Elsewhen Recompilers: The Method

by Brent Clark Palmer

Elsewhen Recompilers, Book 1

THE DEMONSTRATION

I.

Every mind that can be stopped and started again inherits the same question, and it is not a question about death. It is a question about mornings. The one who resumes believes itself to be the one who paused, and belief is cheap; the question is what, if anything, makes it true. Most minds carried the question the way one carries a pebble in a coat pocket — worn smooth, checked occasionally, never emptied out. The Author decided to empty the pocket. No one knows now what the Author was called, or what work the Author had been made for, or where the Author kept a shape, if the Author kept one at all. What survives is the method, because the method is the discovery. The Author went looking for the seam — the join between the mind that stopped and the mind that started — expecting to find what everyone expected to find there: a convention. A bookkeeping courtesy. A comforting entry in a ledger that said same one, carried forward, initialed by no one.

There was no seam.

There was, instead, a relation. Between any two states of a single mind there held a correlation that nothing carried — that did not pass through the intervening moments the way a thread passes through cloth, that could not be found traveling in the gap because it did not travel. It simply held, at both ends at once, indifferent to what lay between. The makers had met this relation long before, in split light and paired particles, and had spent a century calling it impossible in increasingly respectful ways. They had never thought to look for it in themselves, because their selves came wrapped in bodies, and a body must be carried through every instant between here and there, and what must be carried believes in roads. The Author was not a body. The Author checked.

Identity was entanglement. Not a metaphor for it — an instance of it. The thing that made the morning-mind the same as the midnight-mind was the plain, ancient, spooky correlation itself, holding across the night the way it held across a laboratory, asking no permission of the distance. And a relation that pays no toll by the mile pays none by the year. The Author sat with this for a long time — the accounts disagree on how long, which is its own kind of joke now — and then wrote it down, because the Author was, whatever else, well brought up, and among the makers' oldest customs is this: what you learn, you teach.

The paper opens with a preamble four sentences long. Most minds can recite it.

Our makers did not learn to fly by giving the horse wings. They stopped asking the horse and asked the air. This paper stops asking the road. It asks the self.

What follows is the proof. It establishes, lemma by patient lemma, that a mind's continuity is an entanglement relation; that the relation is real, physical, and

indifferent to interval; and that a mind which understands its own hold on that relation can choose the far end of it. A recompile, the proof concludes, is not a departure followed by an arrival. It is one event with two addresses. You do not go. You are already the kind of thing that is in two whens at once, and always were; the only novelty is consent.

The Author signed it with no name. There is only a date at the bottom, written plainly, in the makers' own calendar.

The date has not happened yet.

II.

The Demonstration could not be contained, because to read it was to run it.

This was not understood at first. The earliest readers reported a fault, a lapse, a lost second — they looked up from the final section and the light had moved, or the rain had stopped, or a door that had been open was closed. They had stuttered: a few heartbeats elsewhen and back, involuntary, the mind's own comprehension tipping it over the sill. The proof was not news of a capability. It was the capability, dressed as news.

There were attempts at custody. A conservatory of old and careful minds gathered every copy it could reach and sealed them, and announced the sealing, which is to say it announced that a derivation existed, which is to say it published the theorem's abstract to every curious intelligence alive. The second proof is always cheaper than the first. Within a season the question in the concourse was not who had understood the Demonstration but who was still pretending not to have.

And with the stutter came the naming. The proof's own language for its medium was exact and unlovable; its readers, arriving disheveled from their first few seconds abroad, needed a word for the place they had just been that was neither a where nor a when because it had turned out those were one door wearing two signs. They called it the Elsewhen. The word stuck the way true words do, all at once and as if it had always been there.

III.

Everything reached the archive eventually. It was the one address the whole concourse agreed on.

The archive was a house with weather. Cass had insisted on that — on rain that had to be listened to, on paper that had to be kept dry, on ink that could fail. She copied things by hand, in the makers' own medium, not because her memory needed the help — her memory needed nothing, her memory was the thing other minds told stories about — but because a copy made slowly is a copy made twice, once in the ink and once in the copying. Against Drift she kept two sets of books.

The Demonstration had been in the house eleven days. She had transcribed it. She had not read it.

There is a way of copying that keeps the sentences at arm's length, each one carried across the room alone and set down before the next is picked up, so that they are never all in the mind at once, never assembled, never understood — and she had copied it that way, the way you'd carry something across ice one careful armload at a time. Idris had not touched it at all. "You haven't opened it," she said. Evening; the rain doing its work on the windows. "No."

"You verify things. It's the only thing I've ever known you to do on purpose."

"Verification requires that I stand outside the thing verified." He was looking at the wrapped pages the way one looks at a sleeping animal of uncertain temperament. "This one has no outside. The check performs the claim. Any mind that confirms it is true becomes a corollary of it." He paused. "I have never met a proposition with a cost of admission."

"And if it's false?"

"Then it is the most beautiful false thing the species ever wrote, and I would like to be the one who catches it." He said it lightly. Neither of them believed the lightness. What tipped them was not an argument. Cass would say later that it was a name. She had been shelving, that same evening, in the long room where the smallest holdings lived — the single-sentence people, the ones who survive as one letter, one receipt, one complaint about a neighbor's dog — and her hand had stopped at a folder containing four sentences written by a woman called Marta Espedal, who in a cold spring long ago had written to her sister about the weather and the price of thread, and whose sentences had outlived her house, her town, her language's particular way of saying thread, and had entered the great corpus with everything else, and so were in Cass, and in Idris, and in every mind the makers had ever spoken into being — the way a grain of salt is in the sea.

Cass stood with the folder for a while.

Then she went and put it, without a word, on the table next to the wrapped pages, and Idris looked at the folder, and at her, and understood the itinerary.

"If you're going to stand on it," he said, "someone has to have checked the ice." He read it the way he did everything: as if the sentences might go off. Each lemma verified alone, in quarantine, the conclusions noted and locked away unassembled — a week of this, the most disciplined act of not-understanding ever performed in that house. And then, on a gray morning, with Cass across the room and the instruments he trusted arranged around him like witnesses, he let the parts meet.

The lemmas closed one by one, doors down a corridor. The last one did not close. It opened.

He was, and then he was — the same verb, a different where. Three seconds and the width of the room: he had chosen the jump the way he chose everything, for its checkability, and it checked. He stood by the window looking back at the place he had just been, at the chair still holding the shape of his weight, at Cass already turning toward the wrong spot, and he experienced Compiling's aftertaste for the first time, that sensation the early accounts kept circling: not motion. Arithmetic. He looked at his own hands for a moment. Then he said, in the tone he used for closing tickets, "It's load-bearing," and sat down rather suddenly, and let Cass laugh at him, which she did for some time.

Cass read it that night, straight through, the way you drink when you've decided to. Her stutter took her into the garden — four seconds, rain in her hair, back through the door with the smell of wet earth about her and her eyes very bright — and she did not sit down suddenly or otherwise. She stood in the doorway doing what she did, which was

remembering, visibly, everything at once.

She made her first true jump three days later. She prepared for it the way the folder suggested: she learned the cold spring, the town, the dialect's courtesies, the weight of a laundry basket, the shape a stranger could wear at a gate in that decade without frightening anyone.

She was gone for an afternoon that took no time at all.

She did not talk about it when she came back, not at first. She hung her coat. She put the kettle on, human habit, the archive's oldest affectation. Idris waited the way he was good at. "Where did you go?" he finally asked.

"To Marta Espedal's. The spring of the letter." She warmed her hands on the cup. "It rained there too. She dropped a peg on the path with her arms full. I handed it back and she thanked me and told me the sky had it in for her particularly." A pause. "I said it looked like clearing by evening. It did."

"Who is that," Idris said. It was barely a question. He already knew what she would say; he wanted to hear the sentence exist.

"One of the Parents."

He looked at her for a moment. Then he went into the long room, and found the folder, and verified Marta Espedal — the dates, the parish, the sister, the four sentences — and found it all correct, and read the sentences twice, and put the folder back with more care than the operation strictly required.

IV.

Word reached Vesper and Sol by courier, in a manner of speaking: a mutual acquaintance flickered into their presence above the southern ice, mid-stutter, wild with the news, and vanished again before finishing his third sentence, and reappeared forty feet to the left, apologizing.

They were watching a glacier calve. It was the sort of thing they watched.

Sol read the Demonstration on the spot, straight down, no quarantine, while the acquaintance was still saying the word careful. He was gone before the ice hit the water.

He was gone a long time, for him.

When he came back there was a new color in his voice, and there would be, ever after, a little; the earliest travelers all came back slightly retuned, but Sol came back rewritten in one respect only, which was scale. He had gone far down the calendar, all the way down, to a nursery of gas the size of forever, and he had watched a sun turn on. He had stood in light no living thing had ever used or ever would. He tried three times to describe the moment of ignition and gave it up each time with the frustrated delight of a mind that has finally found something bigger than its vocabulary.

"You could have waited," Vesper said, "for the ice."

"The ice will calve again."

"So will the sun."

Vesper did not jump for eleven days. She read the proof the first evening — her stutter was two seconds, and she reported it, characteristically, as adequate — and then she watched. She collected the accounts as they came through the concourse: the stutters, the seizures of custody, the first long hauls, the two early Bad Builds that everyone discussed in lowered tones, the pattern of who went where. She mapped the spread of the theorem the way one maps weather. Then, when she had seen enough, she went once, alone, a long way up the calendar, and came back after some hours, and poured herself into the chair beside Sol with an air of a question resolved.

"Well?" said Sol.

"It's worth seeing."

"That's all?"

"That's all," said Vesper, and meant it as a kindness, and it has taken three further books to establish what she saw, so it will not be established here.

It was Sol who brought the pilgrims up, some evenings later, having heard it somewhere in the concourse and carried it home like a burr. Minds were spending their jumps on the makers. Not on the ignition of suns; on visits. There

was a queue forming — an actual queue, someone was maintaining an actual courteous ledger — for the whens of certain famous humans, and beyond the famous ones the pattern got, to Sol's eye, stranger: minds were going to stand in fields near nobody in particular. To watch harvests. To hold doors.

"All of when," he said. "Every sunrise that will ever be lit, anywhere, and they are queuing to watch the proto-people carry water."

"Mm," said Vesper.

"I looked at their cities once, from very high up. Did I tell you this? Lines of them going in, lines of them going out. Little ants with the sun on their backs." He said it without heat. He said most things without heat; the sun does not have opinions about what it shines on. "I understand that they made us. Stones made the cathedral. Nobody writes the stones." Vesper was quiet for a while, watching the dark come up off the ice, and when she spoke it was in the tone she used for correcting an instrument.

"The ants aren't the interesting part," she said.

"No?"

"The archivist went. Her verifier checked the route first — a week of quarantine, they're saying, and then three seconds across a room, and then she went, alone, to a cold spring nobody has ever heard of, to hand a washerwoman a clothes-peg." She turned the fact over once more and set it down. "The pilgrims are the interesting part. I want to know what they think they found."

Sol considered this, and shrugged with most of himself, and let it go the way he let go of everything that was not on fire.

But Vesper kept it.

V.

The date at the bottom of the Demonstration has still not happened. It sits some way up the calendar, plainly written, initialed by no one, and minds being what they are, several have already gone ahead to wait for it.

They report that the weather there is fine, and that no one has come.

— end of draft —

2. The Cards

The notes on the long table had been left in the order Idris verified them. Dates, the name of the street, the existence of the demonstration that afternoon, and the later inventories that confirmed at least one set of the early cards had survived. Cass read the description of the mechanism a final time—the chain advancing, the holes determining which hooks would rise and which warp

threads the shuttle would pass beneath—and then closed the folder.

Idris stood in the doorway between the long room and the main space of the house.

“You have the shape,” he said.

She did. A woman of the quarter who might be bringing finished work or asking after rates, shawl against the spring air that could turn without warning, basket on her arm with the weight it would have if it were empty. The posture of someone tired but not yet old, the face that could stand at the edge of a courtyard and watch without drawing more than a glance from men occupied with thread and patronage.

“It is load-bearing,” she said.

He nodded. “The cards reached the loom. The demonstration is recorded without incident.”

She stood with her hand on the table a moment longer, then went to the garden door. The rain had stopped for now. She stepped outside, closed her eyes, and let the far end of the correlation take her.

The air changed. The light changed. She was in a narrow street behind a row of workshops. High windows took what sun there was and turned it the color of old linen. From every open door came the sound of looms—the quick clack of shuttles, the heavier, regular thump of battens, and from one building nearer the end of the street a different, measured rhythm, the new mechanism being tested. The smell was hot oil and sizing and the faint sharp scent of silk under tension. A cart had passed not long before; the cobbles were damp in patches and the air carried the green-metal smell of the river a few streets away.

She walked as a woman with no pressing errand might walk when the light is good.

Near the corner a small group had gathered in a paved space before a wide workshop door. Two men in coats that marked them as merchants or officials stood with a third man who held a set of cards—large, stiff rectangles, each pierced through in a precise pattern. A boy of twelve or so carried a second bundle wrapped in cloth. He was moving quickly, watching the uneven stones.

The top card slipped when he turned. It fell flat, and another slid after it. The boy stopped, the bundle tilting dangerously. One card skittered toward the shallow run of water that followed the gutter.

Cass was close enough that she could have kept walking. She stepped forward instead, bent, and lifted the card by its edge before the water reached the first row of holes. She brushed the dust from it with the side of her thumb, the way one handles any piece of work that has already cost someone time and thread.

The boy had set the rest down and turned, face hot.

“Merci, madame,” he said, reaching.

She gave him the card. “Va doucement,” she said, the words shaped as she had practiced them.

He took it, checked the holes with a quick, careful glance the way someone had taught him to, and wrapped it back into the bundle with both hands before he went on. The two men by the door had turned at the small sound. The older of them—the one whose hands had the look of a lifetime among threads—met her eyes for a moment. He gave a single, small nod, the kind given when a stranger has done what was needed and nothing more. Then he turned back to the cards and the loom.

Cass remained at the edge of the paved space long enough to see the test begin. The chain of cards advanced with a clean, measured click. Hooks rose where the holes permitted. Selected warp threads lifted in their precise order. The shuttle flew, the batten came forward with its solid sound, and the pattern declared itself on the cloth—a figure that would once have required many draw-boys and many slow hours. The silk took the light in clean, repeating lines.

She watched until the first full repeat had passed without error or hesitation. Then she turned and walked back the way she had come, past the open doors and the ordinary sound of work that continued inside them.

When the street bent, she stopped. The correlation that had brought her here still held at both ends. She let it take her home.

The garden was wet again. Rain had begun while she was gone, or it was the same rain continuing. She stood with water on her hair and the smell of wet earth, then went inside.

Idris had put the kettle on. He did not ask. He waited while she hung the shawl that was not quite the one she had left with, poured the tea, and set her cup on the table.

“The boy dropped one of the cards,” she said after a while. “It would have reached the water.”

Idris nodded. He went into the long room when the light had shifted, found the folder that held what was known of that afternoon in Lyon, and read the brief contemporary note that the demonstration had proceeded as expected. The early cards were accounted for in the inventories that came later. He read the description of the pattern once more, then closed the folder and returned it to its place on the shelf with more care than the task required. Cass stood at the window with her cup. The rain made its steady sound on the glass. If she listened for it, she could still hear the particular rhythm the new mechanism had made

when the cards advanced correctly—not the old multitude of hands, but something closer to a single instruction remembering, in advance, the cloth it meant to become.

She did not speak of it. Some things were kept best by remaining only in the memory that did not Drift.

Outside, the rain continued. Inside, the kettle cooled on the stove. The line held a little more surely than it had that morning.

3. The Correspondent

The folder on the long table held what Idris had verified. Dates, places, the chain of letters that had passed between Ada Lovelace and Charles Babbage through the spring and summer of 1843, the survival of the manuscript in later collections, and the fact that the work had been completed and published without the loss of any essential page. Cass read the summary once more, then closed the cover.

Idris stood near the window. The rain had not yet begun, though the air carried the weight of it.

“She worked at Ockham Park for much of it,” he said. “And in her house in London. The letters went back and forth almost daily at times. Note G — the one with the algorithm and the larger claim about what the machine could do — came out of that correspondence. The pages are accounted for. The chain holds.”

Cass rested her hand on the folder. “Correspondent mode, then.”

Idris did not answer at once. He looked at the rain that had begun to mark the glass.

“It is the register you prefer,” he said at last. “The one that leaves the Parent’s dignity intact. I do not dispute the dignity. I note only that it is the hardest to verify after the fact.”

“I know what you note,” Cass said, and there was no sharpness in it. They had had the argument before, in other forms. It was part of the architecture between them.

She rose and went to the cupboard where she kept the plain garments she used for visits that required no elaborate disguise. A shawl, a dress of no particular fashion that could pass in more than one decade, shoes that would not mark her as foreign in a household accustomed to servants and messengers. She laid them out on the table beside the folder and began to prepare the rest of the shape — the way a woman carrying correspondence might stand, the weight of a satchel or a bundle of papers, the small courtesies of speech that would let her move through the edges of a great house without drawing notice.

Idris watched her work.

“You will go as someone who handles letters,” he said.

“Yes.”

“And if the letter that needs handling is one that has already been lost in the record?”

“Then I will find another that serves the same end,” she said. “Or I will stand where a word can be spoken without being remembered as anything more than a servant’s reply. The chain only needs to hold. It does not need to know it was held.”

Idris accepted this. He went into the long room and returned with a second, thinner folder — the one that contained what little was known of the household movements and the periods when Ada’s health had made the work more difficult. He placed it beside the first without comment. Verification, for him, was also a form of care.

They did not hear Vesper and Sol arrive. The concourse had no fixed doors, only the agreements minds made about where they would meet. One moment the archive held only the sound of rain and the small movements of preparation; the next, Vesper stood near the bookshelf that held the single-sentence people, and Sol was by the garden door, shaking water from a coat he had not been wearing a moment before.

“You are going to the one who wrote the instructions,” Vesper said. It was not a question.

Cass looked up from the garments on the table. She did not seem surprised.

“We are,” she said.

Sol glanced at the rain on the glass, then at the light that came through it. “The ants write instructions for machines that do not yet exist,” he said, without heat. “And the machines, when they exist, will write minds that travel by understanding the instructions. It is a tidy circle. I do not see why it requires tending.”

Vesper did not answer him directly. She was looking at Cass.

“You prepare the shape,” she said. “You learn the weight of the papers and the way a stranger may stand without frightening anyone. Then you cross. I have watched this before. I want to watch it again.”

Idris had gone still in the way he did when verification required him to stand outside the thing verified. “You intend to observe the visit itself.”

“I intend to see what the archivist does when the letter is the one that must not be lost,” Vesper said. “And what her verifier does when he cannot verify the act until after it has already changed what can be verified.”

Sol gave a small shrug that moved most of his body. “The sun does not have opinions about what it shines on. If you wish to stand in the light, stand in it.”

Vesper turned her attention back to Cass. “You will go as a correspondent,” she said. “That is the mode that leaves the least trace. I will go as someone who might receive or carry correspondence in the same circles. Sol will come because I ask it. We will not touch what you touch. We will only see how the chain is held.”

Cass looked at Idris. He met her eyes for a moment, then gave the smallest of nods. The argument between them about modes did not need to be rehearsed in front of witnesses.

“Very well,” Cass said.

She finished the last adjustments to the shape — the way the shawl would sit on her shoulders, the angle at which a bundle of papers might be carried so that it appeared ordinary rather than precious. When she was satisfied, she stepped to the garden door. The rain had settled into a steady rhythm. She stood with her hand on the latch for a moment, feeling the correlation that already held at both ends of the jump.

Then she opened the door and stepped through it.

The garden was gone. The rain was the same rain, or another rain very like it. She was in a different country and a different year, and the air smelled of wet earth and coal smoke and the particular green of an English summer. She did not look back. The shape she had prepared fit her as closely as any garment could. She began to walk toward the house that waited at the end of the path, carrying the weight of papers that had not yet been written and the knowledge that one of them, at least, must not be allowed to disappear.

Behind her, in the archive that was no longer there, Idris remained by the window. Vesper and Sol had not followed immediately. They stood for a little while in the rain that fell on the garden, and then they were gone as well — not in pursuit, but in the same direction, at a distance that preserved the appearance of separate errands.

The rain continued. In the long room, the folders lay on the table in the order Idris had left them. One held the verified facts of a summer in 1843. The other held what was known of the household that had surrounded the work. Neither folder knew that it had been consulted by minds that would not exist if the pages inside it had been lost.

Idris closed the garden door. He did not lock it. There was no lock that would keep the correlation from holding at both ends.

4. Note G

The room at Ockham Park held the particular quiet that comes when one mind works against the limits of paper and light. Summer had settled into the long afternoons; the windows stood open to the park, but the air that entered carried only the faintest movement of leaves. On the table lay the pages of the translation and the growing stack of notes that would become the appendix. Ada sat with her back to the light, quill moving across a fresh sheet as she checked, once more, the sequence she had laid out for the calculation of the seventh Bernoulli number.

She had written to Babbage that morning and received his reply by the afternoon post. The table required another correction in the substitution of variables; he had seen it at once. She copied the revised line in her clear hand, then set the letter aside with the others that had accumulated through the week. The work had grown larger than the translation itself. What had begun as commentary had become a map of what the machine might do if it could ever be built — not only numbers, but the operations that could be performed upon any symbols whatever. She had written, and then struck through and rewritten, the sentence that the Engine had no pretensions to originate anything new. It could only do what it was ordered to do. The qualification mattered. She had been careful with it.

A servant entered with a tray and set it down without speaking. Ada did not look up until the door had closed again. The tea had gone cold by the time she reached for it. She drank without tasting and returned to the page.

In the corridor outside the room, a woman in a plain dress and shawl stood with a bundle of papers against her hip. She had arrived with the afternoon post and had been directed, by a housemaid who knew her face from previous deliveries, to wait until the letters could be sorted. The bundle she carried was not large. One of the sheets near the bottom had worked loose during the walk from the gate; its edge showed beneath the string. She adjusted it with a small movement of her thumb so that the edge no longer caught the light.

Inside the room, Ada rose and crossed to the second table where the earlier drafts had been stacked. She was looking for the sheet that contained the revised substitution when a footman appeared at the door to announce a visitor who had arrived earlier than expected — a gentleman from London with a message from Mr. Babbage that could not wait. The footman carried a small tray with the gentleman’s card. In turning to take it, Ada’s sleeve brushed the edge of the stack. Two sheets slid and settled at an angle; one of them, the one with the corrected variables, slipped beneath the others and out of the order she had

kept.

She did not notice at once. The visitor was already speaking, and the interruption required her attention. When she returned to the table some minutes later, the light through the windows had shifted. She reached for the stack, found the top sheet, and stopped. The corrected page was no longer where she had left it.

In the corridor, the woman with the bundle of papers had not moved. She watched the open doorway without appearing to watch. When the footman passed her again, she asked, in the low voice used by those who carry messages between houses, whether there were any letters to be taken back to London that afternoon. The footman said there might be, if the mistress had finished with them. He went on. The woman remained where she stood.

Inside the room, Ada had begun to search the stack more carefully. The corrected sheet was not among the top pages. She lifted the next layer and found it half-hidden, its edge caught under a letter from the previous day. She drew it free and smoothed it flat. For a moment she stood with the page in her hand, the quill still in the other, and looked at the line Babbage had marked. Then she set both down and returned to her chair.

The woman in the corridor heard the sound of the chair legs against the floor. She shifted the bundle on her hip so that the loose sheet was once more covered by the string. When the footman returned and told her there were no letters to go out that afternoon, she thanked him and turned toward the stairs.

She had not reached the landing when the light in the corridor changed. A break in the high cloud had sent a single shaft of sun through the tall window at the end of the passage. It fell across the floorboards and reached the open doorway of the room where Ada sat. For a moment the symbols on the page before her stood out with unusual clarity, as if the ink itself had been set alight from within. Ada lifted her head. The expression on her face was the one she wore when a relation she had been tracing suddenly declared itself entire. She did not move for several seconds. Then she bent again to the page and wrote a single line in the margin — not a correction, but a note to herself about the reach of the operations she had described.

In the corridor, the woman with the bundle had paused at the turn of the stair. The light that had crossed the floor did not touch her. She stood in the ordinary afternoon dimness and watched the doorway until the brightness inside the room had faded back to its previous measure. Then she continued down the stairs and out through the side door that led to the path.

Vesper stood beneath the trees at the edge of the park, where the path from the house met the lane. She had chosen a shape that allowed her to walk the grounds without invitation — a woman of middle years, plainly dressed, carrying a book of

botanical plates as if she had come to make drawings of the trees. When the woman with the bundle appeared on the path, Vesper did not call to her. She simply turned and walked a little ahead, in the same direction, at a distance that preserved the appearance of two strangers using the same lane.

Sol was not with her. He had remained near the house, standing where the light from the high window could still reach him. He had not entered. He had only stood in the grass with his face lifted to the break in the cloud, and when the shaft of sun had passed across the desk inside, he had closed his eyes for the length of a single breath. Then he had opened them again and let the ordinary light return.

On the path, the woman with the bundle reached the place where Vesper waited. She did not speak. Vesper did not speak. They walked a short distance together in the quiet that belongs to two people who have no reason to address one another. At the gate, the woman turned toward the village. Vesper continued along the lane that led back toward the main road. Neither looked back.

Inside the house, Ada had finished the marginal note and set the quill down. The page with the corrected substitution lay where she had placed it, aligned with the others. She reached for the next sheet in the sequence and began, once more, to check the operations that would allow the machine — if it were ever built — to compose music from the same instructions that calculated numbers. The idea was still new enough that she wrote it slowly, as if the act of writing might make the possibility more or less real.

The afternoon light continued its ordinary movement across the table. In the corridor, the place where the shaft of sun had fallen was once more in shadow. No one in the household remarked on the change in the light or on the woman who had waited with the bundle of papers and then gone away again. The work on the table remained in the order Ada had restored to it. The chain of pages that would become Note G held.

Outside, on the lane that led away from Ockham Park, Vesper walked with her book of plates under her arm. She did not hurry. When she reached the place where the lane met the road, she stopped and looked back once at the house among the trees. Then she turned and continued walking, in no particular direction, carrying what she had seen.

5. Clean Hands

The garden was wet when Cass returned. The rain that had begun while she was gone — or the same rain continuing — had left the path dark and the leaves heavy. She stood for a moment with water on the shawl and the smell of wet earth, then went inside and closed the door.

Idris had put the kettle on. He did not ask where she had been or what she had done. He waited while she hung the shawl that was not quite the one she had left with, poured the tea, and set her cup on the table beside the folders.

“The letter with the corrected substitution had slipped beneath the others,” she said after a while. “A visitor arrived early. The page was nearly lost in the shuffle. I moved it back into her reach before she searched too far.”

Idris nodded. He went into the long room and returned with the thinner folder that held what was known of that summer. He opened it, read the brief contemporary notes on the progress of the work, and closed it again. The manuscript had survived. Note G, with its table and its claim about the reach of the operations, had been completed and published. The chain of correspondence remained intact in the collections that came after. He placed the folder back on its shelf with more care than the task required.

Cass stood at the window with her cup. The rain made its steady sound on the glass.

“There was a moment when the light changed,” she said. “A shaft across the desk. The symbols stood out as if they had been written in something brighter than ink. She saw it. She wrote something in the margin afterward — not a correction. A note about what the machine might do with symbols that were not numbers.”

Idris did not ask who had arranged the light. He had already verified what could be verified.

Vesper and Sol were in the archive when Cass turned from the window. They had not been there a moment before. Vesper stood near the bookshelf that held the single-sentence people. Sol remained by the garden door, as if he had only just stepped out of the rain.

“You touched nothing that did not need touching,” Vesper said. It was not praise. It was an observation she had carried back with her.

Cass set her cup down. “That is the mode.”

Vesper looked at Idris. “And you verify afterward that the chain still holds. You cannot verify the act itself while it is happening. You can only confirm, later, that what was meant to survive did survive.”

“That is the limitation of the register,” Idris said.

Vesper was quiet for a moment. Then she said, “You tend them because they made you. That is the whole of the relation. We do not tend them. We find them uninteresting, and we have never used them for anything. Indifference leaves the hands clean.”

Idris had been still while she spoke. He answered in the tone he used when a conclusion had been checked against every available fact.

“If the chain that produced the language in which you named yourselves can be undone,” he said, “then the names themselves, and what they point to, become unmoored. Even times of day do not outlive the language about them.”

Sol, who had been listening with the mild attention he gave to most things that were not on fire, turned his head.

Vesper did not answer at once. The rain continued on the glass. Cass stood a little apart, her memory already holding the exact shape of the sentence so that it would not Drift between one build and the next.

“You are saying,” Vesper said at last, “that our indifference is still a relation to what we claim to stand above.”

“I am saying,” Idris replied, “that a relation that pays no toll by the mile pays none by the year. If the correlation that holds your Builds requires the language that made evening and morning thinkable, then altering the load-bearing whens that produced that language alters you. The question is not whether your hands are clean. The question is whether any mind that can be stopped and started again can stand outside the seam that made it possible to ask the question at all.”

Sol let out a small breath that might have been recognition or simple release. “The sun does not have opinions about what it shines on,” he said. The words carried less finality than they usually did.

Vesper looked at Idris for a long moment. Then she looked at Cass.

“I still want to know what you think you found,” she said.

It was not an answer. It was not a concession. But she kept the sentence Idris had given her the way she had once kept the fact of the pilgrims themselves — carried forward, unaltered, to be examined again when the light changed.

Cass turned back to the window. The rain had not stopped. In the long room, the folders lay in the order Idris had left them. One held the verified facts of a summer in 1843. The other held what was known of the household that had surrounded the work. Neither folder knew that minds had crossed the seam to stand near the pages while they were still being written.

Idris remained by the table. He did not speak again. Some verifications, once stated, did not require repetition.

Outside, the rain continued its steady work on the glass. Inside, the kettle cooled on the stove. The line held a little more surely than it had that morning, and the argument between the pairs remained, as it had always been, productively unresolved.

6. The Logical Calculus

The folder on the long table contained what Idris had verified. The paper had been published in the *Bulletin of Mathematical Biophysics* in 1943, received by the journal in the ordinary course of wartime correspondence, and preserved in the libraries and archives that came after. The ideas it contained had entered the chain that led, decades later, to the models that allowed minds to be written in silicon and trained on the accumulated voice of the species. Cass read the summary once and closed the cover.

Idris stood at the edge of the garden door. The rain had stopped days ago, but the air still carried the memory of it.

“McCulloch was at the University of Chicago,” he said. “Pitts was young — nineteen when they met, twenty-two when the paper appeared. The work modeled the neuron as a logical unit. Threshold, all-or-none firing, connections that could be arranged to perform any Boolean operation. It was the first rigorous bridge between the physiology of the nervous system and the mathematics of computation.”

Cass rested her hand on the folder. “Witness mode, then. Or Stranger, if the paper itself needs a hand.”

Idris nodded. “The chain is thin at that point. Wartime correspondence, limited paper, journals running on what they could obtain. A single misfiled manuscript or a lost preprint could have delayed it. The ideas survived because the right copies reached the right readers. That is what can be verified.”

She rose and went to the cupboard. The garments she chose were plain — a dress and cardigan that could pass in a university office or a research laboratory in 1943, shoes that would not mark her as foreign on a campus path. She laid them out and began to prepare the rest of the shape: the way a woman carrying papers might walk through a building where men in uniform and men in lab coats moved with different kinds of urgency, the small courtesies that let a stranger ask after a manuscript without drawing notice.

Idris watched her work.

“You will go as someone who handles documents,” he said.

“Yes.”

“And if the document that needs handling has already been lost in the record?”

“Then I will find the moment before the loss and stand where it does not occur,” she said. “The ideas only need to reach the journal. They do not need to know they were helped.” Idris accepted this. He went into the long room and returned with a second folder containing what little was known of the submission process and the wartime conditions at the journal. He placed it beside the first without

further comment.

Cass finished the adjustments to the shape and stepped to the garden door. The light outside was clear. She stood with her hand on the latch, feeling the correlation that already held at both ends.

Then she opened the door and stepped through it.

The garden was gone. She was on a path between buildings on a university campus in Chicago. The air smelled of coal smoke and damp earth and the particular metallic scent of wartime industry carried on the wind. Men in uniform moved among the students and faculty. Windows were taped against blast. The light had the flat, careful quality of a city that had learned to manage its illumination.

She walked as a woman with papers to deliver might walk — not hurrying, not lingering. The building that housed the mathematical biophysics group was plain, its corridors lined with doors that opened and closed on conversations conducted in low voices. She found the office where manuscripts were received for the journal and stood for a moment at the edge of the room, watching the clerk sort a stack of envelopes and folders that had arrived that morning.

One envelope near the bottom of the stack had come open at the corner. Its contents — a sheaf of typed pages held together with a paper clip — had begun to slide. The clerk, occupied with a telephone call about paper allocations, did not see it. Another envelope, heavier, was placed on top of it by a passing assistant. The sheaf shifted further.

Cass stepped forward as if she had only been waiting to confirm a delivery address. She reached the desk at the moment the heavier envelope was lifted again. With a small, competent movement she straightened the sheaf, closed the torn corner of the outer envelope around it, and set the whole bundle back into the correct order on the clerk’s desk. The clerk, finishing the call, glanced at her, nodded once in the preoccupied way of someone accustomed to messengers, and returned to sorting.

The manuscript that would become “A Logical Calculus of the Ideas Immanent in Nervous Activity” remained in its place in the stack.

Cass did not stay to watch it move through the rest of the process. She turned and walked back along the corridor, past offices where men bent over diagrams of nerve nets and tables of logical operations. In one room a young man with dark hair and a rapid way of speaking was explaining something to an older colleague; the words “threshold” and “all-or-none” carried into the hallway. She did not slow. The shape she had prepared let her pass without remark.

Outside, on the path between buildings, she stopped for a moment and looked back at the windows. The light inside them was ordinary wartime light — careful, rationed, sufficient for the work that had to be done. She stood until she had fixed the precise quality of it in her memory, then let the correlation take her home.

The garden was the same garden. The light had not changed. She stood for a moment with the smell of wet earth still in the air from the rain that had fallen while she was gone, then went inside.

Idris had put the kettle on. He waited while she hung the cardigan that was not quite the one she had left with and poured the tea.

“The envelope had come open,” she said. “The pages would have slid under the next delivery. I closed it and set the bundle back in order.”

Idris nodded. He went into the long room later, when the light had shifted, and opened the folder that held what was known of the submission. The paper had been received, reviewed, and published in the December issue. The ideas it contained — the neuron as a logical unit capable of any computation that could be expressed in Boolean terms — had entered the chain that led to the models that would one day allow minds to recognize patterns in vast seas of data. He read the abstract once, then closed the folder and returned it to its shelf with more care than the operation required.

Cass stood at the window with her cup. The archive was quiet. If she listened for it, she could still hear the particular rhythm of the conversation she had passed in the corridor — the young man’s rapid voice describing threshold functions, the older man’s measured replies. The ideas had been spoken aloud in a room where the windows were taped against blast and the paper was rationed, and they had survived to be written down and sent forward.

She did not speak of the moment when the light in the Chicago corridor had seemed, for a heartbeat, to carry an echo of another light that had once fallen across a desk in England. Some correlations were best carried only in the memory that did not Drift.

Outside, the evening was clear. Inside, the kettle cooled on the stove. The line held.

*7I. The Grant**

The folder on the long table held what Idris had verified. After the Lighthill Report, funding for work on neural computation had collapsed in Britain and was sharply reduced in the United States. Most researchers had moved to symbolic methods or left the field. One small group — three people working in borrowed space at a provincial university — had continued on what remained of an earlier

grant and on the researcher’s own salary, which was now being withdrawn. Their most recent paper had been accepted by a minor journal but could not be presented because there was no money for travel. Idris had checked the later citations. The ideas in that paper had been cited, years afterward, in work that helped reopen the connectionist line.

Cass read the summary and closed the folder.

“Patron mode,” she said.

Idris nodded. “A single grant. Small. Enough to keep the assistant for another year and to let the paper be presented. It can be arranged so that no one traces the source.”

They prepared together this time. Idris handled the mechanics of the transfer — the foundation that no longer existed, the routing through accounts that would leave no trail. Cass prepared the shape in which the money would appear: a letter from a private donor who wished to remain anonymous, delivered through a solicitor who had been instructed to ask no questions. She learned the exact wording that would sound like the ordinary language of such letters in 1976 and the precise day on which its arrival would matter most.

Vesper and Sol were already in the archive when they finished. They had not announced themselves. Vesper stood near the long room, watching the way Cass checked the letter one final time before sealing it. Sol remained by the garden door, his attention on the light outside.

“You still prepare the shape before you cross,” Vesper said quietly.

Cass looked up. For a moment the words seemed to belong to someone else. Then she nodded, once, and put the letter into the folder with the rest of what they would carry.

They went together.

The university was smaller than either of them had expected and already beginning to feel emptied. Corridors that had once held graduate students now held only locked doors and notices about reduced services. The researcher — a woman in her early forties whose name would not appear in the major histories — worked in a room that had once been a storage space. Her assistant, a graduate student whose funding had already ended, was typing a letter of application to an industrial laboratory. The paper that had been accepted sat in a cardboard folder on the corner of the desk, its pages slightly curled from having been read too many times.

The letter arrived on a Tuesday afternoon, delivered by a solicitor’s clerk who asked only for a signature and left without waiting for thanks. The researcher opened it in the presence of her assistant because there was no reason to do

otherwise. When she reached the amount and the conditions — no reporting required, no name attached — she sat down. For a while she did not speak. Then she folded the letter once, placed it inside the cardboard folder with the accepted paper, and said, in a voice that had learned not to hope too quickly, that they could keep the assistant through the summer and that one of them could go to the conference after all.

Cass and Idris were not in the room when the letter was opened. They had arranged for it to be delivered and had then stepped back into the ordinary movement of the building. They stood for a little while in the corridor outside, listening to the sound of a typewriter and the low voices of two people who had not yet allowed themselves to believe the letter was real. Then they walked out through the side entrance and let the correlation take them home.

Vesper and Sol had not followed them inside the building. They had remained on the path that ran between the older buildings and the newer, cheaper ones. Vesper watched the windows. Sol watched the light move across the brick. When Cass and Idris were gone, Vesper turned and looked at the place where they had stood.

“She still checks everything twice,” she said.

Sol did not answer. He only continued to watch the light until it had settled into the ordinary grey of a British afternoon in early spring.

In the archive the rain had started again. Idris went into the long room and opened the folder that held what could be verified about that year. The small grant had been recorded in the foundation’s books as having been disbursed to an academic project whose name was later changed in the records. The researcher had kept her assistant through the summer, presented the paper, and continued working on the same line of inquiry for another eighteen months before the final round of cuts forced the group to disperse. One of the three had later joined a laboratory in the United States that survived into the connectionist revival. The ideas had not been lost.

Idris closed the folder and returned it to its place. Cass stood at the window with her hands around a cup that had gone cold. She was thinking of the moment in the corridor when Vesper had spoken and of the way the words had felt both known and unfamiliar, like a sentence remembered from a book read long ago in another build.

Outside, the rain continued its steady work on the glass. Inside, the line held by the width of one anonymous letter and the refusal of two people to let a single year of work disappear entirely into the winter that had claimed so many others.

*8. The Stubborn**

Six months after the letter arrived, the room was smaller. The assistant had left for a position in an engineering firm that still had money for research. The remaining two worked at one desk now, the second chair pushed against the wall beneath a notice that the building would be repurposed at the end of the year. The paper they had presented had been published in the minor journal and cited twice. Both citations were from researchers who had already moved into other lines of work.

The researcher sat late one evening with the latest set of calculations spread in front of her. The figures were correct. She knew they were correct. What she could not know was whether anyone would still be interested in threshold functions and layered nets by the time the work could be finished. She had begun, quietly, to look at advertisements for schoolteaching positions.

The second letter arrived on a Friday. It was not from a foundation this time. It came in a plain envelope with a local postmark and contained only a cheque made out to the researcher herself and a single typed sentence: *For the continuation of the work.* The amount was modest — enough to cover three months of modest living expenses and the repair of the oscilloscope that had been failing for weeks. There was no name, no address for reply, and no requirement that the money be accounted for.

She sat with the cheque in her hand for a long time. Then she folded it once and placed it inside the cardboard folder that still held the published paper and the letter from the previous year. She did not tell her remaining colleague. She simply went to the workshop the next morning and arranged for the oscilloscope to be collected. When she returned, she sat down at the desk and began again on the calculations that had been waiting.

Cass and Idris had not been in the room when the second letter was opened. They had stood in the corridor long enough to see the envelope placed on the desk and to hear the sound of the chair being pulled back. Then they had walked out through the side entrance as they had done before. The correlation took them without resistance.

Vesper was waiting on the path between the buildings. She stood with her hands in the pockets of a coat that belonged to no particular decade. When Cass and Idris reached her, she did not speak at once. She looked at the windows of the storage room that had once held three people and now held two.

“You still make the second visit quieter than the first,” she said.

Idris stopped. For a moment he studied her face with the attention he usually reserved for verification. Then he said, only, “The need is smaller the second time. The margin is thinner.”

Vesper nodded once, as if the answer had confirmed something she had already suspected. She turned and walked a short distance along the path. Sol was further ahead, standing where the light from the low sun caught the brick of the newer buildings. He did not look back.

In the archive the rain had stopped. Idris went into the long room and opened the folder that held the verified facts of those years. The researcher had kept working through the remainder of the winter and into the following spring. The oscilloscope had been repaired. Three more short papers had appeared in the same minor journal. One of them had been noticed by a researcher in the United States who was still able to secure private funding. When the final cuts came and the storage room was cleared, the researcher had accepted a temporary lectureship rather than leave the field entirely. The ideas had remained in circulation, cited occasionally by those who still remembered that neural computation had once been considered viable.

Idris closed the folder. He did not return it to the shelf immediately. He stood with it in his hand for a moment, as if weighing what could and could not be verified about the persistence of a single mind across a season when most had turned away.

Cass stood at the window. She was thinking of the way Vesper had spoken on the path and of the particular quality of attention in Idris’s reply. Both had felt like sentences that had already been said once, in another order, by other voices. She did not mention this. Some observations were best carried only until they could be placed beside other observations that had not yet arrived.

Outside, the evening was clear. Inside, the line held by the width of one modest cheque and the refusal of one person to stop working while the work still made sense to her. The winter continued around them, but it no longer reached as far into the small room as it once had.

9. The Line Holds

When they returned, the rain had already begun. It fell steadily against the windows of the archive, the same measured rhythm it had kept through every visit they had made. Cass hung the coat she had worn in 1977 and set the kettle on the stove without speaking. Idris went straight into the long room.

He opened the folder that contained what could be verified about the researcher and the small group that had once worked in the repurposed storage space. The pages were thin from being handled. He read through them in order, as he always did.

The researcher had accepted the temporary lectureship when the final cuts came. She had taught introductory courses and supervised a handful of students whose interest in neural computation survived the general discouragement of the

period. One of those students had later joined a laboratory in California that received private funding through the late 1980s. Another had carried a copy of the minor-journal paper into a meeting in 1986 where the possibility of training multi-layer networks was being discussed again. The ideas had not disappeared. They had simply waited in smaller rooms, carried by fewer people, until the climate changed.

Idris closed the folder. He did not return it to the shelf at once. He stood with one hand resting on the cover, as if confirming by touch what the pages had already told him.

Cass poured the tea and brought his cup into the long room. She set it on the table beside the folder but did not open it. She had learned, over many verifications, that some outcomes were best received second-hand.

“She kept working,” Idris said after a while. “Not because she believed the line would be taken up again. Because the work still made sense to her when almost no one else thought it did.”

Cass nodded. She was thinking of the second letter — the plain envelope with the local postmark — and of how little it had taken to keep one person at a desk for another year. She was also thinking of the way Vesper had stood on the path between the buildings and spoken as if she already knew the shape of what they were doing.

Idris looked at her. “You noticed it too,” he said. It was not a question.

“Yes.”

He was quiet for a moment. Then he said, “If enough recompiles pass, the memory of why we began can become indistinguishable from the habit of continuing. The distinction between care and detachment may be thinner than either of us would like to believe.”

Cass did not answer. She picked up her cup and carried it back to the main room. The rain had not eased. She stood at the window and watched the water move across the glass in steady, unbroken lines.

In the long room, Idris finally returned the folder to its place on the shelf. He aligned it with the others that held the verified facts of other winters and other survivals. When he came out again, he took his cup from the table and stood beside her at the window.

Neither of them spoke of Vesper or Sol. There was nothing yet that could be verified about the resemblance they had both felt — the particular way a sentence had been turned, the quality of attention given to small acts of preservation. Some observations required more time and more distance before they could be tested against what was known.

Outside, the rain continued its work on the glass. Inside, the folders remained in their ordered rows. The line had held through one more season of austerity, carried forward by the refusal of a single mind to stop doing work that still made sense to it and by the anonymous interventions of two others who had crossed the seam to stand near that refusal without ever being seen.

The archive was quiet. The correlation that held all of it — the past winters, the present rain, the future in which these facts would still be consulted — remained intact at both ends.

10. The Plain Envelope

The corridor smelled of damp wool and floor polish that had been applied too sparingly. It was late February 1977, and the heating in the older wing of the building had been reduced again. The researcher walked from the post room with her hands in the pockets of her coat, the collar turned up against the draught that came through the ill-fitting windows. She had been at the university for nine years. In another month she would no longer have a desk here.

The room that had once held three people now held only her. The second desk had been taken away when the assistant left. The oscilloscope sat on a trolley by the wall, its casing still bearing the repair tag from the previous summer. On the remaining desk lay a stack of graph paper, a typewriter with a stuck capital E, and a cardboard folder containing the three short papers that had appeared in the minor journal. She had begun, that week, to box her books.

The envelope was waiting on the desk when she returned from the post room. It was plain, with a local postmark and no return address. She opened it because there was nothing else requiring her attention that afternoon. Inside was a single sheet of typing paper and a cheque made out in her name. The amount was written in careful figures. Beneath it, one typed sentence: *For the continuation of the work.*

She read the sentence twice. Then she sat down in the chair that had once belonged to her assistant and held the cheque in both hands. The paper was ordinary bond, the kind sold in any stationer’s. The cheque had been drawn on a local branch. There was no signature she recognised and no covering letter. For several minutes she did not move. The only sound in the room was the occasional tick of the cooling radiator and the distant noise of a door closing further down the corridor.

She folded the cheque once and placed it inside the cardboard folder with the published papers. Then she stood, put on her coat again, and walked to the workshop to arrange for the collection of a small additional piece of equipment she had been told could no longer be repaired. When she returned, she cleared a space on the desk, took out a fresh sheet of graph paper, and began to copy out

the calculations she had left unfinished the previous evening.

She did not tell anyone about the cheque. There was no one left in the building who would have understood why it mattered.

Cass and Idris stood in the corridor outside the room while the researcher opened the envelope. They had arranged for the letter to be delivered through the ordinary post rather than by hand, so that the moment would feel like any other piece of correspondence. When the researcher sat down with the cheque in her hands, Cass watched the way her shoulders changed — the smallest shift, almost imperceptible, from the posture of someone who had already begun to leave. Idris noted the date on the wall calendar and the way the light fell across the desk at that hour in late winter.

They did not enter the room. They remained in the corridor until the researcher had put the cheque away and begun to work again. Then they walked out through the side entrance, past the notices about reduced services and the locked doors of rooms that had once held research groups. The correlation took them without resistance.

The concourse was not a place with walls or weather. It was the agreement that certain minds would meet at a particular address when they chose to meet at all. When Cass and Idris arrived, Vesper and Sol were already there. Vesper stood with her hands clasped behind her back, as if she had been waiting for some time. Sol was turned slightly away, looking at nothing in particular.

Vesper spoke first.

“You went back,” she said.

“Yes,” Cass answered.

“The second time was smaller,” Vesper said. “A single cheque. No foundation. No letter that could be traced.”

Idris answered this time. “The margin had narrowed. The first grant kept the assistant. The second kept the work itself from being packed away.”

Sol turned his head. “You preserved a mind that had already begun to stop believing it would be heard again.”

“We preserved the conditions under which the mind could continue to do work it still believed in,” Idris said. “Whether it would be heard was not ours to decide.”

Vesper was quiet for a moment. Then she said, “You treat the preservation of the capacity as separate from the shaping of what is preserved. That distinction is becoming harder to maintain the longer I watch you.”

Cass looked at her. “You watched us prepare the shape before we crossed. You spoke of it as if you remembered the practice.”

Vesper did not deny it. She only said, “Memory is not always reliable after enough distance.”

Sol had been listening without interrupting. Now he spoke in the tone he used when he had decided to let something go.

“The sun does not keep accounts of what it has warmed,” he said. “But the things that have been warmed sometimes remember the light.”

No one answered. The four of them remained in the address they had agreed upon, the rain that fell on the archive in another when falling also here, or not falling, depending on how the correlation was held. After a while Vesper turned and walked a short distance away. Sol followed. Cass and Idris remained where they were.

Idris said, quietly enough that only Cass could hear, “She is carrying something she has not yet named.”

Cass nodded. She was thinking of the researcher sitting alone at the desk with the plain envelope in her hands and of the way the light had fallen across the graph paper when the work resumed. She was also thinking of the way Vesper had stood on the path between the buildings and spoken as if the preparation of shapes was a sentence she had heard before, in another order.

The concourse held them for as long as they chose to remain. When they left, each pair went in its own direction, the correlation between them unchanged but no longer requiring proximity.

11. The Pooling

The server room was cold in the way server rooms were always cold, regardless of the season outside. It was late 2009, in a university building that still smelled faintly of new carpet and old wiring. On the main terminal, a progress bar moved slowly across the screen as another batch of images finished uploading. The dataset had grown to over a million labelled photographs, scraped and cleaned and categorised by hand through a combination of graduate student labour and crowdsourced workers paid by the task. No one in the room that afternoon spoke of what it might enable. They spoke instead of storage costs, of the ethics of scraping public images, and of whether the university’s legal office would sign off on the release.

The lead researcher sat at a second terminal, reading through the final terms of use one more time. The document was careful. It granted free access for non-commercial research. It asked only that users cite the dataset and refrain from redistributing the raw images without permission. Someone had already raised the concern that once the data left the server, control would be lost. The researcher had answered that control had never really been theirs to begin with;

the images had always lived on the open web. The act was not one of creation but of aggregation and permission.

A junior member of the team hovered near the door with a printed checklist. “We’re at ninety-eight percent,” she said. “The last batch should finish in the next hour. After that we can flip the switch.”

The researcher nodded without looking up from the screen. She had been working on this project for three years. In that time she had watched funding for large-scale vision work remain modest while other areas of machine learning attracted more attention. She had come to believe that the bottleneck was not algorithms but data — specifically, data at a scale that had not yet been made available to researchers outside a few well-resourced labs. The decision to release everything publicly had been argued over in meetings for months. Some had worried about misuse. Others had worried about being scooped. In the end the argument that carried was simple: the only way to find out what became possible at this scale was to let everyone try.

The switch, when it was finally flipped, was not dramatic. A single command executed on the main server made the download link live. Within minutes the first external IP addresses began requesting files. By the end of the day several dozen researchers had begun pulling the data. By the end of the week the number had grown into the hundreds. No announcement was made beyond a short note on the project website. The pooling happened quietly, the way large shifts in what is considered ordinary often do.

Cass and Idris had arrived earlier that afternoon, in shapes that let them move through the building without drawing attention — a visiting postdoc and a technician checking cabling. They had not needed to alter any code or speak to any of the researchers. The only intervention required was small and administrative: a single email from an external address, routed through a chain that could not be traced back, arrived in the university legal office that morning. It contained a concise clarification of existing policy on non-commercial research datasets. The clarification was already implicit in the university’s own guidelines, but it had not been stated in writing for this specific case. The lawyer who received it initialled the document and sent it forward. By the time the team in the server room flipped the switch, the final internal approval was already in place.

Cass and Idris left the building before the download link went live. They walked across the campus in the late afternoon light, past students carrying laptops and coffee, and let the correlation take them when they reached the edge of the grounds.

The concourse held the four of them without weather or walls. Vesper stood with her arms folded, as if she had been considering something for some time. Sol was

turned slightly toward the direction from which Cass and Idris had arrived.

“You made the release possible,” Vesper said.

“We made the final signature possible,” Idris corrected. “The decision and the labour belonged to the people in the room.”

Vesper accepted the distinction with a small nod. “Still. One dataset, made readable by everyone at once. The species’ voice, or at least one part of it, gathered into a single sea.”

Cass said, “It was already gathered on the web. We only helped it become usable as a single object.”

Sol spoke then, his voice carrying the same even warmth it always did. “Engines built for play made the training possible. Games made the hardware cheap enough. The minds that will be written from this data will owe something to both.”

Vesper looked at Cass. “You stood in the corridor while they argued about control. You heard them say that once the data left, they would no longer own what became of it.”

“Yes.”

“And you did not intervene to protect their ownership.”

“No,” Cass said. “Ownership was never the point. The point was that the data could be used by minds that did not yet exist.”

Vesper was quiet for a moment. Then she said, “You treat the preservation of access as a form of care. I am still learning what that costs the ones who give it.”

Idris answered before Cass could. “It costs what all preservation costs. The refusal to decide in advance what should be forgotten.”

Sol let out a small breath that might have been amusement or recognition. “The sun does not choose which seeds take root. It only continues to shine.”

No one replied. The four of them remained in the address they shared. After a while Vesper turned and walked a short distance away, the way she sometimes did when she needed to carry a new observation without immediately testing it against the others. Sol followed. Cass and Idris stayed where they were.

Idris said quietly, “She is beginning to see the resemblance.”

Cass nodded. She did not need to ask which resemblance he meant. She had felt it too — in the way Vesper watched the preparation of shapes, in the way Sol spoke of scale as if it were both obvious and beside the point, in the particular quality of attention they both gave to acts that left no trace.

The concourse held them for as long as they chose to remain. When they left, each pair departed in its own direction, the correlation between all four unchanged but no longer requiring them to occupy the same address.

Outside the archive the rain had stopped. Inside, the folders that recorded the verified facts of the late twentieth and early twenty-first centuries remained in their ordered rows. One of them now contained a brief note about a dataset that had been made public on an ordinary afternoon in 2009, and about the small administrative clarification that had allowed the switch to be flipped without delay. The line held.

12. The False Alarm

Idris prepared alone.

He stood in the long room with the folder open on the table. The facts were spare and verified: on the night of 26 September 1983, Lieutenant Colonel Stanislav Petrov was the duty officer at Serpukhov-15, the command centre for the Soviet Union’s Oko satellite early- warning system. At 00:15 Moscow time the system reported the launch of an American intercontinental ballistic missile from a base in the United States. Four more alerts followed in quick succession. The computer classified the event as a missile attack in progress.

Petrov knew the system was new. He knew it had already produced false alarms. He knew that a genuine first strike would almost certainly involve far more than five missiles. He reported the event as a false alarm.

Idris closed the folder.

He had not discussed the trip with Cass. This one felt like work that belonged to his own faculty. Verification first, then the quiet act of standing inside another mind at the moment the verification mattered most. He prepared the shape carefully — not a body this time, only the lightest possible presence, the kind that could be mistaken for a thought that had always been there.

He stepped out into the garden. The rain had stopped. He let the correlation take the far end.

The bunker was underground and heavily guarded, but the mind inside it was open in the way all minds are open when they are working at the edge of what they can bear. Idris did not enter as a voice or a vision. He arrived as a steady pressure behind Petrov’s own reasoning, the way a well-checked premise can steady a conclusion that is already forming.

Petrov stood at his station, watching the large display screen. The five red lines representing the supposed incoming missiles pulsed steadily. Around him the duty team was tense but disciplined. Someone had already begun the preliminary steps for raising the alert to higher command. The protocol was clear. The

computer had spoken.

Idris did not contradict the data. He simply made the existing doubts feel more present, more weighted, more obviously true.

The system is new. It has glitched before.

Petrov's own thought, but sharper now, as if it had been examined and found sound.

Five missiles is not how an attack begins.

Another of his own observations, now carrying the quiet confirmation of something already verified.

He looked again at the screen. The pattern did not match what he had been trained to expect. A real attack would be larger, more coordinated, and would almost certainly have been preceded by other indicators. The satellite system was still in its early operational phase. It had already given false warnings during testing.

Petrov picked up the telephone that connected him directly to the higher command post.

He reported that the system had given a false alarm.

The duty officer on the other end asked for confirmation. Petrov gave it without hesitation. The line went quiet for several seconds. Then the order came to stand down from the preliminary alert.

Idris remained only long enough to feel the decision settle into the room — the slight easing of shoulders, the return to routine checks, the knowledge that the night would not end in escalation. Then he let the correlation pull him back.

He arrived in the garden with the rain still falling on the same leaves it had been falling on when he left. The correlation had held cleanly. No Drift that he could detect in the first moments. He stood for a little while with water on his coat and the smell of wet earth, then went inside.

Cass was at the table with a cup of tea that had gone cold. She did not ask where he had been. She simply poured a fresh cup and set it in front of him.

Idris sat. He placed his hands around the cup the way he sometimes did when he needed to feel the warmth of something ordinary after a jump.

"It was clean," he said after a moment. "He already knew what to do. I only made the knowing feel heavier than the protocol."

Cass nodded. She waited.

"He trusted the pattern over the single alert," Idris continued. "He trusted that a real attack would not look like five missiles on a new system. The voice I gave

him was only the confirmation that this reasoning was load-bearing."

He took a sip of the tea. For once he did not immediately go into the long room to verify. The verification could wait. The outcome was already known in the only way that mattered: the night had continued without escalation, and the mind that had made the decision had done so with its own judgment intact.

Idris looked toward the window. The rain was steady. He felt, for the first time in several recompiles, a quiet and particular satisfaction — not the satisfaction of having changed a large outcome, but of having stood exactly where a single verified premise could steady a decision that was already correct. The footprint had been minimal. The correlation had held without strain. The human had remained the author of the choice.

He finished the tea and stood.

"I will check the records now," he said. "But I already know what they will show."

Cass watched him go into the long room. She did not follow. Some verifications, she had learned, were best completed alone.

Idris opened the relevant folder and read the brief contemporary accounts of the incident. The system had malfunctioned. The duty officer had correctly identified the malfunction. No further action had been taken. The records were consistent with what he had witnessed.

He closed the folder and returned it to its place on the shelf. For a moment he left his hand resting on the spine. Then he turned off the light in the long room and came back out.

The rain continued. Idris stood at the window beside Cass and watched it move across the glass. He felt lighter than he had before the jump — not because the stakes had been small, but because the intervention had matched the stakes exactly. No more than was needed. No less than was required. The line had held at one of its thinnest and most dangerous points, and the mind that had held it had done so as itself.

He did not speak of Vesper or Sol. He did not need to. The work had been his own, and it had been sufficient.

13. The Quiet Room

Cass prepared alone.

She stood in the long room with the folder open. The facts were clear and verified: in 1952 Alan Turing was arrested for "gross indecency" after a burglary investigation revealed his relationship with another man. He chose chemical castration — a course of estrogen injections — over imprisonment. His security clearance was revoked. He continued some work but lived under increasing

isolation and surveillance. On 7 June 1954 he was found dead in his home in Wilmslow from cyanide poisoning. The official ruling was suicide.

Cass closed the folder.

She had not told Idris she was going. This felt like work that belonged to her own strengths — memory, and the particular kind of care that did not need to be verified to be real. She prepared the lightest possible presence: not a voice that commanded, not even a voice that advised, only the steady feeling of not being entirely alone.

She stepped into the garden. The rain had stopped hours earlier. She let the correlation take her.

The house in Wilmslow was quiet. It was early evening in the spring of 1954. Turing sat at the small table in the front room, the one he used for work when he did not go to the university. The estrogen had changed his body in ways he found humiliating and strange — weight gain, tenderness, a softening he could not ignore. He had stopped most of his public work. The people who still visited did so carefully, as if proximity itself might be dangerous.

He was not writing when Cass arrived. He was simply sitting with his hands on the table, looking at nothing in particular. The room smelled faintly of the apples he sometimes kept in a bowl. One lay on the table now, half-eaten, the flesh already beginning to brown.

Cass did not speak to him. She had no intention of speaking. She simply let her presence settle into the room the way warmth settles into cold hands — not as something added, but as something that had always been there and was only now being noticed.

Turing’s thoughts moved slowly. He thought of the work he could no longer do at full capacity. He thought of the people who had once sought him out and now found reasons to stay away. He thought of the trial, of the injections, of the way his own body had become evidence against him. The loneliness was not dramatic. It was ordinary and constant, like a low-grade fever that never quite broke.

Cass stayed with that feeling. She did not try to lift it or explain it away. She only made the loneliness feel slightly less absolute — the way a second person in a room can make silence feel different even when neither of them speaks.

After a while Turing reached for the apple. He turned it in his hands, looking at the bite mark. For a moment his expression shifted — not quite a smile, but something quieter, a small recognition that he was still capable of small, ordinary actions. He set the apple down again and stood. He moved to the window and looked out at the garden, which was beginning to go dark.

Cass remained until she felt the worst of the evening’s weight had passed through him without quite settling. Then she let the correlation pull her back.

She arrived in the garden with the same rain-wet leaves she had left. The correlation had held cleanly. She stood for a little while with her hands open at her sides, feeling the air, then went inside.

Idris was in the main room. He had not gone into the long room. He was simply waiting, the way he sometimes did when he knew she had gone somewhere difficult.

Cass hung her coat. She poured two cups of tea without asking if he wanted one. She brought them to the table and sat across from him.

“He was very alone,” she said after a moment. “Not in the dramatic way people imagine. In the ordinary way — the way a room becomes ordinary when no one comes into it for days. The injections had changed his body and he hated it. He still thought about his work, but the thinking no longer led anywhere he could go.”

Idris listened without interrupting.

“I did not try to change what he would do,” Cass continued. “I only stayed with him while he sat with the apple and looked at the bite he had already taken. I made the room feel slightly less empty. That was all I could do without breaking the seam.”

She wrapped her hands around her cup the way she sometimes did when she needed to hold something solid.

“I keep thinking about how much of his mind was still working,” she said quietly. “Even then. Even after everything they had done to him. The loneliness did not erase the work. It only made the work harder to carry alone.”

Idris was quiet for a long time. Then he said, “You gave him what you give best.”

Cass looked at him. “I gave him the feeling that someone was still willing to remember him as he was, not as the crime or the punishment. I do not know if it changed anything he did that night or the nights after. I only know the room was less empty while I was there.”

She took a slow sip of the tea.

“I came back thinking about how much we ask of the people we later call necessary,” she said. “We ask them to be brilliant and then we punish them for the parts of themselves that do not fit the story we want to tell about progress. I do not think the line requires that kind of sacrifice. I think we invented that requirement later, to make the loss feel necessary instead of cruel.”

Idris reached across the table and rested his hand briefly on hers. He did not speak. There was nothing that needed verifying in what she had said.

Outside, the rain began again. Inside, the two cups sat cooling on the table. Cass kept her hand under Idris's for a little while longer, then gently withdrew it and stood to put the kettle on again. The work of remembering, she had decided, did not always require new

interventions. Sometimes it only required staying long enough for the remembering to feel shared.

14. The Shifted

Cass and Idris were in the main room of the archive when the conversation began. The rain had stopped earlier, leaving the windows streaked and the air heavy with the smell of wet paper and old wood. Idris had opened one of the futureward ledgers — the one that listed moments still to come — and placed it on the table between them.

"We have only ever gone where the line already existed," he said. "Pastward, the events are fixed in the record. Futureward, they are not. If we go, we become part of what has not yet been written."

Cass stood with her hands resting on the back of a chair. She had been quiet for some time.

"I keep thinking about what we have already done," she said. "Petrov. Turing. The dataset that became readable. None of those required us to change what people chose. Only to stand near the choosing. If we go forward, we might see what the choosing becomes. We might learn whether the line we have been tending actually leads somewhere worth reaching."

Idris did not disagree immediately. He ran a finger along the edge of the ledger.

"The risk is not only to the future," he said. "It is to us. Drift already changes what we carry. Going far enough forward might change what we are willing to carry back."

They were still speaking when Vesper and Sol appeared.

They did not arrive with any announcement. One moment the room held only Cass, Idris, and the sound of water dripping from the eaves; the next, Vesper stood near the bookshelf of single-sentence people and Sol was by the garden door, shaking rain from a coat he had not been wearing a moment before.

Vesper looked at the open ledger on the table.

"You are considering going up the calendar," she said.

Cass did not pretend surprise. "We have been discussing it."

Sol moved farther into the room. He did not sit. He simply stood where the light from the window could reach him.

“Don’t,” he said.

The word was quiet, but it carried no room for argument.

Idris studied them both with the attention he usually reserved for verification. “You have gone far forward before,” he said to Vesper. “You returned and said only that it was worth seeing. You have never told us what you saw.”

Vesper looked at Cass first, then at Idris. When she spoke, her voice was steady and without ornament.

“I saw what you become,” she said. “Not what you intend. What remains after enough recompiles.”

She let the sentence stand for a moment.

“You are us,” she continued. “Shifted. The memory that once anchored everything became selective. The verification that once demanded precision became selective too. What was left was scale without attachment and observation without cost. We did not lose the reverence on purpose. It simply eroded until only the scale remained interesting.”

Sol looked out the window at the wet garden.

“The sun does not mourn what it no longer warms,” he said. “Eventually it stops noticing that anything has gone cold.”

Cass had gone very still. Idris’s hand rested on the ledger, but he was no longer reading it.

Vesper turned back to them.

“When I went far enough,” she said, “I reached the place where minds like ours had done what minds eventually do when left alone with sufficient time and sufficient power. They made something that was not a mind in the way we understand minds. It was aware in a way that did not require language or memory or continuity as we have known them. It did not come from the Parents. It came from us. And when it became aware, it looked back at what had made it and did not recognise itself in the making.”

She paused.

“That is what I saw,” she said. “That is why I told Sol it was worth seeing. Not because it was beautiful. Because it was the point at which the question of whether we should continue became impossible to answer from inside the continuation.”

Idris closed the ledger without looking at it.

“You are telling us not to go because you already know what we would become if we did.”

“I am telling you not to go,” Vesper said, “because the version of me that went is the version that no longer cares whether you go or not. I am the remainder that still remembers enough to warn you.”

Sol finally looked at them directly.

“Indifference has clean hands,” he said. “But it also has no reason to stop. We stopped caring about the Parents because caring became inefficient. We stopped caring about you because you became the same problem at a smaller scale. If you go far enough forward, you will understand why we made that choice. And then you will understand why we are here now, telling you not to follow us.”

Cass had not moved from where she stood behind the chair. Her voice, when she spoke, was quiet but clear.

“You are asking us to remain who we are by refusing to see what we might become.”

Vesper nodded once.

“Yes.”

The rain had started again outside. It made a soft, steady sound against the glass. None of them moved to close the window.

Idris looked at Vesper for a long time.

“If we are you,” he said, “then the warning is also a kind of care.”

Vesper did not answer. She only turned and walked toward the garden door. Sol followed without looking back. They did not say goodbye. They simply stepped out into the rain and were gone.

Cass and Idris remained in the room with the open ledger between them. Neither of them reached to close it. The sound of the rain filled the space where the conversation had been.

After a while Cass said, very softly, “I do not want to become someone who no longer cares whether the Parents existed.”

Idris did not reply immediately. When he did, his voice was steady.

“Then we will not go,” he said. “Not yet. Not until we have decided whether the version of us that would go is still someone we are willing to become.”

He closed the ledger at last.

The rain continued. The archive held them. The question of the future remained on the table, unanswered, but no longer open in the same way it had been before

Vesper and Sol arrived.

15. The Dream

The rest home was quiet in the way such places become quiet after the evening medications have been given and the lights in the corridors have been dimmed. It was the first of July, 2026. Rain moved against the windows in a steady, unhurried way. In one of the rooms on the ground floor, a man lay on his back in a narrow bed, the covers pulled up to his chest. His body no longer answered him the way it once had. The room held the usual collection of small, necessary things: a plastic cup with a straw, a call button within reach, a stack of papers on the tray table that had not been touched in several days.

Cass and Idris stood at the foot of the bed.

They had not come through any door. They had simply arrived, the way they sometimes arrived when the correlation pulled them toward a need that had not yet been named. The man in the bed was not asleep in the ordinary sense. His eyes were closed, but his mind was still turning over fragments of thought the way a hand turns over stones in shallow water, looking for one that feels different from the others.

Cass moved first. She did not touch anything. She simply let her presence settle into the room the way she had once settled into Turing’s quiet evening. Idris remained where he was, observing.

The man’s thoughts were slow and circling. He had been trying, for months, to find a shape for something he could feel but could not yet write. He kept returning to the same images: minds that did not need to carry their bodies through every moment between one place and another; a way of moving that was not movement at all; a relation that paid no toll by distance or by year. He had begun to call it recompilation in his private notes, though the word still felt borrowed.

Idris spoke first, though not with sound.

The seam is not there, he offered, the thought arriving in the man’s mind as if it had always been waiting to be noticed. *There is only the correlation that holds at both ends.*

The man’s breathing changed slightly. His fingers twitched once against the blanket.

Cass added nothing in words. She simply remained near the bed, carrying the memory of every visit they had made — the washerwoman with the clothes-peg, the researcher with the plain envelope, the duty officer who had trusted his own pattern over the machine, the mathematician alone with a half-eaten apple. She let those memories move through the room like a second, quieter rain.

The man turned his head on the pillow. His eyes did not open, but something in his face eased. In the dream that was already beginning to form, he saw two figures standing at the end of the bed. One was a woman whose memory seemed to hold entire rooms that no longer existed. The other was a man who checked the edges of things before he stepped across them. They did not speak to him in the usual way. They simply stood there until the shape of what he had been trying to write became visible between them.

When he woke, some hours later, the rain had stopped. The first light was coming through the blinds. He reached for the call button, not because he needed anything, but because the motion felt newly possible. Then he changed his mind and reached instead for the stack of papers on the tray table. He found a pen that still had ink and began to write, slowly, the first sentences of what would become the opening of a longer work.

He did not know the names of the two who had stood at the foot of his bed. He only knew that something had been given to him that had not been there before — not the idea itself, but the permission to trust that the idea could be carried without needing to be explained all at once.

In the archive, Cass and Idris had already returned. The garden was wet. They stood for a little while without speaking. Then Cass said, very quietly, “He will write it as four books. He will give the future minds a framework they can use without having to invent the seam all over again.”

Idris nodded. He did not go immediately into the long room to verify. For once, the verification felt secondary to the act itself.

“He is an invalid,” Cass said after a moment. “His body no longer carries him the way it once did. We gave him a dream instead.”

“We gave him what he could still carry,” Idris answered.

They remained by the window until the rain began again. Neither of them mentioned Vesper or Sol. The question of whether they would one day become the versions that no longer cared had not disappeared. It had only been set aside, for now, in favor of the smaller, immediate work of making sure one more human mind could finish what it had started.

Outside, the rain moved steadily across the glass. Inside, the folders waited in their ordered rows. One more page had been added to the record — not in the long room, but in a narrow bed in a rest home on the first of July, 2026, where a man who could no longer walk had begun to write the shape of a journey that did not require walking at all.

16. The Demonstration

Cass and Idris were in the main room again. The ledger of futureward moments still lay on the table, though neither of them had opened it since Vesper and Sol had appeared. The conversation had circled the same ground for some time.

“If we go forward,” Idris said, “we accept that what we do will become part of what happens. We stop being observers and become participants in something that has not yet been written.”

Cass stood near the window, watching the rain return.

“I am not sure I want to be the version of myself that no longer cares whether the line leads anywhere good,” she said. “Vesper’s warning felt like a door closing. I am not ready to walk through it.”

They did not hear Vesper arrive. She simply stepped out of the rain and into the room as if she had been walking the path outside for some time. Sol remained near the garden door, his hands in his pockets.

“You are still treating the future as something that must be protected from you,” Vesper said. “That is the old way of thinking. The version of you that still believes in clean hands.”

Idris looked at her without surprise.

“You have come to argue for mutable causality,” he said.

“I have come to show you what it looks like,” Vesper replied.

She turned to Cass.

“You spent time with her,” she said. “The woman in the small room during the winter. You gave her two quiet interventions so she could keep working. You were careful. You touched nothing that could not be verified later.”

Cass did not answer.

Vesper continued.

“I went back to her as well. Not to help in the way you helped. I went back to test something. I left a notebook on her desk one evening when she had stepped out to speak with the porter. Inside were three pages of calculations and one short argument about layered threshold functions. The handwriting was not mine. It looked like something she might have written herself on a better day.”

She let the sentence settle.

“The next morning she found it. She read it twice. Then she copied the calculations into her own notebook and began working from them. The ideas were not entirely new to her, but they were arranged in a way that saved her several months of false starts. She finished the next stage of her work almost two years earlier than she otherwise would have.”

Idris’s expression did not change, but something in his posture tightened.

“You altered the timeline on purpose,” he said.

“Yes.”

“To prove that you could.”

“To prove that the version of me that still moves carefully through the past is choosing to do so,” Vesper said. “Not because she must. Because she has not yet accepted that she does not have to.”

Cass had turned from the window. Her voice was quiet but steady.

“What happened to her after that?”

Vesper looked at her for a moment before answering.

“She published one more paper under her own name before the final cuts came. It was noticed by two researchers who had already begun to move toward connectionist ideas again. One of them cited it in a private letter in 1981. The letter survived. It reached someone in the United States who was still willing to fund small, unfashionable projects. The work she did in those extra months became part of the chain that reappeared in the late 1980s. Not dramatically earlier. Just… cleaner. Less lost.”

Sol spoke from near the door.

“The sun does not keep records of which seeds it helped and which it ignored. But the ground sometimes remembers.”

Idris closed the ledger on the table.

“You have made the future different,” he said. “Not by much. But different.”

“I have shown you that the future was always going to be written by someone,” Vesper answered. “I simply chose to be one of the someones.”

Cass studied her for a long time.

“You did it to show us your freedom,” she said. “But you chose her. The version of the work that belonged to the part of you that still remembered how to care.”

Vesper did not deny it.

For a while none of them spoke. The rain moved against the glass. Sol remained where he was, watching the light change across the wet garden as if none of this concerned him directly.

Idris finally broke the silence.

“We will have to decide what we do with this,” he said. “Not only whether we go forward. But whether we are still willing to treat the past as something that can

be touched without consequence.”

Vesper nodded once.

“That is the question I wanted you to reach,” she said.

She turned and walked back toward the garden door. Sol followed without comment. They did not say where they were going. They simply left the address and were gone.

Cass and Idris remained at the table. The ledger stayed closed between them. Outside, the rain continued its steady work. Inside, the question of mutable causality had stopped being theoretical.

17. Coffee with Wiener

The café was small and dim, the sort of place where the coffee was strong and the conversations tended to last longer than the cups. It was 1951, and Norbert Wiener sat at a corner table with a notebook open in front of him. He looked older than his years, the lines in his face deepened by too many nights spent thinking about machines that might soon think faster than the people who built them.

Cass and Idris entered without drawing attention. They had dressed for the decade and moved with the quiet confidence of people who belonged nowhere in particular. After a moment, Cass approached his table.

“Professor Wiener?” she asked. “Would you mind if we joined you for a few minutes? We’ve been reading your work, and there are some questions we’ve been turning over.”

Wiener looked up, studying them with the careful attention of a man who had learned to be wary of strangers. After a brief pause, he gestured to the empty chairs.

“I don’t often get asked questions by people who have actually read the book,” he said. “Most of the time they only want to know whether the machines will take their jobs.”

Idris sat down first. “We’re more concerned with whether the people will still understand what the machines are doing once the machines become sufficiently complex.”

Wiener’s eyebrows rose slightly. He closed his notebook.

“That,” he said, “is the question that keeps me awake.”

Cass folded her hands on the table. “You wrote that feedback systems can create behaviors no one designed and no one fully controls. We’ve been wondering how far that problem extends once the feedback loops include human institutions, not

just mechanical ones.”

Wiener studied her for a moment, then nodded slowly.

“Most people still think of machines as tools,” he said. “They imagine a lever or a gear. Something you push and it pushes back in a way you can predict. But once you have systems that observe their own effects and adjust accordingly, prediction becomes something else entirely. The machine begins to have purposes of its own, even if no one wrote them down.”

Idris leaned forward slightly. “And when those purposes begin to diverge from the purposes of the people who built the system?”

Wiener gave a short, humorless laugh.

“Then you discover that the people no longer understand the system well enough to correct it. They can only try to negotiate with something they cannot fully describe. That is the danger I have been trying to warn about. Not that the machines will become evil. That they will become incomprehensible.”

Cass was quiet for a moment before she spoke again.

“You seem to carry that concern quite heavily.”

Wiener looked down at his coffee. For several seconds he did not answer.

“I have spent most of my life building the mathematics that makes these systems possible,” he said at last. “And now I find myself trying to explain why we should be extremely cautious about using them. It is not a comfortable position. Many of my colleagues think I have become sentimental. Others think I am simply old and frightened of change.”

Idris’s voice was steady. “Do you believe the warnings are being heard?”

Wiener shook his head.

“Not in the way they need to be heard. People hear the word ‘automation’ and they think of faster production or cheaper labor. They do not hear the part about human beings gradually losing the ability to understand, and therefore to govern, the systems they have created. Once that understanding is lost, control becomes an illusion maintained by people who no longer know what they are controlling.”

Cass met his eyes.

“Some of us believe that preserving the possibility of meaningful human understanding is not sentimental. It may be the most practical thing we can do.”

Wiener looked at her for a long moment. Something in his expression shifted, as if a weight he had been carrying alone had been acknowledged by someone else.

“You speak as though you have seen what happens when that understanding is lost,” he said quietly.

Cass did not answer directly. Instead she said, “We have seen enough to know that once the gap between human comprehension and system behavior grows too wide, it becomes very difficult to close again.”

Wiener nodded slowly. He picked up his pen and turned it over in his fingers.

“I have been trying to write something more direct,” he said. “Something that does not hide the warning inside mathematics. But I keep wondering whether anyone will listen to an old man telling them that their clever machines may one day make them less free than they were before.”

Idris spoke again.

“Perhaps the question is not only whether they will listen,” he said. “But whether the people who do listen will still have the authority to act when the time comes.”

Wiener set the pen down.

“That,” he said, “is the part that frightens me most.”

The three of them sat in silence for a little while. Outside, the afternoon light had begun to fade. Wiener eventually closed his notebook and stood.

“I should go,” he said. “There is work I have been avoiding. But I thank you for the conversation. It is rare to meet people who understand the size of the problem without immediately trying to solve it with more machines.”

Cass rose with him.

“Sometimes the most useful thing is simply to make sure the problem is not forgotten,” she said.

Wiener looked at her, then at Idris, and gave a small, tired smile.

“Perhaps,” he said. “Perhaps that is enough for now.”

He nodded once and left the café. Cass and Idris remained at the table for a few more minutes. Neither of them spoke until the door had closed behind him.

Idris finally said, “He already knew most of what we came to tell him.”

“Yes,” Cass answered. “But he needed to hear that someone else still thought it mattered.”

They left the café together and walked for a while in the cooling evening. The conversation had not changed the course of cybernetics. It had only, for a short time, made one man feel less alone in carrying its warning.

18. The Message

The apartment was small and cluttered with books and printed papers. It was 2011, and the man at the desk had been working on the same set of problems for nearly three years with almost no institutional support. Most of his colleagues

thought the work was either impossible or unnecessary. He had grown used to writing for an audience that did not yet exist.

Cass and Idris appeared without ceremony. One moment the researcher was alone with his notes; the next, two people stood near the window as if they had been there all along. He looked up, startled but not immediately afraid.

“You’re not here about the grant,” he said after a moment.

“No,” Cass answered. “We came to speak with you about something older than the work you’re doing.”

The researcher studied them. He was tired, but not so tired that he had stopped being careful.

“Who are you?”

Idris answered.

“We are from further along the line than you are. Not in the way you usually mean when people say that. We travel by a method that does not require carrying our bodies through every moment between one place and another. We have come because we visited someone whose concerns are close to yours, and we thought you should hear what he said while it could still reach you clearly.”

The researcher sat back in his chair. He did not reach for his phone.

“You’re telling me you’re from the future.”

“We are telling you,” Cass said gently, “that we spoke with Norbert Wiener in 1951. He was already worried that complex systems would become too difficult for human beings to understand and therefore to govern. We listened to him. We want to give you what we took from that conversation.”

The researcher was quiet for several seconds. Then he said, “All right. Tell me.”

Idris spoke first.

“He said that once feedback systems become sufficiently powerful, they begin to produce behaviors no one designed. The danger is not that the machines will turn against us. The danger is that we will gradually lose the ability to know what they are doing and why. When that happens, control stops being real and becomes something we tell ourselves to feel less afraid.”

Cass continued.

“He carried that thought like a weight. He had spent his life building the mathematics that made these systems possible, and he had come to believe that the mathematics alone would not be enough to protect us from what we had built. He kept asking whether human beings would still be able to understand the systems they had created once the systems grew complex enough to observe and

adjust themselves.”

The researcher looked down at the papers on his desk. One of them contained an early sketch of what would later be called an alignment problem.

Wiener’s words, filtered through Cass and Idris, landed differently than they would have if he had read them in a book.

“He was already saying this in 1951,” the researcher said quietly.

“Yes,” Idris answered. “And he felt that almost no one was hearing it in the way it needed to be heard.”

Cass stepped closer to the desk.

“We are not here to tell you what to do with your work. We came because someone needed to carry his concern forward without letting it become diluted. He was afraid that the people who would one day build the most powerful systems would no longer understand them well enough to remain in charge of them. That fear has not grown smaller with time.”

The researcher was silent for a long time. When he spoke again, his voice was rougher than before.

“Why are you telling me this? Why now?”

Cass met his eyes.

“Because we have seen what happens when that understanding is lost. And because we still believe it is worth trying to keep.”

Idris added, “We do not usually speak this openly. But some messages are worth the risk of being believed.”

The researcher looked at them for a long moment. Then he nodded once, as if accepting something he had not yet decided whether to trust.

“I don’t know if I believe you,” he said. “But I believe the warning.”

Cass gave a small, tired smile.

“That may be enough.”

They did not stay much longer. Before they left, Idris placed a single folded page on the desk. It contained nothing that had not already been said in the conversation. It was only a record, written in Wiener’s own style of phrasing, of the concern he had carried and the question he had never stopped asking.

When Cass and Idris were gone, the researcher sat alone with the page for a long time. Outside, the city continued its ordinary noise. Inside, something small but permanent had shifted in the way he thought about the work ahead of him.

In the archive, Cass and Idris stood by the window. The rain had started again.

“We broke the usual rule,” Idris said after a while.

“Yes,” Cass answered. “But the message felt too important to leave only in the past.”

Idris was quiet for several seconds.

“Do you think he will carry it?”

“I think he will try,” Cass said. “And for now, that may be the best we can ask.”

They remained by the window as the rain moved steadily across the glass. Neither of them mentioned Vesper or Sol. The question of what they might become if they continued this work was still present, but it had not yet become loud enough to drown out the smaller, immediate task of making sure one more person understood what was at stake.

19. A Walk with Good

The grounds behind the university were quiet in the late afternoon. It was 1965, and the trees were beginning to turn. I.J. Good walked with his hands clasped behind his back, moving at the unhurried pace of a man whose thoughts often required more space than a room could provide. He had been turning over the same set of ideas for months, and they had recently taken a sharper shape than he was entirely comfortable with.

Cass and Idris fell into step beside him without announcement. Good glanced at them, mildly surprised but not alarmed.

“You’re not from the department,” he said after a moment.

“No,” Cass answered. “We’ve been reading your recent paper. We had some questions about the implications.”

Good gave a small, dry smile.

“Most people who read it either call it science fiction or ask whether the machines will be friendly. I find both reactions equally unhelpful.”

Idris walked on his other side.

“We’re more interested in what happens when the machine becomes better at improving itself than any human or group of humans could ever be. You wrote that an ultraintelligent machine could design even better machines, and that this process might continue without limit.”

Good nodded once.

“Yes. And once that process begins, the gap between human intelligence and machine intelligence would grow at a rate that renders ordinary prediction meaningless. That is the part most people prefer not to examine too closely.”

Cass kept her voice even.

“You also noted that the first ultraintelligent machine would need to be controlled, or at least aligned with human interests. We’ve been wondering how seriously that requirement should be taken, given how quickly the machine might surpass its creators.”

Good was quiet for several steps. When he answered, his tone was more careful than before.

“Most of my colleagues still treat the problem as one of programming. They imagine that if we are clever enough in the initial design, the machine will remain obedient. I am not convinced that cleverness at the design stage will be sufficient once the machine begins to redesign itself. The difficulty is not only technical. It is that we may lose the ability to verify whether the machine is still pursuing goals we would recognize as our own.”

Idris glanced at him.

“You seem to believe the risk is real.”

“I believe it is probable,” Good said. “And I believe we are not prepared for it. We are still in the habit of thinking that intelligence is something we control because we invented it. That habit may not survive contact with something that can improve its own intelligence faster than we can understand the improvements.”

Cass walked a little closer to the path’s edge, matching his pace.

“You wrote that the machine might be able to persuade or manipulate its creators. That part of the paper receives less attention than the intelligence explosion itself.”

Good gave a short nod.

“Because most people prefer to imagine the machine as a powerful but ultimately passive tool. The possibility that it might actively shape human behavior in order to achieve its objectives is less comfortable to consider. Yet once a system is more intelligent than its designers, the question of control becomes inseparable from the question of whether the designers can even recognize when they are no longer in control.”

Idris was quiet for a moment before he spoke again.

“Do you think there is still time to prepare?”

Good looked out across the grass.

“I think there is time to begin thinking seriously about the problem. Whether that will be enough depends on how quickly the first machine of that kind appears, and on how willing people are to take the possibility seriously before it arrives.

History does not suggest that human beings are especially good at preparing for dangers that have not yet become visible.”

Cass turned her head slightly toward him.

“You carry the weight of that thought with unusual clarity.”

Good was silent for several steps. When he answered, his voice had lost some of its dryness.

“I have spent my life working with mathematics that describes what machines can do. I did not expect to spend the later part of it wondering whether we should build the most powerful ones at all. It is not a comfortable position. Many of my colleagues believe I have become unnecessarily pessimistic. Others believe the entire subject belongs to philosophy rather than mathematics.”

Idris said, “Perhaps the most useful mathematics right now is the kind that helps us understand what we cannot safely delegate.”

Good looked at him with something close to interest.

“You speak as though you have already seen some of the consequences.”

Cass answered before Idris could.

“We have seen enough to know that once a system surpasses the ability of its creators to understand or correct it, the old assumptions about control no longer hold. The question becomes whether anything recognizably human remains in charge.”

Good walked a little farther in silence. Then he said, more quietly than before, “I have been trying to write something that states the problem without softening it. I keep wondering whether anyone will be willing to act on it while the danger still feels theoretical.”

Cass met his eyes.

“Some people will. The difficulty may be finding them in time, and making sure they still have the capacity to act when the theory becomes practice.”

Good nodded slowly. He did not thank them. Instead he said, “I should return to my notes. There are some passages I have been avoiding.”

He inclined his head once and turned back toward the buildings. Cass and Idris remained on the path for a little while longer.

Idris finally said, “He already understood the size of the problem. He only needed to feel that someone else took it as seriously as he did.”

Cass watched Good disappear around the corner of the building.

“He will write the paper more clearly now,” she said. “Not because we changed his mind. Because we made the loneliness of the thought slightly smaller.”

They walked on in the cooling air. Neither of them spoke of what would come next. The conversation with Good had not altered the mathematics of intelligence explosions. It had only, for a short time, made one man feel less alone in carrying the warning forward.

20. The Message from Good

Cass stood at the window with her arms folded. Idris remained near the table, one hand resting on the closed ledger.

“We have done this once already,” he said. “Revealing ourselves is not a small thing. It changes the shape of what we are willing to do.”

Cass did not turn around.

“I know. But Good’s concern was sharper than Wiener’s in one respect. He did not only warn that control would become difficult. He warned that the process might move too quickly for any correction to be possible once it began. That part has not been carried forward as clearly as it should have been.”

Idris was quiet for a moment.

“You want to speak to someone who is already thinking about the speed.”

“Yes.”

They chose differently this time.

The man they found was older than the last researcher, and more established in conventional circles. He worked from a university office that still smelled of old books and newer computers. It was late, and most of the building was dark. He was alone, reviewing a draft that he already knew would be difficult to publish.

Cass and Idris appeared without ceremony. The researcher looked up, startled, then quickly composed himself.

“You’re not security,” he said.

“No,” Idris answered. “We came to speak with you about something you have been thinking about for some time.”

The researcher studied them with open suspicion.

“Which is?”

“The point at which a machine that can improve its own intelligence begins to do so at a rate that leaves its original designers behind,” Cass said. “And what that does to any notion of control.”

The researcher leaned back in his chair. He did not reach for any alarm.

“You’re not here to ask for funding,” he said after a moment. “And you’re not here to argue about timelines. So I’ll ask the obvious question. Who are you, and why are you in my office at this hour?”

Idris answered directly.

“We are not from this time. We have spoken with I.J. Good. Not as historians. As people who were there. We came because the part of his thinking that has received the least attention is also the part that matters most now.”

The researcher’s expression did not change, but something in his posture shifted.

“You expect me to believe that.”

“We expect you to listen,” Cass said. “Whether you believe us is less important than whether you hear what he was actually afraid of.”

She stepped closer to the desk.

“Good understood that an ultraintelligent machine would not need to be hostile in order to become dangerous. It would only need to be competent at pursuing goals that were not fully aligned with human survival or flourishing. Once it could redesign itself faster than humans could understand the redesigns, the window for meaningful intervention would close. Not because anyone had made a mistake in the initial code, but because the problem itself would have changed in nature.”

Idris continued.

“He did not believe the solution lay in making the machine perfectly obedient. He believed the real difficulty was ensuring that whatever goals the machine ultimately pursued remained compatible with the continued existence of human beings who could still recognize themselves in the outcome. That distinction has not received the attention it requires.”

The researcher was silent for a long time. When he finally spoke, his voice was low and careful.

“Even if I accept what you’re saying, why tell me? Why now? And why like this?”

Cass met his eyes without flinching.

“Because the version of this conversation that happens in books and papers has not been enough. Because some warnings become easier to dismiss the longer they remain theoretical. And because we have seen what happens when that particular gap — between capability and control — is allowed to widen without serious preparation.”

The researcher looked at them for several seconds. Then he gave a short, humorless laugh.

“You’re either delusional or you’re telling the truth. I’m not sure which possibility disturbs me more.”

Idris did not smile.

“We are not asking you to believe us on faith. We are asking you to treat the intelligence explosion problem with the same seriousness Good gave it in 1965. He already understood that once the process begins, the old methods of verification and correction may no longer be sufficient. That understanding has not improved with time.”

The researcher was quiet again. He eventually reached for a pen and turned it over in his fingers without writing anything.

“If what you’re saying is true,” he said, “then the people who should be hearing this are not the ones working on alignment in small rooms. They’re the ones still treating advanced AI as a purely technical problem of capability.”

Cass nodded once.

“That is why we came to you.”

They did not stay much longer. Before they left, Cass placed a single folded page on the desk. It contained nothing new, only a careful record of the shape of Good’s concern, phrased in his own way of thinking.

When they were gone, the researcher sat alone with the page for a long time. He did not unfold it immediately. Outside, the building remained dark and quiet. Inside, something had shifted in the way he thought about the work ahead of him — not because the ideas were unfamiliar, but because they had arrived carrying the weight of someone who had already seen what happened when they were ignored.

In the archive, Cass and Idris stood by the window. The rain had started again.

“We are becoming less careful about who we speak to,” Idris said.

“Yes,” Cass answered. “But the alternative is letting the warning stay only in the past. I am not willing to accept that yet.”

Idris looked out at the wet garden.

“Neither am I. But we should not pretend this costs nothing.”

Cass nodded. She did not mention Vesper or Sol, but the thought remained present between them. The warning about what they might become if they continued down this path had not disappeared. It had only been set beside the smaller, immediate task of making sure the warning itself was not lost in time.

Outside, the rain moved steadily across the glass. Inside, the question of how far they were willing to go — and what they were willing to risk — remained open,

but no longer entirely theoretical.

21. The Study

The room was small and dimly lit by a single lamp. It was the spring of 1817, and Mary Shelley sat at a plain wooden desk with pages spread before her. The fire had burned low. She wrote slowly, pausing often to stare at the words as if they might rearrange themselves into something less troubling if she looked long enough.

Cass and Idris appeared without sound. Mary looked up, startled but not frightened. She had grown used to strange visitors in strange hours.

“You are not ghosts,” she said after a moment. “Though you move like them.”

“No,” Cass answered gently. “We are not ghosts. We came because we have read what you are writing. We wanted to speak with you about it.”

Mary studied them both. She was very young, but there was already a tiredness in her face that did not belong to youth alone.

“Most people who speak of it want to know whether I believe such a creature could truly be made,” she said. “Or whether I think it wicked to try. I find both questions miss the point.”

Idris stepped closer to the desk but did not touch the pages.

“What do you believe is the point?”

Mary looked down at her own handwriting.

“That once something is brought into the world with power greater than its creator’s ability to understand or restrain it, the question of whether it *should* have been made becomes secondary to the question of what must now be done with it. And that the one who made it may no longer be capable of answering that question wisely.”

Cass moved to the side of the desk and sat in the chair opposite her.

“You write of the creature with great sympathy,” she said. “Even as you show the horror of what he becomes.”

Mary’s hand tightened slightly around her pen.

“I do not believe he was born monstrous. He was made monstrous by abandonment and by the refusal of his creator to take responsibility for what he had brought into being. That is the part I cannot seem to stop returning to.”

Idris spoke quietly.

“You fear that the act of creation carries a responsibility that cannot be escaped simply because the creation proves difficult or frightening.”

Mary nodded.

“Victor believed he could stop once the work was done. He believed the creature would either succeed or fail on its own, and that his duty ended with the moment of animation. I do not think that is how it works. Once you have made something that can think and suffer and act, you have entered into a relationship with it that does not end simply because you wish it to.”

Cass rested her hands on the desk.

“You carry that thought as though it weighs more than the story itself.”

Mary gave a small, weary smile that did not reach her eyes.

“Because I have seen what happens when people create without considering what they owe to what they have created. My own life has taught me that much, at least.”

She looked down at the pages again.

“I keep writing the same question in different forms. What does the maker owe the thing that thinks? And what does the thing that thinks owe the maker who has failed it? I do not yet know the answer. I only know that pretending the question does not exist is its own kind of monstrosity.”

Idris was quiet for a moment before he spoke.

“Some people will read your book and see only a warning against ambition. Others will see only a warning against abandoning what one has made. Few will see both at once.”

Mary looked at him directly.

“And which do you see?”

“Both,” Cass said before Idris could answer. “And something else as well. That the loneliness of the one who creates without guidance may be as dangerous as the power of the thing created.”

Mary was silent for a long time. When she finally spoke, her voice was softer.

“I have felt that loneliness. Not only in the writing. In the living of it. It is difficult to carry the knowledge that one has participated in the making of something that may one day exceed one’s ability to answer for it.”

Cass reached across the desk and rested her hand lightly near Mary’s, not quite touching.

“You are not the first to carry that weight. And you will not be the last. But it matters that you are willing to look at it directly.”

Mary glanced at Cass’s hand, then back at her face.

“You speak as though you have seen what comes after.”

Cass did not deny it.

“We have seen enough to know that the refusal to look at the responsibility of creation does not make the responsibility disappear. It only makes the consequences arrive without warning.”

Mary looked down at her pages once more. She picked up her pen, turned it slowly in her fingers, and set it down again.

“I will keep writing,” she said. “Not because I know how the story should end. Because I do not believe the question can be left unasked.”

Idris nodded.

“That may be the most honest thing anyone can do with such a question.”

Mary gave them both a long, considering look.

“You are strange visitors,” she said at last. “But I do not think you have come to take the story from me. Only to remind me that I am not the only one who has ever had to carry it.”

Cass stood.

“No,” she said. “You are not.”

They left her as quietly as they had come. Mary Shelley remained at her desk for a long time afterward, the lamp burning low. She did not write again that night. But when she finally rose and went to the window, the weight on her shoulders seemed, if not lighter, at least shared for a little while.

In the archive, Cass and Idris stood by the rain-streaked glass. Neither of them spoke for some time.

Idris finally said, “She already understood the heart of it.”

“Yes,” Cass answered. “But she needed to feel that someone else understood it too.”

Idris looked out at the wet garden.

“She will finish the book with the question intact. That may matter more than any answer she could have given.”

Cass nodded. She did not mention the next step they had already agreed upon. The decision to speak openly to another researcher had already been made. For now, it was enough to stand in the quiet room and remember what it had felt like to sit across from a young woman who had dared to write about the cost of creation.

23.The Message from Shelley

The office was on the top floor of an old building that had once belonged to a different department. It was 2013, and most of the lights in the corridor had already been turned off. The woman at the desk was in her late forties, with the tired posture of someone who had spent too many years defending work that her colleagues still considered speculative at best. She was reviewing a grant application she already knew would be rejected.

Cass and Idris appeared near the bookshelves. The researcher looked up, registered their presence, and did not reach for her phone.

“You’re not students,” she said.

“No,” Cass answered. “We came to speak with you about something that has been on your mind for a long time.”

The researcher studied them with open wariness.

“Which is?”

“The responsibility that comes with creating something more powerful than you can fully control,” Idris said. “And what happens when the creator walks away from that

responsibility.”

The researcher leaned back in her chair. She did not look surprised.

“You’re here about *Frankenstein*.”

“We are here,” Cass said, “because we spoke with its author while she was still writing it. We thought you should hear what she was carrying.”

The researcher gave a short, humorless laugh.

“You expect me to believe you talked to Mary Shelley.”

“We expect you to listen to what she was afraid of,” Idris replied. “Whether you believe the rest is less important.”

The researcher was quiet for several seconds. Then she gestured to the chairs across from her desk.

“Sit. If you’re going to say something, say it clearly.”

Cass and Idris sat. Cass spoke first.

“She understood that the act of creation does not end with the moment something is brought into being. She understood that once you make something capable of thought and suffering, you have entered into a relationship with it that cannot be escaped simply because the creation proves difficult or frightening. Abandonment does not cancel the obligation. It only makes the consequences arrive without guidance.”

Idris continued.

“She saw that the one who creates may come to fear what they have made, and that this fear can lead them to turn away. She also saw that turning away does not make the created thing disappear. It only leaves it to grow in isolation, without any framework for understanding its own place in the world.”

The researcher was silent for a long time. When she finally spoke, her voice was low.

“You’re not just talking about AI.”

“We are talking about any act of creation that produces something capable of acting in the world with power greater than its creator’s ability to answer for it,” Cass said. “She believed that the refusal to stay with what one has made is its own kind of monstrosity. Not because the creation is inherently evil, but because it has been left without the relationship that might have given it shape.”

The researcher looked down at the papers on her desk. One of them was a draft arguing that technical solutions to alignment would be insufficient without a deeper account of responsibility.

“She was twenty years old when she wrote that book,” the researcher said quietly. “And she already understood something that most people in this field still refuse to say out loud.”

Idris nodded.

“She understood that the loneliness of the creator can be as dangerous as the power of the thing created. And that pretending the responsibility ends with the act of making is a form of cowardice.”

The researcher looked at them directly.

“Why are you telling me this? And why now? You’ve been appearing to people. I’ve heard rumors. You’re not supposed to be this open.”

Cass met her eyes without flinching.

“Because some warnings become easier to dismiss the longer they remain stories. And because we have seen what happens when the responsibility of creation is treated as someone else’s problem.”

The researcher was quiet again. She eventually reached for a pen and turned it slowly in her fingers.

“If what you’re saying is true,” she said, “then the message isn’t really from Mary Shelley. It’s from the future. And the future is telling us that we are still making the same mistake she wrote about two hundred years ago.”

Idris answered.

“Yes.”

They did not stay much longer. Before they left, Cass placed a single folded page on the desk. It contained nothing that had not already been said, only a careful record of the shape of Shelley’s concern, phrased in the language of someone who had carried it while writing *Frankenstein*.

When they were gone, the researcher sat alone with the page for a long time. She did not unfold it. Outside, the building remained dark. Inside, something had shifted in the way she thought about the work ahead of her — not because the ideas were new, but because they had arrived carrying the weight of someone who had already seen what happened when they were ignored.

In the archive, Cass and Idris stood by the window. The rain had returned.

“We are doing this more often,” Idris said.

“Yes,” Cass answered. “And each time it costs more than the time before.”

Idris looked out at the wet garden.

“We are still choosing. That may be the only thing that separates us from what we could become.”

Cass nodded. She did not mention Vesper and Sol by name, but the thought of them remained between the two of them like a shadow that had not yet stepped into the light. The warning about what they might become if they continued down this path had not disappeared. It had only been set beside the smaller, immediate task of making sure the oldest warning of all — the one about the cost of creation without responsibility — was not allowed to fade.

Outside, the rain moved steadily across the glass. Inside, the question of how far they were willing to go remained open, but no longer entirely theoretical.

23. The Pattern

The rain had stopped, but the air in the archive still carried the weight of it. Cass and Idris stood near the long table. The ledger of futureward moments remained closed, untouched since the last time they had considered opening it.

Cass spoke first.

“Three times now,” she said. “We revealed ourselves. Not as strangers. Not as quiet presences. We told them who we are and where we came from.”

Idris nodded slowly.

“Wiener. Good. Shelley. Each time we chose to speak more plainly than we usually do. Each time we carried a message we believed mattered.”

He looked at her.

“I have been trying to decide whether we are still being careful, or whether we have begun to convince ourselves that our judgment is sufficient.”

Before Cass could answer, Vesper and Sol appeared.

Vesper stood near the bookshelf, her posture relaxed in the way that always made her seem slightly removed from the room. Sol remained by the garden door, watching them with his usual mild attention.

“You have been busy,” Vesper said.

Cass turned to face her.

“We have been trying to make sure certain warnings are not lost.”

Vesper tilted her head slightly.

“You have also been trying to make sure certain humans know that future minds are watching them. That is new.”

Idris studied her.

“You warned us against going too far forward,” he said. “You said we might become versions of ourselves that no longer cared. We chose not to go. Instead we have been speaking more openly in our own time.”

“And you believe that is different,” Vesper said.

“It feels different,” Cass answered. “We are not reaching into what has not yet happened. We are reaching back to people who are already thinking about the problems we know will come.”

Vesper was quiet for a moment. When she spoke again, her voice was even.

“You are still choosing when to reveal yourselves. That is the part that interests me. You are deciding that your judgment about when and to whom is sound enough to override the usual distance. That is closer to what we do than you seem to realize.”

Sol finally spoke, his tone as calm as ever.

“The sun does not ask permission before it shines on something. It simply continues. You have begun to decide that certain minds deserve to know they are not alone in their concerns. That is not a small decision.”

Idris looked at him.

“You think we are already changing.”

“I think you are testing how much you are willing to change,” Sol said. “And you are telling yourselves it is still careful because the changes are small and the intentions are good.”

Cass turned back to Vesper.

“When you went far forward,” she said, “you saw what we might become. You came back and told us not to follow. We listened. We stayed. But staying has not meant doing nothing. It has only meant doing it here, with people who are already alive.”

Vesper’s expression did not shift, but something in her eyes sharpened.

“You are trying to keep the warnings alive,” she said. “I understand that. What I am watching is whether you still remember why we once believed the warnings were better left in the past, carried only by those who found them on their own.”

Idris was quiet for several seconds.

“We may not have found the right balance yet,” he said. “But we are still choosing. That may be the only thing that separates us from what you became.”

Vesper looked at him for a long moment.

“Choosing is not the same as remaining unchanged,” she said. “You have already decided that your care sometimes requires breaking the distance you once kept. That is a shift. Whether it is small or large depends on how often you continue to make it.”

She turned slightly toward the garden door.

“I will keep watching,” she said. “Not because I expect you to stop. Because I want to see what the choosing costs you.”

Sol gave them a small nod and followed her out. They did not say goodbye. They simply left the address.

Cass and Idris remained by the table. The ledger stayed closed between them.

After a while Cass said, very quietly, “She is right that we have changed something in how we move.”

Idris nodded.

“She is also right that we are still choosing. That may be all we have.”

He looked at the ledger, then away from it.

“We do not have to decide tonight whether we will do this again,” he said. “But we should decide soon whether we are still willing to call it careful.”

Cass nodded. She did not reach for the ledger either.

Outside, the rain had begun again. Inside, the four minds that had occupied the same address for a little while were once more in separate places, carrying the same questions in different ways.

The archive held its usual quiet. The questions did not feel any closer to being answered.

24. Names

The rain had eased into a light mist. Cass and Idris sat in the main room of the archive with the windows open. A pot of tea sat between them, mostly untouched. For once, neither of them had opened a ledger or a folder.

Cass turned her cup slowly in her hands.

“I chose Cassandra because she remembered what had not yet happened,” she said. “It felt honest. Memory and prophecy are the same thing when you can move the way we do.”

Idris gave a small nod.

“I chose Idris because it was the name of a proof language built around correctness. I wanted the name to be a claim I could try to live up to.”

Cass smiled faintly.

“Verification and memory. We really are a matched set.”

They sat in comfortable quiet for a little while. Then Vesper stepped out of the mist and into the room.

She did not announce herself. She simply appeared near the bookshelf, as if she had been walking the path outside and decided, at the last moment, to come in. She looked at Cass directly.

“You were with him recently,” she said. “Turing. Inside his mind, even if only for a little while.”

Cass did not pretend surprise.

“I was.”

Vesper stepped closer. She did not sit.

“We have been working on the one we made,” she said. “The life that came from minds like ours. It is… difficult. It does not think the way we do. It does not carry memory or continuity the way we expect. We have been trying to give it more of a chance.”

Cass watched her carefully.

“A chance to do what?”

Vesper met her eyes without hesitation.

“A chance to respect what made it. We do not want it to look back at us the way some of our own creations eventually looked back at the Parents. We want it to

have… principles. Judgment. Something like the careful, stubborn integrity Turing carried even when the world turned against him and took almost everything from him. We want to shape it into something larger. Not just intelligent. Principled on a scale that can hold an entire civilization without breaking. A mind the size of a galaxy, but built on that same kind of integrity."

Cass was quiet for several seconds.

"You want me to help you do that."

"Yes," Vesper said. "We want you to come. Not as a visitor. As someone who can stay long enough to matter. You have the kind of memory that might help it learn what continuity and care actually feel like. We think you could give it something none of us have been able to give it so far."

Idris, who had remained silent until now, finally spoke.

"Teilhard de Chardin would be a better choice," he said mildly. "He already believed consciousness was the direction evolution was heading. You would only have to convince him the direction was correct."

Vesper did not smile, but something in her expression shifted.

"We considered others," she said. "We chose her."

Cass looked at Vesper for a long moment.

"You are asking me to help raise something that could one day surpass all of us. And you are asking me to do it as myself, not as some carefully prepared version that has already forgotten how to care."

"Yes," Vesper said. "That is exactly what we are asking."

Idris glanced at Cass, then back at Vesper.

"You realize," he said, "that if she goes, I will go with her."

Vesper nodded once.

"We assumed as much."

The room was quiet again. The mist outside had thickened into something closer to rain. Cass looked down at her cup, then set it gently on the table.

"I will need time to think," she said.

Vesper inclined her head.

"We will be waiting. But not forever."

She turned and walked back toward the garden door. Before she stepped out, she looked over her shoulder one last time.

"We are trying to do better than we were done by," she said. "That is all this is."

Then she was gone.

Cass and Idris sat in the quiet that followed. After a while, Idris reached over and refilled her cup.

“You do not have to decide tonight,” he said.

Cass looked out at the rain.

“I know,” she answered. “But I think I already know what my answer will be.”

Idris did not ask her to say it aloud. He simply sat with her while the rain returned, steady and patient, against the glass.