THE DEPARTMENT OF

UNSOLVABLE EQUATIONS

The universe, love, and life,
subject to correction



ORION SAINT

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A NOVEL

Rewritten edition 2026

The Department of Unsolvable Equations

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This is a work of fiction. Its people, institutions and events are invented.

Orion Saint is the pen name of Bulgarian artist and writer Ivaylo Peytchev.

Cacophony by Ivaylo Peytchev appears on the back cover of the PDF edition.

Rewritten edition

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CHAPTER 1

A Number Where a Person Should Be

The letter arrived on a Monday, which Niko considered an unnecessarily coordinated attack.

It had a window through which his name appeared beneath the number 43.7. He assumed this was an outstanding balance until he opened the envelope and discovered that it was his contribution to civic life.

The Department of Surrender had begun a pilot programme called Common Measure. Selected residents would receive a provisional Living Value Score, calculated from participation, independence, economic activity, and demonstrated social connection. The score was intended to help allocate community resources fairly.

Below this explanation, in smaller print, it said that no judgment of personal worth was implied.

Niko read the number again. It was surprising how much judgment could be accomplished without implying any.

He put the letter beside a plate and made toast. The toaster had to be held down with the handle of a wooden spoon. He had meant to replace it for two years, but it remained possible to argue that it worked.

There was no scale on the letter. Forty-three point seven out of what? He turned it over. The reverse explained how to request the document in a larger font.

He had been awake for twenty-six hours with a gap of four in the middle. At the hotel, a guest had locked a passport in a safe and forgotten both the code and whether the passport was in it. The passport had been in his jacket. The safe remained Niko's fault.

Now the city had sent its assessment.

His daughter Mina had moved to a city upriver. He worked nights maintaining a hotel, took painting jobs when he could fit them around sleep, and had begun a small picture of Ada's grandson repairing a toy

van. The van in the picture had no wheels yet. This was not a statement about modernity. He had run out of yellow.

The phone rang while he was scraping the toast.

"Mr Bell? Municipal Facilities. We have a small commission. Your name came through the Citizens Hall project."

The woman introduced herself as Bea Vale. She needed someone to repair and repaint an exhibition room at the old Meridian Observatory. Six half-days, two thousand four hundred in total, materials supplied. Eight hundred on commencement and the balance after the agreed work was inspected.

Niko sat down. People who described payment before inspiration deserved to be heard.

"What exhibition?"

"The Mathematics of a Good Life. It's part of Common Measure. We have a review in four weeks. The building is being assessed for continued funding."

"And I do the walls?"

"Walls, display boards, some minor repairs. Nothing structural. We have a surveyor for that. We thought an artist who understands maintenance might make the material approachable."

She sent the contract while they spoke. Niko read it on his phone, enlarging every paragraph with fingers that still smelled of yesterday's drain.

The practical work was clear. One phrase was less so: assistance with public interpretation.

"Does that mean explaining the numbers?"

"It means making them friendly."

He accepted an appointment to inspect the room.

After the call he looked again at 43.7. His father had never owned a smartphone, had seldom joined anything, and had repaired the same neighbours' bicycles for twenty years. Presumably the Department would have had difficulty distinguishing him from a cupboard.

Niko took the letter downstairs. Ada was cleaning a small spill outside her door. She was due at the hospital laundry in forty minutes and had already done a significant quantity of unrecorded living.

"They've measured me," he said.

She glanced at the page. "Did they come inside?"

"It's based on available information."

"Then they missed the leak under your sink."

He had promised to repair it on Sunday. He had spent Sunday looking at reviews of replacement taps, then reviews of the people who reviewed the taps. By evening he had become unusually well informed about a job he had not done.

Ada returned the letter and carried the wet cloth indoors.

At the Department, a new display had been installed beside the queue numbers. It showed the city's Average Flourishing Index. This was rising. The queue was not moving.

The clerk sent him to Pemberton, whom Niko remembered from a dispute about a mural permit. Pemberton had found the missing form by looking in the drawer marked CURRENT, where nobody had expected anything current to be.

His office had changed departments without changing rooms. A silver watch lay on the desk. Above it, a ceiling stain spread towards a framed certificate for service improvement.

"Forty-three point seven," Niko said.

Pemberton closed his door.

"The pilot has some limitations."

"So do I. Mine don't arrive in envelopes."

The officer rubbed the bridge of his nose. His shirt collar was fraying on the side hidden by his tie. On his desk was a stack of appeals, each held together by a different arrangement of hope and staples.

"I want you to explain the universe," Niko said. "And love. And life. If you're putting numbers on them, I want to know where the numbers come from."

Pemberton considered the request.

"Have you eaten?"

"Mostly carbon."

The officer opened a drawer, found two wrapped biscuits, and pushed one across the desk.

Then he took three sheets from the printer.

CHAPTER 2

The Three Sheets

On the first sheet Pemberton wrote an equation Niko recognised from T-shirts belonging to people who had never repaired anything.

$$E_0 = mc^2$$

"Rest energy," he said. "An object's mass multiplied by the speed of light squared. The zero tells us we're talking about its energy at rest."

"So I was contributing on Sunday."

"You were resting. You don't need Einstein to defend it."

The officer began explaining that mass and energy were connected. Then he stopped. He looked towards a small encyclopaedia on the shelf, then back at Niko.

"I can give you the definition," he admitted. "For the rest, you should talk to Vera Dene. She teaches at the observatory."

Niko told him about the commission.

Pemberton moved the contract on the phone closer to his face. "Public interpretation. Yes. That will be her room."

"Does the equation tell us why there's a universe?"

"No."

"What does?"

The officer turned the paper over. Nothing was written there.

On the second sheet he wrote:

$$1 + 1 = 2$$

"Love."

"You said you weren't qualified for physics."

"I'm even less qualified for this. Consider it a proposal. Two people remain two people, including when they are fond of each other."

Niko thought of Mina. During her last visit he had rearranged the books in her bag to protect the corners. She had asked him not to. He

had explained his reasoning until the explanation became longer than the rearrangement.

He had later described the afternoon to himself as difficult.

Pemberton drew two dots with a line between them. "You can connect without merging."

"And what maintains the line?"

The officer wrote a second expression.

$$L \approx \Sigma c_i$$

"Imagine adding up acts of care. Listening. Showing up. Repairing what you damaged. That symbol means approximately, and the large one means a sum."

Niko studied it. "How many points for bringing soup?"

"There are no points."

"Then how do you add it?"

Pemberton looked at the expression for some time.

"Perhaps you don't. Perhaps I have put a useful reminder into a misleading shape."

This was a better answer than Niko had expected from the Department. He kept the sheet anyway.

On the third, Pemberton divided a day into work, rest, connection, and other things. If they counted each minute once, the total was twenty-four hours.

$$24 = W + R + C + O$$

"In hours," he added. "The letters are categories, not instructions. Some of your day is constrained by work and health and people who depend on you. This doesn't make those constraints disappear."

Niko liked that qualification. He had heard enough men with inherited houses explain that poverty was a scheduling error.

"You mentioned an art teacher when you came about the mural," Pemberton said. "Steven, was it? You spent half your appointment arguing with him. He wasn't here."

Steven had taught an evening painting class in a room above a betting shop. Once, in front of fourteen people, he had held up Niko's canvas

and said, "You have a useful eye. Unfortunately, you keep trying to make it an interesting one."

Niko could still remember the betting-shop lights through the window. He could not remember the name of the woman who had stayed afterwards to tell him she liked the picture.

"I don't think about him that much."

Pemberton said nothing. Niko adjusted his estimate.

The officer slid the three sheets together. "I can't explain the whole universe. I can help you ask which part of the problem you're actually holding."

Niko put the pages in his jacket. As he stood, he saw an unsealed envelope on the desk. Inside was a railway ticket and a birthday card addressed to someone called Ruth.

"Are you going somewhere?"

"Possibly."

Pemberton put a folder over the envelope. Niko recognised the gesture. It was how he stored invoices he intended to become emotionally ready to open.

Outside, he called Mina. She answered on the third ring, breathless from stairs.

"Have you got a minute?"

"A few."

He nearly told her about his score, the contract, and Einstein. Instead he asked about work.

"Fine," she said.

He waited.

Traffic passed. Somewhere on her end a door banged shut.

"Actually," she said, "can I come on Saturday? There's something I want to talk about."

He felt several possibilities arrive, none invited. His mouth prepared a question about whether she was all right.

"Of course," he said. "I'll make lunch."

She thanked him, and they talked about trains. After hanging up, he stood beside a shop selling phones and looked at his own dark reflection in the glass. The call had not resolved anything. He felt the unfamiliar strain of having left room for it to continue.

CHAPTER 3

Witnesses

The Meridian Observatory had been built above a public bathhouse by a mayor who liked both progress and opening ceremonies. The baths had closed, the dome had jammed, and the ground floor had become a classroom where the city stored activities too small to have departments of their own.

At the entrance stood a sandwich board advertising BASIC NUMBERS, THURSDAY EVENINGS. Someone had added BRING THE ONES YOU ARE AFRAID OF.

Vera Dene was kneeling beside a cupboard with a screwdriver between her teeth. She was in her sixties, with grey hair tied in a knot and a cardigan worn shiny at the elbows. She removed the screwdriver when Niko introduced himself.

"Can you hold this door?"

He held it. She removed a screw that had been doing almost none of the work assigned to it.

They carried the door to a table. Only then did she ask about the commission.

"You're the friendly numbers man."

"I'm primarily a paint man."

"Good. Numbers have enough friends. They need witnesses."

The classroom contained mismatched chairs, a chalkboard, a kettle, and a telescope on a wheeled stand. A faded mural showed the planets travelling on tracks that made the solar system look like a municipal transport scheme. There was a notice asking visitors not to touch the eyepiece with jam.

Niko inspected the walls, sockets, skirting boards and ceiling. He marked a loose fitting for the electrician and a crack for the surveyor. Vera watched without interrupting.

"Most people start by saying it's a lovely old building," she said.

"It may be. That crack still wants someone qualified."

She seemed relieved.

On a table lay the Common Measure report. The centre's Utilisation Score was 41.8. Its minimum renewal target was 60. The assessment would be presented at a public meeting in twenty-four days.

"Can you fix it?" he asked.

"The score or the building?"

"Both, ideally."

"I can show you what I know."

She opened a register. On Thursdays, between eight and twenty people came for help with bills, recipes, homework, and forms. A retired bus mechanic called Leon taught children how gears worked. On alternate Saturdays, weather permitting, they took the portable telescope into the yard. Other groups used the room: carers, two language classes, a small choir whose members disagreed about nearly everything except the first note.

Niko looked at the report again. "They've counted the chair capacity for every evening."

"Yes."

"But you're open three evenings."

"Yes."

"That's wrong."

"It may be measuring availability of the building rather than attendance during our hours. Those are different questions. I have asked which question they intended."

She handed him a copy of her email. It was courteous, specific, and unanswered.

Niko was beginning to like her, but he wanted an easier enemy.

"Why not say they're cheating?"

"Because I don't know that. If I guess their motive incorrectly, they can argue about my guess instead of answering my question."

She wrote on the board:

ratio = counted amount / comparison amount

"A fraction has two responsibilities," she said. "People tend to inspect only the one on top."

Bea Vale arrived carrying paint samples and a folder. She was younger than Niko expected, wearing trainers with a suit because the building had stairs she did not trust.

She listened while he described the work. They agreed that the loose fitting would wait for the electrician and the crack was outside his scope. She approved a warm white for the walls and a dark blue for the boards. Then she led him through a side passage to a gate that dragged on the paving.

Beyond it was an eight-by-six-metre yard. Two wheelie bins occupied the best position. A chestnut tree leaned over the wall, shedding the last of its dry flower stalks. Someone had left a chair upside down in the corner.

"Can this be used?" Niko asked.

"The building team is looking at the gate and drainage. We used to hold sessions out here."

"I could do something with that wall."

Bea looked at the wall, then at his contract. "Bring me a proposal before you do anything with it."

He heard possibility. She tapped the contract again.

"The fee is for the work we've listed."

"I heard you."

"People usually do. Then I find a fountain."

"We want visitors to feel they belong," she said.

Vera looked at the renewal threshold in her folder. "So do we."

Bea heard the point. She did not pretend she hadn't.

"I have six buildings requesting more money than we have," she said. "If this stays open, something else will have fewer hours. I need more than affection for this room."

When she left, Niko opened his tool bag. Vera put the kettle on. They had both expected to feel united by disliking her, and neither had quite managed it.

On the way out, he turned the abandoned chair upright. One of its rubber feet was missing. He put a folded scrap of cardboard beneath it and sat for a moment.

From here he could hear a woman practising English in the classroom. She was repeating the sentence I would like to make an appointment. Each time, a different word received the force of her determination.

Above him, the old dome gave a short metallic knock as the afternoon warmed its panels.

"Is that normal?" Niko asked.

"It's familiar," Vera said. "I'm trying to stop confusing those words."