that somehow, for the first time, she saw me.

It was the first time I'd ever seen them diverge.

"Fran, I want you to see a doctor."

"You're good to be so concerned. But I'm fine. Look, Jack, here on the diagram ..."

Both Frans lit up with the precise pleasure of numbers. And I -- out of cowardice, out of relief -- let them.

"... can't understand a thing in this fucking course."

The voice was low, male, the words distinct but the speaker not identifiable.

I turned from writing equations on the board. Thirty-two/sixty-four faces swam in front of me. "Did one of you say something?"

Silence. A few girls looked down at their notebooks. The rest of the students stared back at me, stony. I turned back to the board and wrote another half equation.

"... fucking moron who couldn't teach a dog to piss." A different voice.

My hand, holding the chalk, shook. I went on writing.

"... shouldn't be allowed in front of a classroom." This time, a girl.

I turned around again. My stomach churned. The students stared back at me. They were all in on this, or at least tacitly complicit.

I heard my voice shake. "If you have any complaints about how this course is being taught, you are advised to take them up with the department chair, or to express them on the course evaluation form distributed at the end of the semester. Meanwhile, we have additional work to cover." I turned back to the board.

"... fucking prick who can't make anything clear."

My chalk stopped, in the middle of writing an integer. I couldn't make it move again. No matter how hard I concentrated, the chalk wouldn't complete the number.

"... trying to make us flunk so he looks bigger."

Slowly I turned to face the class.

They sat in front of me, slumping or smirking or grinning inanely. Empty faces. Stupid faces. A few embarrassed faces. Fourth-rate minds, interested only in getting by, ugly gaping maws into which we were supposed to stuff the brilliance of Maxwell and Boltzmann and von Neumann and Russell and Arnfelter. So they could masticate it and spit it on the floor.

And behind them ... behind them ...

"Get out," I said.

One hundred twenty-eight eyes opened wide.

"You heard me!" I heard myself screaming. "Get out of my classroom! Get out of this university! You don't belong here, it's criminal that you're here, none of you are worth the flame to set you on fire! Get out! You've diverged too far from what you ... what you ... "

A few boys in the front row sauntered out. A girl in the back started to cry. Then some of them were yelling at me, shrieking, only the shrieking wasn't in my classroom, it was in the hall, down the hall, it was sirens and bells and outside the window, an emergency medical van, and they were carrying Fran out on a stretcher, her long-fingered hand dangling limply over the side, and nobody would listen to me explain that the terrible thing was not that she wasn't moving but that lying on the stretcher so quietly were not two Frans, as there should have been, but only one. Only one.

I didn't go to the funeral.

I took Fran's last set of diagrams, and copied her files off her hard drive, and packed a bag. Before I checked into the Morningside Motel on Route 64, I left messages on Diane's answering machine, and the department chair's, and my landlady's.

" -- don't want to see you again. It's not your fault, but I mean it. I'm sorry."

"I resign my teaching fellowship, and my status as a post-doc at this university."

"My rent is paid through the end of the month. I will not be returning. Please pack my things and send them to my sister, COD, at this address. Thank you."

I bolted the motel door, unwrapped two bottles of Jack Daniels, and raised my glass to the mirror.

But no toast came. To him? Who would not have been doing this stupid melodramatic thing? Who would have seen Fran's death as the random event it was, and grieved it with courage and grace? Who would have figured out the best way to cope with his problems from a healthy sense of balance undestroyed by knowing exactly what he could never, ever, ever measure up to? I'd be damned if I'd drink to him.

"To Fran," I said, and downed it straight, and went on downing it straight until I couldn't see the other, better room lurking behind this one.

Even drunk, you dream.

I didn't know that. I'd expected the hangovers, and the throwing up, and the terrible, blessed blackouts. I'd expected the crying jag. And the emotional pain, like a dull drill. But I'd never been drunk for four days before. I'd thought that when I slept the pain would go away, into oblivion. I didn't know I'd dream.

I dreamed about numbers.

They swam in front of me, pounded the inside of my eyelids, chased me through dark and indistinct landscapes. They hunted me with knives and guns and fire. They hurt. I didn't wake screaming, or disoriented, but I did wake sweating, and in the middle of the night I hung over the toilet, puking, while numbers swam around me on the wavering, double floor. The numbers wouldn't go away. And neither would the thing I was trying to drink myself out of. No matter how drunk I got, the double vision stayed. Except for the equations, and they hurt just as much as the polished floor I couldn't touch, the cool sheets I couldn't feel, the competent Jack I couldn't be. Maybe the equations hurt more. They were Fran's.

Take Arnfelser's Constant. Plug it into a set of equations describing a nonlinear system ...

Phase space diagrams. Diverging, diverging, gone. A small difference in initial states and you get widely differing states, you get chaos ...

Take Arnfelser's Constant. Use it as r . Let x equal ...

A small difference in initial states. A Fran who diverged only a small amount, a Jack who ...

Take Arnfelser's equation ...

I almost saw it. But not quite.

I wasn't good enough to see it. Only he was.

I poured another whiskey.

The knock on the door woke me. It sounded like a battering ram.

"Get out. I paid at the desk this morning. I don't want maid service!"

The shouting transferred the battering ram to my head, but the knocking ceased.

Someone started picking the lock.

I lay on the bed and watched, my anger mounting. The chain was on the door. But when the lock was picked the door opened the length of the chain, and a hand inserted a pair of wirecutters. Two pairs of wirecutters, physical and ideal. Four hands. I didn't even move. If the motel owner wanted me, he could have me. Or the cops. I had reached some sort of final decimal place -- I simply didn't care.

The chain, cheap lightweight links, gave way, and the door opened. Mia walked in.

"Christ, Jack. Look at you."

I lay sprawled across the bed, and both Mias wrinkled their noses at the smell.

I said, even though it wasn't what I meant, "How the fuck did you get in here?"

"Well, didn't you see how I got in here? Weren't you even conscious?" She walked closer and went on staring at me, in soiled underwear, the empty bottle on the floor. Something moved behind their eyes.

"How did you find me?" it hurt to speak.

"Hacked your Visa account. You put this dump on it."

"Go away, Mia."

"When I'm good and ready. Jesus, look at you."

"So don't."

I tried to roll over, but couldn't, so I closed my eyes.

Mia said, "I didn't think you had it in you. No, I really didn't." Her tone was so stupid -- such a mix of ignorance and some sort of stupid feminine idealization of macho asshole behavior -- that I opened my eyes again. She was smiling.

"Get. Out. Now."

"Not till you tell me what this is all about. Is it Dr. Schraeder? They told me you two were pals."

Fran. The pain started again. And the numbers.

"That's it, isn't it, Jack? She was your friend, not just your adviser. I'm sorry."

I said, "She was the only person I ever met who was what she was supposed to be."

"Yeah? Well, then, I'm really sorry. I'm not what I'm supposed to be, I know. And you sure the hell aren't. Although, you know ... you look closer to him this morning than you ever did on campus. More ... real."

I couldn't shove her out the door, and I couldn't stop her talking, and I couldn't roll over without vomiting. So I brought my arm up and placed it across my eyes.

"Don't cry, Jack. Please don't cry."

"I'm not -- "

"On second thought, do cry. Why the fuck not? Your friend is dead. Go ahead and cry, if you want to!" And she knelt beside me, despite what I must smell like and look like, and put her arms around me while, hating every second of it, I cried.

When I was done, I pushed her away. Drawing every fiber of my body into it, I hauled myself off the bed and toward the bathroom. My stomach churned and the rooms wavered. It took two hands to grope along the wall to the shower.

The water hit me, hard and cold and stinging. I stood under it until I was shivering, and it took that long to realize I still had my briefs on. Bending over to strip them off was torture. My toothbrush scraped raw the inside of my mouth, and the nerves in my brain. I didn't even care that when I staggered naked into the bedroom, Mia was still there.

She said, "Your body is closer to his than your face."

"Get out, Mia."

"I told you, when I'm ready. Jack, there aren't any more of us. At least not that I know of. Or that you do. We can't fight like this."

I groped in my overnight bag, untouched for four days, for fresh underwear. Mia seemed different than she had in the cafeteria: gentler, less abrasive, although she looked the same. I didn't care which -- or who -- she was.

"We need each other," Mia said, and now there was a touch of desperation in her voice. I

didn't turn around.

"Jack -- listen to me, at least. See me!"

"I see you," I said. "And I don't want to. Not you, not anybody. Get out, Mia."

"No."

"Have it your way."

I pulled on my clothes, gritted my teeth to get on my shoes, left them untied. I braced myself to push past her.

She stood in the exact center of the room, her hands dangling helplessly at her sides. Behind her the other Mia stood gracefully, her drooping body full of sorrow. But the physical Mia, face twisted in an ugly grimace, was the only one looking at me.

I stopped dead.

They always both looked at me. At the same time. Everybody's both: Mia, Diane, Fran, the department chair, my students. Where one looked, the other looked. Always.

Mia said, more subdued than I had ever heard her. "Please don't leave me alone with this Jack. I ... need you."

The other Mia looked across the room, not over my shoulder. Not at him. At ... what?

From a small difference in initial states you get widely differing states with repeated iterations. Diverging, diverging, chaos ... and somewhere in there, the strange attractor. The means to make sense of it.

And just like that, I saw the pattern in the phase space diagrams. I saw the equations.

"Jack? Jack!"

"Just let me ... write them down ... "

But there wasn't any chance I'd forget them. They were there, so clear and obvious and perfect, exactly what Fran and I had been searching for.

Mia cried, "You can't just leave! We're the only two people like this!"

I finished scribbling the equations and straightened. My head ached, my stomach wanted to puke, my intestines prickled and squirmed. My eyes were so puffy I could barely see out of them. But I saw her, looking at me with her scared bravado, and I saw the other one, not looking at me at all. Diverging. She was right -- we were the only two people like this, linked in our own chaotic system. And the states I could see were diverging.

"No," I got out, just before I had to go back into the bathroom. "There aren't two. Soon ... only one of you."

She stared at me like I was crazy, all the time I was puking. And the other Jack was doing God knows what.

I didn't really care.

I haven't published the equations yet.

I will, of course. They're too important not to publish: proof that any physical system showing an ultradependence on initial conditions must have a strange attractor buried somewhere in its structure. The implications for understanding chaos are profound. But it's not easy to publish this kind of innovation when you no longer have even a post-doc position at a decent university. Even though Fran's name will go first on the article.

I may just put it out on the Internet. Without prior peer review, without copyright protection, without comment. Out onto the unstructured, shifting realities of the net. After all, I don't really need formal attention. I don't really want it.

I have what I wanted: relief. The other faces -- other rooms, other buildings, other

gardens -- are receding from me now. I catch only glimpses of them out of the corner of my eye, diminished in size by the distance between us, and getting smaller all the time. Diverging toward their own strange attractors.

It's not the same for Mia. When she said at the Morningside Motel that I looked more like the ideal Jack than ever before, it wasn't a compliment to my unshaven frowziness. For her, the phase space diagrams are converging. She can barely discern the ideal separate from the physical now; the states are that close.

She smiles at everyone. People are drawn to her as to a magnet; she treats them as if their real selves are their ideal ones.

For now.

The crucial characteristic about chaotic systems is that they change unpredictably. Not as unpredictably as before the Schraeder Equations, but still unpredictably. Once you fall into the area past the Feigenbaum number, states converge or diverge chaotically. Tomorrow Mia could see something else. Or I could.

I have no idea what the ideal Mia was looking at when she gazed across the motel room, away from both me and him. When you are not the shadow on the cave wall but the genuine ideal; what is the next state?

I don't want to know. But it doesn't matter whether or not I want it. If that state of life comes into being, then it does, and all we can do is chase it through the chaos of dens and labyrinths and underground caves, trying to pin it momentarily with numbers, as our states diverge from what we know toward something I cannot even imagine, and don't want to.

Although, of course, that too may change.