Yao Tongduan meets me at the door to the clinic, finds me panting and sweating through a set of totally superfluous scrubs. He clicks his pen impatiently. “You picked one hell of a day to come late.”

No I didn’t. I’m late practically every morning. A year ago Yao was a fresh-faced freshman, putting in long hours at the front desk for a preferential slot in the Applied Neikotics lottery. When he made the program, he started looking the clinicians in the eye, and when he achieved loop-lock, he started swearing at us like a proper shift manager. I sort of prefer this.

“It’s all on the checklist, Yao. Coffee maker needs a double tap. Toilet paper in the back closet.”

“I’m serious, Mona.” He pronounces my English name in a rising, then falling, but mostly exasperated tone. “We have a patient.”

“And you, my friend, have your cert now.” I jab towards the N-1 license *(provisional)* dangling proudly from his lapel. “Says you’re qualified to do inversions now and everything. You think you’re up for it?”

“No, this is — c’mere.” Yao sounds nervous, and suddenly I feel foolish. “Follow me.”

The YINS Neikotic Safety clinic gets two, maybe three patients a day. Mostly the neikonauts Shanghai doesn’t see — the mathematicians and engineers, less ostentatious than the financiers but hardly less reckless in loop-lock. When Yao leads me into the scanner room, I expect a half-familiar face from the halls. Some fellow student who got lost in the catacombs of category theory, and now winces at right angles, that sort of thing. But I don’t quite know what to make of the man already lying in the scanner bed.

He looks West African, about my age, curly locks falling to his shoulders and a zircon rhombus embedded in his forehead. The wanji around each of his wrists is idly hallucinating runes, and his mesh tank top is an admirable idea in this heat. I approach the scanner bed and his eyes track me, barely. This man has a face predisposed to smiling, but right now he’s in obvious pain.

“Hi, I’m Mona Xu,” I tell him, extending a hand he seems unlikely to shake.

He turns his head as far as the loop-lock headset will let him and groans, *“Yi....yi-sheng?”*

“Not a doctor,” I tell him, trying not to think about what 400 blank pages look like stacked on my advisor’s desk. “But close as you’ll get this morning. You got a name?”

He makes a sound — it’s hard to be more specific — and then closes his eyes, wincing at something unseen. Yao and I have a silent exchange:

*Holy shit!*

*Yeah*, *I warned you*, his eyes say. We duck behind the control bank, maybe kinda out of earshot.

“This is *bad*.” Like 98th-percentile bad. “Have you gotten anything else out of him?”

“Not at all,” Yao’s round face is shaded with concern. “He stumbled in about half an hour ago — didn’t even fill out a waiver, mind you — and collapsed into the scanner bed.” He passes me an N-1 license on the usual turquoise lanyard, with a name, *Mbetethi Okeme*, and its owner’s face in a cheesy grin that suggests he’s getting away with something. “If he has any other ID, it’s on his person.”

“So what’s he do for a living? Vest type?”

“No vest,” Yao shrugs. “But he’s got the look of someone in that orbit. My guess is lone-wolf trader feeding on whalefall. Because, check this out.”

Mbetethi’s rucksack is stuffed with bits and pieces of electronic salvage: LCD screens and beamformers and batteries and GPUs. If you *really, really* knew what you were doing, you could build a working loop-lock headset or two from what’s inside. If you get one little thing wrong, well...

“He’s lucky to be alive,” I mutter. “I don’t even wanna know, but what’s in his ‘folds?”

All six of the control bank screens are almost humming with color, fractalized swirls of organic thought like the inside of a higher-dimensional marble. Each is a different vantage point on the thing that’s causing Mbetethi so much pain: a nearly white-hot bolus of jagged, pixelated noise lodged in the 32-dimensional manifolds of the Standard Neikotic Projection. If you ask where some process is happening in the cells of the brain, the answer is *everywhere, kinda*. The ‘folds give you something you can point to. Dr. Deng loves to chastise us about how these images are projections of projections, how they don’t purport to show cause and effect, but it sure *seems* like the debris lodged in his mind is tangling up the gently undulating sheets of his very soul like a kite stuck in a washing machine.

“Can we oversample on the lower tau band?”

Yao mashes a few keys and the picture slides from greens to violets.

At a surface level the picture is pretty, even mesmerizing. A few fathoms deep and I understand it, loosely, as mathematical constructs escaped from seminars I passed by a hair. But deeper and deeper still...there’s a part of me, dormant now, that *knows* this colorful space, is roused gently by even these shadows of shadows. To see it scarred in this way brings up bile, but mostly a shot of adrenaline so strong it pools in my fingertips. *I can fix this, I know I can,* even if from down here I can scarcely imagine how.

“Down a few megahertz?” I ask, trying to smooth all of this out of my voice.

“I’ll save you the trouble.” Yao replies in a lowered voice, but he taps at an arrow key and winces as something like a pufferfish briefly takes shape. Mbetethi lets out a despairing groan from a few meters away. “I cross-checked it against the whole Municipal database, and the scraps we have from Suowei, and not a single inversion in the database will bind to it. Most of them can’t even *detect* it. This is totally novel. Brand new. *Wo cao*, Mona, can you try not to look so excited?”

“What?” But I can’t help but let a smile rise from that deepness inside me. “Is it showing?”

See, at the end of a loop-lock session, when the primer tiles stop and the drugs wear off, whatever computational constructs you were working with will disintegrate. They leave behind the sensation of cathedrals collapsing silently in six dimensions, of powerful truths rendered obscurely into decaying frescoes, of illuminated texts being shut in the tomb of the last person who could read them. Depending on who you ask this is like waking pleasantly from a profound if deeply strange dream, or like having a stroke. It’s not for everyone. There’s a thousand-yard stare you see these days, from traders on the subway or Fields medalists on the podium, their breakthrough in hand, but the intermediate steps belonging to the human-machine hybrid that, for a short time, they *were*. That bothers people — it bothered Adrianna Lam enough to spend years returning to her Collatz proof at smaller and smaller doses, trying to understand *how she got there*, leading to a wave of secondary results. It bothered Peter Waldmann enough to take a sledgehammer to the machine in Goettingen where he did his wormhole structure work, leading him to a showdown with Interpol.

Sometimes these existential crises find their way to our little basement clinic, but to put it bluntly, they’re not our problem. We refer them to counseling on a floor with windows. Like I said, when you exit loop-lock, your mind springs back to its original, organic shape. Mostly, usually. But things can get...left behind. Lodged up in there. Sometimes it’s a fantastically complex graph structure, casting spindly shadows, forcing complicated detours — you can’t think straight, because you have to go around it. Sometimes it’s a million pieces of digital gravel, each byte just — *crunch! crunch!* — against every other. Or sometimes it’s a megalithic crystalline shard, splitting the background noise of life into prismatic arcana. It stays behind, rattles around, takes on a life of its own. It’s computational residue, is what it is. Junk, waste, debris.

And Clinical Neikotics is in the business of garbage collection.

“So here’s the bad news,” Yao tells Mbetethi. He taps around his tablet, dredging up the consent form for what we’re about to attempt. “We have absolutely no idea what it is that you did to yourself. Homebrew loop-lock systems are dangerous business,” he goes on, with the confidence of someone who just aced an online training module on the topic.

Mbetethi looks at him, then at me, desperate for the good news.

“The good news is that, one, the box on the floor next to you is a piece of neikonautical history. Something like three were ever built, back in the People’s Republic era. And two, our ranking clinician on duty today” — he nods briskly in my direction — “is certifiably insane.”

Neither of those things sound like good news. Mbetethi’s mouth curls with horror and despair.

“It’s a Deng bridge,” I explain, wincing at the thought of Dr. Deng hearing me say it. Half of everything she’s done since we arrived from Stanford was to distance herself from this machine, all but deny that it ever existed, and here’s her advisee giving out free rides. “It...well, it will let me enter loop-lock with you. We would share a tilespace, sort of, and I could attempt an inversion by hand...in a manner of speaking.” I could go on hedging, but something in the way Mbetethi’s jaw drops fractionally suggests he’s already familiar with the concept — or at least the rumor — of a Deng bridge. When he’s out of this mess, maybe we can talk shop.

“I’m going to need you to sign this,” Yao interjects, placing a stylus in Mbetethi’s trembling hand.

Five minutes later I’m reclining in another UTMS scanner that’s been wheeled up next to Mbetethi’s. The Deng Bridge itself is a piece of hardware on the floor between us, wired up with a series of finicky adapters. While Yao runs to the storeroom for a couple of autovials, I turn to our patient and try my hand at the reassuring clinician thing.

“I know this is unorthodox. But if it’s any consolation, this is the only thing in the world I’m really good at.”

For a long second it’s hard to tell whether Mbetethi even heard this. But then his eyes close and something like an amused smile peeks through the tremors of pain in his face. Yao returns a minute later, and shows our patient a series of fast-acting psychedelic tryptamines like a dentist offering toothpaste flavors. I make note of his selection (the one he groans at the least), but I focus on fitting a tube into the port in the crevice of my elbow. Then I flip the stereo visor over my eyes and begin to configure my own UTMS bed.