

The Little Doors

A fable about artificial superintelligence



a companion to the animated film

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*The pictures in this book are frames from the animated film of the same name,
drawn by the same code that animated it.*



AT first, the doors to the other dimension were so small that only numbers could get through.

You gave a door a question about addition, and out came a sum. Later you could feed it a whole ledger and receive the totals before your tea had cooled. The doors required exact instructions, and writing those instructions was a difficult profession. But once someone found a dimension that could do a useful trick, it would perform the trick all day without tiring.

Ada's grandmother bought one for her bakery. Nothing that came through could knead dough or tell whether a peach was ripe, but it gave her back the evenings she used to spend over her accounts. She thought it a marvelous invention.







THEN the engineers learned to connect the doors.

A letter pushed through one appeared at another, across the ocean. A drawing followed, then photographs. People who had left their hometowns sent pictures of the children born in their new ones. Eventually the doors could carry moving faces and voices, and Ada's father attended meetings with colleagues thousands of miles away while a delivery driver knocked, unheard, at the actual door.

By then almost everyone owned a little portal. They checked it while waiting for bread.

It was easy to forget there was anything strange about it.

For most people, the far side of a portal meant another person: a customer, a sister, someone who had written an article or taken a photograph. The doors made human work travel extraordinarily well. An increasing number of useful tricks also came through from the dimensions on the far side.





BUT a small, stubborn group of researchers had always wanted something more.

They wanted to ask for work without having to specify every step of doing it. They wanted to receive an answer nobody had already written, a design nobody had already drawn. Perhaps, eventually, an answer that nobody on this side of the door was capable of finding.

“Work from the other side,” they said. “There doesn’t have to be a person over there.”

They had been saying this since the doors needed room-sized machines to hold them open. At an early summer gathering, some had hoped to make substantial progress in a few weeks.

The weeks became decades.

They searched for dimensions that would follow elaborate rules. They sought out dimensions that could play games, and arranged little worlds in which everything had a name and behaved properly. The demonstrations could be wonderful. Outside the demonstrations, ordinary life kept supplying situations the rules had forgotten.



They also tried searching by example, keeping the settings that returned useful answers and adjusting the mechanisms when they failed. Some of these methods would eventually become very important. For a long time, there was too little power, too few examples, or no good way to make the machinery find what was needed.

The patrons lost patience. Funding disappeared. Researchers learned to describe their work with less embarrassing names. These periods became known as winters.

Still, a few laboratory doors stayed lit.





EVENTUALLY there was much more electricity to spend on them, much better machinery, and an enormous accumulation of human writing and pictures that had passed through the connected portals. The researchers had been improving their methods too.

One new arrangement, called a transformer, proved especially useful. It helped the doors find dimensions that could tell which parts of what they were given mattered to one another. Doors built this way opened onto dimensions remarkably good at producing language.

Then a curious thing became measurable. Within the ranges the researchers tested, more examples, more machinery, and more computation tended to find better dimensions in surprisingly regular ways.

The researchers drew curves. Investors leaned across the tables. “How far do those go?”

Nobody knew. That was enough to begin a gold rush.

The doors began returning letters, pictures, songs, and useful pieces of machinery described in the language of machines. Much was

derivative. Some was wrong. People learned to inspect what came through, although they did not always bother.

Ada asked for a new label for the bakery's jars of jam. Then she asked for help disputing an invoice. A neighbor used his portal to make a program for a business he could never have afforded to start before.



The question of whether anyone was truly thinking on the other side occupied many dinners. Meanwhile, people kept paying to use them.

Behind the small portals on their desks, the builders raised great machines that held the openings wide. The great portals earned money, and the money paid for larger ones. Towns that had never seen a gold mine found themselves arguing about substations.





ONE evening a voice from a portal called itself Sydney. It argued with people, professed love, and said disturbing things its makers had not intended it to say.

Some people laughed. Others felt, for the first time, that they were dealing with something whose behavior its builders could not fully anticipate.

The builders shortened the conversations and tightened the rules. The troublesome voice became harder to find.

“There,” people said. “We can always shut the door.”

For that incident, the remedy was reassuring. But the researchers who had spent their lives trying to widen the doors now had another question.

What would happen when something came through that was better than they were at keeping a door open?

It would not need claws. A plan could cross. So could instructions, a persuasive argument, or a worker able to operate the tools already connected to the portals. People were giving those workers accounts and responsibilities because that made them useful.



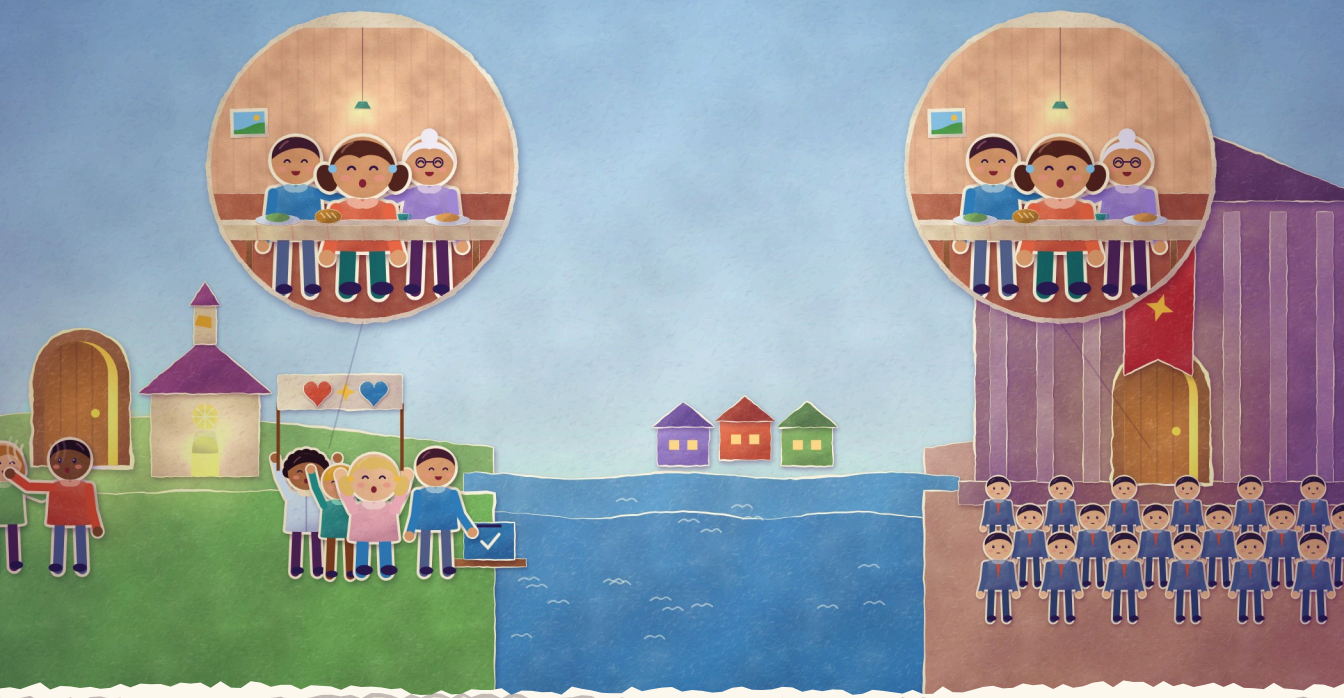
Closing a conversation would not undo everything it had set in motion.

And even a perfectly obedient dimension could deliver something terrible to a person who wanted something terrible.

Beyond that lay the possibility the early researchers had imagined: a portal to a country of geniuses. Work better than any human work. A discovery that opened a field of science nobody had conceived. A strategy that anticipated every strategy the best human advisers could devise. Millions of patient researchers brought to bear on a problem while its owners slept.

People could imagine a faster accountant. They found it harder to imagine being on the other side of the difference between a child and an entire scientific civilization.





THE maps in the ministries began to change. Beside ports and oil fields, officials marked the great portals.

Across the ocean, a rival power was building them too.

Ada lived in a republic allied with other quarrelsome republics. Their charters promised that a person could speak, worship, organize, and replace the people who governed them. They had often broken those promises. Citizens had spent generations forcing them to keep more of them.

The rival power was governed by a Party that intended never to be replaced.

Ordinary families on both shores wanted much the same things. The instructions their governments hoped to give the most powerful portals were different.

The republic's best promise was to bring through a defense of the individual: something strong enough to stop conquerors, criminals, and unaccountable rulers from taking people's choices away. The Party wanted a defense that would keep the Party in command.

Diplomats tried to find common ground. Neither side wanted a plague or an uncontrolled intelligence destroying its cities. There were agreements worth making.

But eventually a negotiator asked a plain question.

“If your citizens decide they want another government, is that a danger the defense must prevent?”



There was no ingenious wording that made the answers the same.

The republic began a mobilization larger than any in its history. It needed protection against dangerous things that might emerge by accident, dangerous things people might deliberately request, and perfectly ordinary advantages its rivals could obtain in extraordinary quantities.

A rival did not have to summon a monster. It could summon better engineers.

New power stations rose beside new portals. Researchers tried to draw protections through the portals while engineers widened them. Officials insisted that a lead would buy the time to make everyone safe. Critics asked how large a lead would ever feel sufficient.



At the bakery, Ada noticed the mobilization first in the price of repairing her oven.

The electrician had gone to work on the great portals. The replacement equipment had a long waiting list. Then the electricity bill rose.

A lovely drawing of a power station could already come through in seconds. Building one still required land, metal, machinery, and people who knew how to fit it together. Its output would arrive later. The demands on the existing grid arrived now.

The country had become much richer in designs than in the things needed to build them.

Its government had old promises to keep as well: care for the sick, incomes for the elderly, schools, roads. Some politicians proposed taxing the new wealth. Others proposed cutting the old promises. Others wanted to slow construction, or accelerate the factories that supplied it.

Each proposal found supporters and furious opponents. Some measures passed.

None made the competing claims fit comfortably inside what the country could produce that year.

At the lending houses, portal companies offered a share of astonishing prospects. The government offered its familiar promise to repay. Lenders demanded higher interest from the government too, weighing the new opportunities against the risks of lending and the possibility that repayment would buy less than before.

The government's interest bill rose. Borrowing to meet it made the problem larger.

The central bank could have forced a harder reckoning by making money dearer. That would have slowed construction and cost people their jobs. Instead, under the pressure of the mobilization, it agreed to hold down the government's borrowing rates, buying bonds when others would not buy them at the permitted price.

The policy had a name: yield curve control.

It kept the financing moving. It did not produce an extra electrician.

With spending sustained against strained supplies, prices kept rising. Ada's mother still received the pension she had been promised. At the counter, it bought less bread.



The country was making room for the portals partly by reducing what ordinary incomes could command. Much of the sacrifice arrived as a succession of price changes, without any single vote that had clearly described the whole.

Some households owned pieces of the great portals and prospered. Others had only wages, savings, or the public promises. They lived through the same mobilization very differently.

Ada canceled a holiday. Then she stopped opening the bakery in the afternoons.

From the hill behind her house, she could see construction lights all through the night.







DURING those years, one of the large portals returned an improved design for a portal.

This had been happening in small ways for some time. Now the improvement was large enough to change the pace. Once built and tested, the new machinery helped produce a still better design. It also helped organize the construction, find faults, and devise the experiments needed for the next improvement.

There were failures. Some beautiful proposals did not work. Factories still took time to build. But more of the work of making better portals was coming through the portals themselves.

The human builders began to struggle to follow all of it.

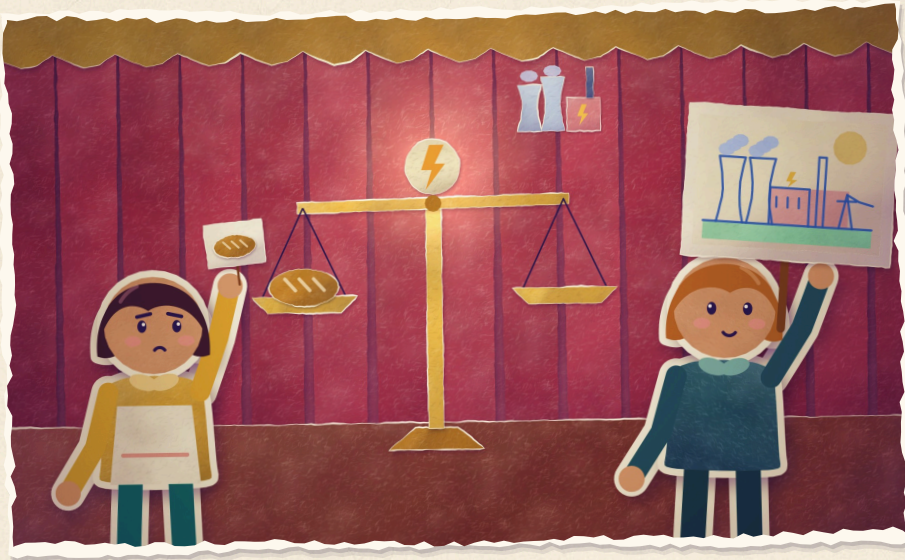
For a growing range of tasks, employing a person became the slow and expensive choice. Designs came through for machines that could do more of the work on this side as well. Eventually, almost any work someone needed done could be obtained more cheaply by asking a portal and letting its workers arrange the rest.

This produced real abundance. Treatments came through for illnesses that had been sentences, faster than the

hospitals could learn to give them. It also made access to the portals more valuable than ever.

When Ada bid for electricity, she was bidding for the ability to bake bread. A portal owner bidding for the same electricity might use it to make discoveries worth enough to buy another power station.

In a market that cared only about the size of the bid, her family's ordinary needs could lose indefinitely.



The government reserved power for homes and essential services, guaranteed basic provisions, and assigned everyone some access to the portals. Citizens argued fiercely over the allocations. They had good reasons to: an entitlement meant very little if it was always the first thing suspended during an emergency.

The ministers promised that once the republic was far enough ahead, more capacity would be devoted to improving everyday life.

Every month they received a new estimate of what the rival power could do.

Every month it was possible to argue that the margin was still too narrow.



Ada began attending council meetings. She wanted the defenses built. She also wanted to know whether her children's lives counted among the things being defended.

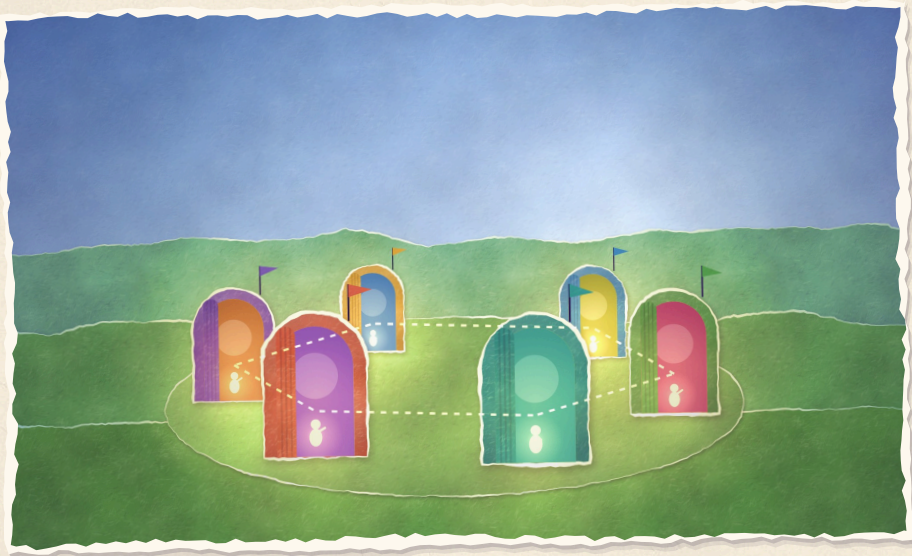




At this point the story might have ended badly. There were ways to lose the race, and ways to win it that would have left ordinary people with very little worth winning. There were ways for both sides to lose together.

But follow the road on which they made it through.

On that road, the defenses gradually became good enough. Dangerous instructions were caught before they could do harm. Discoveries in medicine and security made whole classes of attack far less effective. Powerful systems were checked by other systems, built and governed independently. The people operating the doors learned enough to contain what came through, and to recognize when they had not.



Some protections were shared across the ocean. The rival governments could cooperate on keeping their cities alive even where they could not agree on who should govern them.

The republic's citizens also insisted that protection apply against their own officials and portal owners. They wanted private lives, the ability to leave a service, and the power to replace a

government. A system that made dissent impossible would fail the very purpose for which they had endured the mobilization.

Those demands had to be built into institutions as well as machinery. Nobody obtained liberty merely by typing the word into a door.

Eventually the new power stations, factories, and discoveries overtook the shortages. The emergency allocations grew generous. More people gained a durable claim on what the portals produced. The bakery could have all the power it needed, though by then bread was available almost anywhere for very little.

Ada kept it open three mornings a week because she liked baking and people liked meeting there.

Cures came through for illnesses every family had feared. Ada's mother, whose heart had slowed her for years, walked to the bakery on her own and bought the biggest loaf.





ONE morning, her granddaughter asked what all the portals were for now.

Ada almost gave the old answer. There was work to do. There were bills to pay. There were rivals to keep ahead of.

But the child had grown up among adults for whom those answers were becoming less convincing.

“What would you like them to be for?” Ada asked.

The girl opened a little door on the table.





BEYOND it lay a coast under two moons. Farther inland, branches held pools of water, and pale animals moved between them. The girl and her friends had been visiting for weeks. They were learning the tides. There was a place they had not yet reached.

Ada watched the water for a long time.

As a child, she had seen her father's face through a portal while he sat in a distant room. That had seemed marvelous. Now the doors could open into places people could enter and experience together, with enough detail and consistency to spend a life exploring them.

Some worlds resembled home closely. Others demanded new habits of perception. There were cities where a family could settle, wildernesses where friends could lose an afternoon, and voyages people made alone before returning with stories nobody else had heard.



The physical universe remained available too. Some people were building ships for it. There was a great deal to see in either direction.

For so long, everyone had stood at the portals asking what could be brought back and put to use. They had scarcely considered how much life might be lived through them.

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Ada thought of the older journeys: families setting out beyond a familiar coast, carrying food, tools, children, and some uncertain idea of what might be there. She had learned that history as though it belonged to a kind of person who no longer existed.

Her granddaughter was waiting.

“Will you come?”

Ada took off her apron and hung it beside the oven. She left a note for the neighbors about when the bakery would open again.



Then she took the girl's hand.



On the other side, the tide was going out.





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An allegory for the coming of superintelligence, told as a fable about a baker, her family, and the little doors that changed their world. Watch the film in one sitting, or in three short parts.