



EXHALATION

TED CHIANG



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THIS IS A BORZOI BOOK
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ANXIETY IS THE DIZZINESS OF FREEDOM

NAT COULD HAVE USED A CIGARETTE, BUT COMPANY POLICY forbade smoking in the store, so all she could do was get more and more nervous. Now it was a quarter to four, and Morrow still hadn't returned. She wasn't sure how she'd explain things if he didn't get back in time. She sent him a text asking where he was.

A chime sounded as the front door opened, but it wasn't Morrow. A guy with an orange sweater came in. "Hello? I have a prism to sell?"

Nat put her phone away. "Let's take a look at it."

He came over and put the prism on the counter; it was a new model, the size of a briefcase. Nat slid it around so she could see the numeric readout at one end: the activation date was only six months ago, and more than 90 percent of its pad was still available. She unfolded the keyboard to reveal the display screen, tapped the ONLINE button, and then waited. A minute went by.

"He might have run into some traffic," said Orange Sweater uncertainly.

"It's fine," said Nat.

After another minute the ready light came on. Nat typed

Keyboard test.

A few seconds later a reply came back:

Looks good.

She switched to video mode, and the text on the screen was replaced by a grainy image of her own face looking back at her.

Her parallel self nodded at her and said, "Mic test."

"Loud and clear," she replied.

The screen reverted to text. Nat hadn't recognized the necklace her paraself had been wearing; if they wound up buying the prism, she'd have to ask her where she got it. She looked back at the guy with the orange sweater and quoted him a price.

His disappointment was obvious. "Is that all?"

"That's what it's worth."

"I thought these things got more valuable over time."

"They do, but not right away. If this was five years old, we'd be having a different conversation."

"What about if the other branch has something really interesting going on?"

"Yeah, that'd be worth something." Nat pointed at his prism.

"Does the other branch have something interesting going on?"

"I . . . don't know."

"You'll have to do the research yourself and bring it to us if you want a better offer."

Orange Sweater hesitated.

"If you want to think it over and come back later, we're always here."

"Can you give me a minute?"

"Take your time."

Orange Sweater got on the keyboard and had a brief typed exchange with his paraself. When he was done, he said, "Thanks, we'll be back later." He folded the prism up and left.

The last customer in the store had finished chatting and was ready to check out. Nat went to the carrel he'd been using, checked the data usage on the prism, and carried it back to the storeroom. By the time she had finished ringing him up, the three customers with four o'clock appointments had arrived, including the one who needed the prism Morrow had with him.

"Just a minute," she told them, "and I'll get you checked in." She went to the storeroom and brought out the prisms for the two other customers. She had just set them up in their carrels when Morrow came through the front door, elbows splayed as he carried a big cardboard carton. She met him at the counter.

"You're cutting it close," she whispered, glaring at him.

"Yeah, yeah, I know the schedule."

Morrow took the oversize box into the storeroom and came out with the prism. He set it up in a carrel for the third customer with seconds to spare. At four o'clock, the ready lights on all three prisms came on, and all three customers began chatting with their paraselves.

Nat followed Morrow into the office behind the front counter. He took a seat at the desk as if nothing had happened. "Well?" she asked. "What took you so long?"

"I was talking to one of the aides at the home." Morrow had just come back from seeing one of their customers. Jessica Oehlsen was a widow in her seventies with few friends and whose only son was more of a burden than a comfort. Almost a year ago she'd started coming in once a week to talk with her

paraself; she always reserved one of the private booths so she could use voice chat. A couple months ago she had fractured her hip in a bad fall, and now she was in a nursing home. Since she couldn't come to the store, Morrow brought the prism to her every week so she could continue her regular conversations; it was a violation of SelfTalk's company policy, but she paid him for the favor. "He filled me in about Mrs. Oehlsen's condition."

"What about it?"

"She's got pneumonia now," said Morrow. "He said it happens a lot after a broken hip."

"Really? How does a broken hip lead to pneumonia?"

"According to this guy, it's because they don't move around a lot and they're zonked on oxy, so they never take a deep breath. Anyway, Mrs. Oehlsen's definitely got it."

"Is it serious?"

"The aide thinks she'll be dead within a month, two tops."

"Wow. That's too bad."

"Yeah." Morrow scratched his chin with his blunt, square fingertips. "But it gave me an idea."

That was no surprise. "So what is it this time?"

"I won't need you on this one. I can handle it by myself."

"Fine by me. I've got enough to do."

"Right, you've got a meeting to go to tonight. How's that going?"

Nat shrugged. "It's hard to tell. I think I'm making progress."

. . .

Every prism—the name was a near acronym of the original designation, "Plaga interworld signaling mechanism"—had two LEDs, one red and one blue. When a prism was activated, a quantum measurement was performed inside the device, with

two possible outcomes of equal probability: one outcome was indicated by the red LED lighting up, while the other was indicated by the blue one. From that moment forward, the prism allowed information transfer between two branches of the universal wave function. In colloquial terms, the prism created two newly divergent timelines, one in which the red LED lit up and one in which the blue one did, and it allowed communication between the two.

Information was exchanged using an array of ions, isolated in magnetic traps within the prism. When the prism was activated and the universal wave function split into two branches, these ions remained in a state of coherent superposition, balanced on a knife's edge and accessible to either branch. Each ion could be used to send a single bit of information, a yes or a no, from one branch to the other. The act of reading that yes/no caused the ion to decohere, permanently knocking it off the knife's edge and onto one side. To send another bit, you needed another ion. With an array of ions, you could transmit a string of bits that encoded text; with a long-enough array, you could send images, sound, even video.

The upshot was that a prism wasn't like a radio connecting the two branches; activating one didn't power up a transmitter whose frequency you could keep tuning into. It was more like a notepad that the two branches shared, and each time a message was sent, a strip of paper was torn off the top sheet. Once the notepad was exhausted, no more information could be exchanged and the two branches went on their separate ways, incommunicado forever after.

Ever since the invention of the prism, engineers had been working to add more ions to the array and increase the size of the notepad. The latest commercial prisms had pads that were

a gigabyte in size. That was enough to last a lifetime if all you were exchanging was text, but not all consumers were satisfied with that. Many wanted the ability to have a live conversation, preferably with video; they needed to hear their own voice or see their own face looking back at them. Even low-resolution, low-frame-rate video could burn through a prism's entire pad in a matter of hours; people tended to use it only occasionally, relying on text or audio-only communications most of the time in order to make their prism last for as long as possible.

. . .

Dana's regular four o'clock appointment was a woman named Teresa. Teresa had been a client for just over a year; she had sought out therapy primarily because of her difficulty in maintaining a long-term romantic relationship. Dana had initially thought her issues stemmed from her parents' divorce when she was a teenager, but now she suspected that Teresa was prone to seeking better alternatives. In their session last week, Teresa had told her that she had recently run into an ex-boyfriend of hers; five years ago she had turned down a marriage proposal from him, and now he was happily married to someone else. Dana expected that they would continue talking about that today.

Teresa often started her sessions with pleasantries, but not this time. As soon as she sat down she said, "I went to Crystal Ball during my lunch break today."

Already suspecting the answer, Dana asked, "What did you ask them about?"

"I asked them if they could find out what my life would look like if I had married Andrew."

"And what did they say?"

"They said maybe. I hadn't realized how it worked; a man

there explained it to me.” Teresa didn’t ask if Dana was familiar with it. She needed to talk it through, which was fine; she was often able to untangle her thoughts that way with only slight prompting from Dana. “He said that my decision to marry Andrew or not didn’t cause two timelines to branch off, that only activating a prism does that. He said they could look at the prisms they had that had been activated in the months before Andrew proposed. They would send requests to the parallel versions of Crystal Ball in those branches, and their employees would look up the parallel versions of me and see if any of them were married to him. If one of me was, they could interview her and tell me what she said. But he said there was no guarantee that they’d find such a branch, and it cost money just to send the requests, so they would have to charge me whether they found one or not. Then, if I want them to interview the parallel version of me, there’d be a separate charge for that. And because they’d be using prisms that are five years old, everything would be expensive.”

Dana was glad to hear that Crystal Ball had been honest about their claims; she knew there were data brokers out there that promised results they couldn’t deliver. “So what did you do?”

“I didn’t want to do anything without talking to you first.”

“Okay,” said Dana, “let’s talk. How did you feel after the consultation?”

“I don’t know. I hadn’t considered the possibility that they might not be able to find a branch where I said yes to Andrew. Why wouldn’t they be able to find a branch like that?”

Dana considered trying to lead Teresa to the answer herself, but decided it wasn’t necessary. “It could mean that your decision to reject him wasn’t a close call. It may have felt like you were

on the fence, but in fact you weren't; your decision to turn him down was based on a deep feeling, not a whim."

Teresa looked thoughtful. "That might be a good thing to know. I wonder if I ought to just have them do the search first. If they don't find a version of me that married Andrew, then I can just stop."

"And if they do find a version that married Andrew, how likely is it that you'll ask them to interview her?"

She sighed. "A hundred percent."

"So what does that tell you?"

"I guess it tells me that I shouldn't have them do the search unless I'm sure I want to know the answer."

"And do you want to know the answer?" asked Dana. "No, let's put it another way. What would you like the answer to be, and what are you afraid it might be?"

Teresa paused for a minute. Eventually she said, "I guess what I'd like to find out is that a version of me married Andrew and then divorced him because he wasn't the right guy for me. What I'm afraid of finding out is that a version of me married him and is now blissfully happy. Is that petty of me?"

"Not at all," said Dana. "Those are perfectly understandable feelings."

"I suppose I just have to decide if I'm willing to take the risk."

"That's one way to think about it."

"What's another?"

"Another would be to consider whether anything you learn about the other branch would actually be helpful. It could be that nothing you find out about some other branch will change your situation here in this branch."

Teresa frowned as she thought it over. "Maybe it wouldn't

change anything, but I'd feel better knowing that I had made the right decision." She went silent, and Dana waited. Then Teresa asked, "Do you have other clients who've gone to data brokers?"

Dana nodded. "Many."

"In general, do you think it's a good idea to use one of these services?"

"I don't think there's a general answer to that. It depends entirely on the individual."

"And you're not going to tell me whether or not I should do it."

Dana smiled. "You know that's not my role."

"I know, I just figured it couldn't hurt to ask." After a moment, Teresa said, "I've heard that some people become obsessed with prisms."

"Yes, that can happen. I actually facilitate a support group for people whose prism use has become an issue for them."

"Really?" Teresa seemed briefly tempted to ask for details, but instead she said, "And you're not going to warn me away from using Crystal Ball's services?"

"Some people have issues with alcohol, but I'm not going to advise my clients to never take a drink."

"I suppose that makes sense." Teresa paused, and then asked, "Have you ever used one of these services yourself?"

Dana shook her head. "No, I haven't."

"Have you ever been tempted?"

"Not really."

She looked at Dana curiously. "Don't you ever wonder if you made the wrong choice?"

I don't have to wonder; I know. But aloud Dana said, "Of course. But I try to focus on the here and now."

. . .

The two branches connected by a prism start out as perfectly identical except for the result of the quantum measurement. If a person has resolved to base a huge decision on the measurement—"If the blue LED lights up, I will detonate this bomb; otherwise, I will disarm it"—then the two branches will diverge in an obvious manner. But if no one takes any action as a result of the measurement, how much will the two branches diverge? Can a single quantum event by itself lead to visible changes between the two branches? Is it possible for broader historical forces to be studied using prisms?

These questions had been a matter of debate ever since the first demonstration of communication with a prism. When prisms with pads about a hundred kilobytes in size were developed, an atmospheric scientist named Peter Silitonga conducted a pair of experiments to settle the matter.

At the time, a prism was still a large array of laboratory equipment that used liquid nitrogen for cooling, and Silitonga required one for each of his planned experiments. Before activating them he made a number of arrangements. First he recruited volunteers in a dozen countries who were not currently pregnant but were trying to conceive children; in one year's time, the couples who'd successfully had a child agreed to have a twenty-one-loci DNA test performed on their newborns. Then he activated the first of his prisms, typing the keyboard command that sent a photon through a polarization filter.

Six months later, he scheduled a software agent to retrieve weather reports from around the globe in one month's time. Then he activated the second of his prisms, and waited.

. . .

Nat liked that, no matter what the issue was, support-group meetings always had coffee. She didn't care so much whether the coffee was good or bad; what she appreciated was that holding the cup gave her something to do with her hands. And even though this support group's location wasn't the nicest she'd ever seen—a pretty typical church basement—the coffee was usually really good.

Lyle was at the coffeemaker pouring himself a cup as Nat walked up. "Hey there," he said. He handed her the cup he had just filled and started pouring another for himself.

"Thanks, Lyle." Lyle had been attending the group just a little longer than Nat had, about three months. Ten months ago he'd been offered a new job and couldn't decide whether he should accept it. He'd bought a prism and used it as a coin flip: blue LED accepts the offer, red LED rejects it. The blue LED had lit up in this branch, so he took the new job while his paraself stayed at his existing job. For months they both felt happy with their situations. But after the initial novelty of the new job wore off, Lyle found himself disenchanted with his duties, while his paraself got a promotion. Lyle's confidence was shaken. He pretended he was happy when communicating with his paraself, but he was struggling with feelings of envy and jealousy.

Nat found them a couple of empty chairs next to each other. "You like sitting up front, right?" she asked.

"Yeah, but you don't have to if you don't want to."

"It's fine," she said. They sat and sipped their coffee while waiting for the meeting to start.

The group's facilitator was a therapist named Dana. She was

young, no older than Nat, but seemed to know what she was doing. Nat could have used someone like her in her previous groups. Once everyone was seated, Dana said, "Does anyone want to start us off today?"

"I'll go," said Lyle.

"Okay, tell us about your week."

"Well, I looked up the Becca here." Lyle's parallel self had been seeing a woman named Becca for months, after a chance meeting at a bar.

"Bad idea, bad idea," said Kevin, shaking his head.

"Kevin, please," said Dana.

"Sorry, sorry."

"Thanks, Dana," said Lyle. "I messaged her, I told her why I was messaging her, I sent her a photo of my paraself and her paraself together, and I asked if I could take her out for coffee. She said sure."

Dana nodded for him to continue.

"We met on Saturday afternoon, and at first we seemed to hit it off. She laughed at my jokes, I laughed at hers, and I was thinking, I'll bet this is just how it went when my paraself met her. I felt like I was living my best life." He looked embarrassed.

"And then it went all wrong. I was saying how great it was to meet her, and how I felt like things were turning around for me, and before I knew it I told her how using the prism had screwed things up for me. I talked about how jealous I was of my paraself for having met parallel Becca, how I was always second-guessing myself now, and on and on. And I could hear how pathetic I sounded as I was saying it. I knew I was losing her, so out of desperation I . . ." He hesitated, and then said, "I offered to let her borrow my prism so she could talk with parallel Becca, and

that Becca could tell this one what a great guy I could be. You can imagine how well that went over. She was polite, but she made it clear that she didn't want to see me again."

"Thanks for sharing that, Lyle," said Dana. She addressed the rest of the group. "Does anyone want to say anything in response?"

This was an opportunity, but Nat wasn't going to jump in right away. It'd be best if the other group members spoke first.

Kevin started. "Sorry about my earlier remark. I didn't mean that you were dumb for trying it. What I was thinking was it sounded like something I would do, and because of that, I had a bad feeling about how it was going to turn out. I'm sorry it didn't work out better for you."

"Thanks, Kevin."

"And really, it's not a bad idea. The two of you have got to be compatible if your paraselves are a couple."

"I agree with Kevin that the two of you are compatible," said Zareenah. "But the mistake that all of us keep making is that, when we see our paraselves experiencing good fortune, we think we're entitled to the same good fortune."

"I don't think I'm entitled to Becca," said Lyle. "But she's looking for someone, just like I am. If we're compatible, shouldn't that count for something? I know I made a bad first impression, but I feel like our compatibility should be a reason for her to overlook that."

"It'd be nice if she did, but she's under no obligation to do that."

"Yeah," said Lyle grudgingly. "I see what you're saying. I just feel so . . . I know I say this all the time, but I feel envious. Why am I like this?"

Now seemed like a good time. Nat said, "Something hap-

pened to me recently that I think might be similar to what Lyle's going through?"

"Go ahead," said Dana.

"Okay, I've got this hobby where I make jewelry, mostly earrings. I have a little online store where people can buy them; I don't fill the orders myself, I just upload the designs and this company fabs them and mails them to customers." That part was all true, which was good in case anyone wanted to look at her store. "My paraself was just telling me that some influencer happened across one of our designs, and posted about how she loved them, and in the last week my paraself has sold hundreds of earrings. She actually saw someone at a coffee shop who was wearing the earrings.

"The thing is, the design that got all the attention wasn't one she made after I activated the prism; it's one from before. Those exact same earrings are for sale in my store in this branch, but no one's buying them here. She's making money for something we did before our branches diverged, but I'm not. And I resented her for it. Why is she so lucky and I'm not?" Nat saw some others nodding in sympathy.

"And I realized, this didn't feel the same as when I see other people sell a lot of jewelry in their online stores. This is different." She turned to face Lyle. "I don't think I'm an envious person by nature, and I don't think you are, either. We're not always wanting what other people have. But with a prism, it's not other people, it's you. So how can you not feel like you deserve what they have? It's natural. The problem isn't with you, it's with the prism."

"Thanks, Nat. I appreciate that."

"You're welcome."

Progress. That was definitely progress.

Set up a rack of billiard balls and execute a flawless break. Imagine the table has no pockets and is frictionless, so the balls just keep rebounding, never coming to a stop; how accurately can you predict the path of any given ball as it collides against the others? In 1978, the physicist Michael Berry calculated that you could predict only nine collisions before you would need to account for the gravitational effect of a person standing in the room. If your initial measurement of a ball's position is off by even a nanometer, your prediction becomes useless within a matter of seconds.

The collisions between air molecules are similarly contingent and can be affected by the gravitational effect of a single atom a meter away. So even though the interior of a prism is shielded from the external environment, the result of the quantum measurement that takes place when the prism is activated can still exert an effect on the outside world, determining whether two oxygen molecules collide or whether they drift past each other. Without anyone intending it, the activation of the prism inevitably gives rise to a difference between the two branches generated. The difference is imperceptible at first, a discrepancy at the level of the thermal motion of molecules, but when air is turbulent, it takes roughly a minute for a perturbation at the microscopic level to become macroscopic, affecting eddies one centimeter in diameter.

For small-scale atmospheric phenomena, the effects of perturbations double in size every couple of hours. In terms of prediction, that means that an error one meter wide in your initial measurements of the atmosphere will lead to an error a kilometer wide in your prediction of the weather on the following day.

At larger scales, the propagation of errors slows down due to factors like topography and the stratification of the atmosphere, but it doesn't stop; eventually errors on the kilometer scale become errors hundreds or thousands of kilometers in size. Even if your initial measurements were so detailed that they included data about every cubic meter of the Earth's atmosphere, your prediction of the future weather would cease to be useful within a month's time. Increasing the resolution of the initial measurements has a limited benefit; because errors propagate so rapidly at the small scale, starting with data about every cubic centimeter of the atmosphere would prolong the accuracy of the prediction by only a matter of hours.

The growth of errors in weather prediction is identical to the divergence between the weather in the branches on opposite sides of a prism. The initial perturbation is the difference in the collision of oxygen molecules when the prism is activated, and within a month, the weather around the globe is different. Silitonga confirmed this when he and his parallel self exchanged weather reports one month after activating a prism. The weather reports were all seasonally appropriate—there was no location that experienced winter in one branch and summer in the other—but beyond that they were essentially uncorrelated. Without anyone making an effort, the two branches had diverged visibly on a worldwide scale.

After Silitonga published these results, in a paper titled "Studying Atmospheric Upscale Error Propagation with the Plaga Interworld-Signaling Mechanism," historians engaged in heated debates over the extent to which weather could affect the course of history. Skeptics acknowledged that it could affect individuals' daily lives in various ways, but how often were the outcomes of history-making events decided by the weather? Sili-

tonga didn't participate in the debates; he was waiting for his other, yearlong prism experiment to conclude.

. . .

There were times when the clients came in just the right order, and Wednesday afternoons were like that for Dana. The afternoon began with one of her most demanding clients, a man who asked her to make all his decisions for him, whined when she wouldn't, and blamed her whenever he eventually did take an action. So it was a relief to see Jorge immediately afterward, a breath of fresh air to clear out her office. The issues he was dealing with weren't the most interesting she'd ever seen, but she liked having him as a client. Jorge was funny and kind, and always well-intentioned; he was tentative about the therapeutic process, but they'd been making steady progress on his poor self-image and the negative attitudes that were holding him back.

Four weeks ago there had been an incident. Jorge's manager at work was a mean-spirited tyrant who belittled everyone who worked for him; one of the ongoing themes of Dana's sessions with Jorge was helping him to ignore his manager's insults. One day, Jorge had lost his temper and punctured all four tires of his manager's car when he was alone in the parking lot. Enough time had passed that it seemed like there was no risk of him getting caught, and while part of him wanted to pretend that it had never happened, part of him still felt terrible about what he'd done.

They began their session with some small talk; Dana got the sense that Jorge had something he wanted to say. She looked at him expectantly, and he said, "After our session last week, I went to one of those prism brokers, Lydoscope."

Dana was surprised. "Really? What for?"

"I wanted to see how many versions of me acted the same way I did."

"Tell me more."

"I asked them to send questions to six versions of me. Since it's such a recent departure point, it was cheap, so I asked for video. This morning they sent me a bunch of video files, recordings of what my paraselves said."

"And what did you learn?"

"None of my paraselves have punctured their manager's tires. All of them said they've fantasized about it. One came really close on the same day that I did it, but he stopped himself."

"What do you think that means?"

"It means that my puncturing his tires was a freak accident. The fact that I did it doesn't say anything important about me as a person."

Dana knew of people using prisms in a similar way, but it was usually someone justifying their actions by pointing out they might have done something worse. She hadn't encountered this particular version of it before, where the defense was based on their parallel selves behaving better. She certainly hadn't expected it from Jorge. "So you think your paraselves' behavior is a reflection on you?"

"The branches they checked, they were all ones where the departure point was just a month before the incident. That means that those paraselves were just the same as me; they hadn't had time to become different people."

She nodded; he was right about that. "Do you think the fact that you vandalized your manager's car is canceled out by the fact that your paraselves didn't?"

"Not canceled out, but it's an indicator of the type of person I am. If all of my paraselves had punctured his tires, that would

indicate something significant about my personality. That's something Sharon would need to know about." Jorge hadn't told his wife about what he'd done; he'd been too ashamed. "But the fact that they didn't means that I'm fundamentally not a violent person, so telling Sharon about what happened would give her the wrong idea."

Getting him to tell his wife everything was something they'd have to build up to. "So how do you feel, now that you've gotten this information?"

"Relief, I suppose," said Jorge. "I was worried about what it meant that I had done that. But now I'm not so worried."

"Tell me more about that feeling of relief?"

"I feel like . . ." Jorge fidgeted in his chair as he searched for the words. Eventually he said, "I guess I feel like I got the results of a medical test back, and I'm in the clear."

"Like you might have been sick, but it turns out you're not."

"Yes! It was nothing serious. It's not something that's going to be a recurring thing with me."

Dana decided to take a chance. "So let's think of it as a medical test. You had some symptoms that might have indicated something serious, like cancer. But it turns out you don't have cancer."

"Right!"

"Of course it's great that you don't have cancer. But you still had those symptoms. Isn't it worth figuring out what it was that gave you those symptoms?"

Jorge looked blank. "If it's not cancer, what does it matter?"

"Well, it could be something else, something it'd help you to know about."

"I got the answer I needed." He shrugged. "That's good enough for now."

“Okay, that’s fine,” said Dana. No sense in pushing the issue. She was sure he’d get there eventually.

. . .

It’s a commonly held belief that you would have been born in any branch where your parents met and had children, but no one’s birth is inevitable. Silitonga intended his yearlong experiment to show how the act of conception was highly contingent on circumstances, including the day’s weather.

Ovulation is a gradual and regulated process, so the same egg cell emerges from the follicle no matter whether it’s raining or shining that day. The sperm cell that reaches that egg, however, is like a winning Ping-Pong ball siphoned from a lottery drum as it rotates; it’s the result of utterly random forces. Even if the external circumstances surrounding an act of intercourse appear identical in the two branches, it takes only an imperceptible discrepancy to cause one spermatozoon to fuse with the ovum rather than another. Consequently, as soon as weather patterns are visibly different in two branches, all instances of fertilization are affected. Nine months later, every mother around the globe is giving birth to a different infant in each of the two branches. This is immediately evident when the child is a boy in one branch and a girl in the other, but it remains true even when the children are the same sex. The newly christened Dylan in one branch is not the same as the Dylan in the other; the two are siblings.

This is what Silitonga demonstrated when he and his parallel self exchanged the DNA tests of infants born a year after activating a prism, in a paper titled “The Effect of Atmospheric Turbulence on Human Conception.” He had used a different prism from the one in his “Error Propagation” paper to avoid the

question of whether the publication of that experiment's results had somehow created divergences that wouldn't have otherwise occurred. At the time of these children's conceptions, there had been no communication at all between the two branches. Every child had a different chromosomal makeup than their counterpart in the other branch, and the only possible cause had been the outcome of a single quantum measurement.

Some people still argued that the broader course of history wouldn't change between the two branches, but it became a more difficult case to make. Silitonga had shown that the smallest change imaginable would eventually have global repercussions. For a hypothetical time traveler who wanted to prevent Hitler's rise to power, the minimal intervention wasn't smothering the baby Adolf in his crib; all that was needed was to travel back to a month before his conception and disturb an oxygen molecule. Not only would this replace Adolf with a sibling, it would replace everyone his age or younger. By 1920 that would have composed half of the world's population.

. . .

Morrow had started working at SelfTalk around the same time as Nat, so neither had been an employee back when the company was thriving. When prisms were something only corporations could afford, people were happy to go to a store to communicate with parallel versions of themselves. Now that it was possible for people to buy their own prisms, SelfTalk had only a few locations left, and their customers were mostly teenagers whose parents didn't let them use prisms or senior citizens who were unsophisticated enough that they still found the idea of paraselves a novelty.

Nat had been content to keep her head down, but Morrow

had always had plans. He was promoted to store manager after coming up with a way to get new customers. Every time they got a new prism, he checked the accident reports from a month after a prism's activation date and sent targeted advertisements to the people involved. They were often unable to resist the chance to get a glimpse of their lives if things had gone differently. None of them became long-term customers—most of them were depressed by what they learned—but they were a reliable way of generating revenue from every new prism acquired.

At the nursing home, Morrow waited just outside the door to Mrs. Oehlsen's room while she talked to her paraself. Now they were using video for their conversations instead of text; she knew she didn't have long left, so there was no point in conserving the prism's pad for later. This made things difficult for the parallel Mrs. Oehlsen, though, who was now actually watching a version of herself die. Their conversation was strained—Morrow had left a microphone in the room so he could listen to them through an earpiece—although the dying Mrs. Oehlsen didn't seem to notice.

When they were done, Mrs. Oehlsen raised her voice slightly to tell Morrow to come back in. "How did your conversation go?" he asked.

"Fine," she said. Her breathing was labored. "If there's one person you can talk to without pretense, it's your own self."

Morrow lifted the prism from the overbed table and repacked it into the carton. "Mrs. Oehlsen, if you don't mind, I'd like to suggest something."

"Go ahead."

"You've said you don't know anyone who really deserves your money. If you really feel that way, maybe you ought to give the money to your paraself."

“You can do that?”

Confidence was the key to selling any lie. “Money is just another form of information,” he said. “We can transmit it through a prism the same way that we transmit audio or video information.”

“Hmm, that’s an interesting idea. I know she’d put it to better use than my son would.” Her face puckered slightly as she thought about him. “How would I go about that? Would I ask my lawyer to adjust my will?”

“You could, but it will take some time before your estate is settled, and you might want to transfer the money sooner rather than later.”

“Why is that?”

“There’s a new law that goes into effect next month.” He pulled out his phone and showed her an article he had dummied up. “The government wants to discourage people from moving money out of this timeline, so they’re imposing a fifty-percent tax on fund transfers to other timelines. If you send the money before the law goes into effect, you can avoid that tax.” He could see from her expression that the idea appealed to her. “SelfTalk could handle it for you right away.”

“Make the arrangements,” she said. “We’ll do it when you visit next week.”

“I’ll have everything ready,” said Morrow.

When he got back to SelfTalk, Morrow used the prism to send a message to his parallel self, asking him to play along. The two of them would tell the parallel Mrs. Oehlsen that this one was becoming delusional from the pain medication, believing that she had sent money across the prism, and it would be better to humor her in her remaining days. That would probably suffice, but if necessary, they could always put an end to the

video conversations altogether by saying that another client had unexpectedly exhausted the prism's pad.

Once that was done, Morrow began setting up the dummy account to receive the funds. He wasn't expecting a fortune from this; Mrs. Oehlsen presumably had some money saved, but she wasn't wealthy. The big score would come, if they were lucky, from Nat's support group.

As part of his job for SelfTalk, Morrow maintained a list of support groups for people struggling with their prisms. He knew some people in those groups would wind up selling their prisms, so he'd regularly go to the churches and community centers where those groups met and put up flyers: *WE'LL BUY YOUR PRISM; TOP DOLLAR PAID*. Three months ago Morrow had been stapling a flyer to a bulletin board when a couple of support-group members were standing nearby, cups of coffee in their hand, chatting before the room opened up. Morrow could hear them talking.

"Do you ever wonder if you ruined someone else's life by activating your prism?"

"What do you mean?"

"Like, maybe someone might die in a car crash in the other branch but not in this one, and all because you activated the prism."

"Now that you mention it, you remember that car crash in Hollywood a few months back? In my paraself's branch, Scott died in that crash instead of Roderick."

"That's exactly the sort of thing I mean. You activating the prism had a huge impact on someone else's life. Do you ever think about that?"

"Not really. Maybe I'm too self-absorbed, but I'm usually thinking about my own life."

The guy had been talking about a celebrity couple, pop singer Scott Otsuka and movie star Roderick Ferris. They'd been en route to a movie premiere when their limousine had been hit by a drunk driver; Roderick had been killed, and Scott was left a grieving widower. But this guy's prism connected to a branch where Scott had been the one who was killed and Roderick was the survivor.

That prism could be worth a lot of money, but Morrow couldn't just go up to him and offer to buy it. So he had sent Nat into the group to pretend she was someone wanting to kick her prism habit. The guy's name was Lyle, and her job was to make friends with him. Nothing sexual—Morrow knew better than to ask her to do that—just a support-group buddy, someone he liked and trusted. That way she could gently nudge him in the direction of giving up his prism. And when he was ready, Nat would tell him she was ready to get rid of hers, too, and she knew someone who was paying good prices for used prisms, so how about the two of them sell theirs together? And then she'd bring Lyle to SelfTalk, where Morrow would buy both of their prisms.

Then Morrow would arrange a visit with Scott Otsuka and offer to sell him a prism that let him talk with his dead husband.

. . .

No prism would ever allow communication to a branch that had split off prior to its moment of activation, so there'd be no reports from branches where Kennedy hadn't been assassinated or where the Mongols had invaded western Europe. By the same token, there were no fortunes to be made by patenting inventions gleaned from branches where technological progress had taken a different route. If there were going to be any practical benefits

gained from using a prism, they would have to derive from subsequent divergences, not earlier ones.

Occasionally, random variations made it possible to avert an accident: once, when a passenger plane crashed, the FAA notified its counterpart in another branch, which was able to ground its version of the plane and perform a closer inspection, identifying a component in the hydraulic system that was on the verge of failing. But there was nothing to be done about accidents caused by human error, which were different in every branch. Nor was it possible to send advance notice of natural disasters: a hurricane in one said nothing about the likelihood of a hurricane in another, while earthquakes happened simultaneously in every branch, so no early warning was possible.

An army general purchased a prism because he thought he'd be able to use a branch as a supremely realistic military simulation: he intended to have his parallel self make an aggressive move in the other branch so they could see what the response was. He discovered the flaw in this plan as soon as he communicated with his parallel self, who intended to use him in exactly the same way. Every branch was of paramount importance to its inhabitants; no one was willing to act as a guinea pig for anyone else.

What prisms did offer was a way to study the mechanisms of historical change. Researchers began comparing news headlines across branches, looking for discrepancies and then investigating their causes. In some cases the divergence arose from an explicitly random event, such as a wanted fugitive being arrested during a traffic stop. In other cases the divergence was the result of an individual choosing different actions in two branches, in which case researchers would request an interview, but if the person was a public figure, they rarely offered details on why

they had made the choice they did. For cases that didn't fall into those categories, the researchers had to comb through the news stories from the preceding weeks to try to identify the causes of the discrepancy, which usually led to scrutinizing the stochastic jitters of the stock market or social media.

Then the researchers would continue to monitor the news over the following weeks and months to see how the divergences grew over time. They looked for a classic "for want of a nail, a kingdom was lost" scenario, where the ripples expanded steadily but in an intelligible manner. Instead what they found were other small discrepancies, unrelated to the one they'd originally discovered; the weather was instigating changes everywhere, all the time. By the time a significant political divergence was observed, it was difficult to ascertain what the cause had been. The problem was exacerbated by the fact that every study had to end once a prism's pad was exhausted; no matter how interesting any particular divergence might be, the connection between branches was always temporary.

In the private sector, entrepreneurs realized that while the information obtained from prisms had limited instrumental value, it was something that could be sold as content to consumers. A new kind of data broker emerged: a company would exchange news about current events with its parallel versions and sell the information to subscribers. Sports news and celebrity gossip were the easiest to sell; people were often just as interested in what their favorite stars did in other branches as in what they did in their own. Hard-core sports fans collected information from multiple branches and argued about which team had the best overall performance and whether that was more important than their performance in any individual branch. Readers

compared different versions of novels published in different branches, with the result that authors faced competition from pirated copies of books they might have written. As prisms with larger pads were developed, the same thing began happening with music, and then film.

. . .

At the first meeting she attended, Nat had been incredulous at the things its attendees talked about: a man obsessively worried that his paraself was having more fun than he was, a woman trapped in a spiral of doubt because her paraself voted for a different candidate than she did. Were these the sorts of things regular people thought of as problems? Waking up covered in your own vomit; having to fuck your dealer because you couldn't scrape together enough cash: those were real problems. Nat had momentarily fantasized about telling everyone in the group they should just get over themselves, but of course she didn't, and not just because it would have blown her cover. She was in no position to judge these people. So what if they felt sorry for themselves? Better to wallow in self-pity over nothing than to have actually screwed up your life.

Nat had moved out here to get a fresh start, away from the people and places that could trigger a relapse. The job at SelfTalk wasn't great, but it was good to earn an honest paycheck, and she mostly liked hanging out with Morrow. His side hustles had been fun; she'd always been good at that sort of thing, and she told herself that it helped keep her from relapsing, because the pleasure of conning people was a safe substitute for getting high. Lately, though, Nat had begun to feel that she was just fooling herself about that. Even if she wasn't spending the money on

drugs, these little scams would probably lead her back to using again. It'd be better for her to get away from all of it; she had to find a different job, away from Morrow, and that probably meant relocating again. But she needed money to do that, so she had to keep working with Morrow before she'd be able to not work with him anymore.

Zareenah was talking. "My niece is a senior in high school, and for the last few months it's been college application season. This week they heard back, and she did pretty well; she was accepted to three schools. I was feeling good about it until I was chatting with my paraself.

"It turns out that my paraself's niece got accepted to Vassar, which was her first choice. But here in this branch, that's one of the schools that rejected my niece. Everything different between our two branches is a result of my activating the prism, right? So I'm the cause of my niece getting rejected. I'm to blame."

"You're assuming that if you hadn't activated the prism, your niece would have gotten accepted," said Kevin. "But that's not necessarily true."

Zareenah started tearing apart a tissue she held in her hands, a habit of hers when talking about herself. "But that means my paraself did something to help her niece, something I didn't do in this branch. So I'm to blame through my inaction."

"You're not to blame," said Lyle.

"But everything different is because of my prism."

"That doesn't mean it's your fault."

"How can it not be?"

At a loss, Lyle turned to Dana for help. Dana asked Zareenah, "Aside from Vassar, were there any other differences in the acceptances and rejections that your niece and her paraself got?"

"No, the rest are the same."

“So we can assume that your niece’s overall application package was equally strong in both branches.”

“Yes,” she said firmly. “She’s a smart girl, and nothing I do is going to change that.”

“So let’s speculate for a minute. Why would Vassar accept your niece in the other branch but not in this one?”

“I don’t know,” said Zareenah.

Dana looked around the room. “Does anyone else have any ideas?”

Lyle said, “Maybe the admissions officer in this branch was having a bad day when he reviewed her application.”

“And what might have caused him to have a bad day?”

Nat had to feign interest, so she participated. “Maybe someone cut him off in traffic that morning.”

“Or he dropped his phone in the toilet,” said Kevin.

“Or both,” said Lyle.

To Zareenah, Dana said, “Are any of those foreseeable consequences of actions you took?”

“No,” admitted Zareenah. “I guess not.”

“They’re just random results of the weather being different between the two branches. And anything can cause the weather to be different. If we looked, I’m sure we could find a hundred people whose prisms connect a branch where your niece was rejected. If the same thing happens in branches where you acted differently, then you aren’t the cause.”

“But I still feel like it’s my fault.”

Dana nodded. “We like the idea that there’s always someone responsible for any given event, because that helps us make sense of the world. We like that so much that sometimes we blame ourselves, just so that there’s someone to blame. But not everything is under our control, or even anyone’s control.”

"I can see it's not a rational response, but I feel it anyway," said Zareenah. "I think I'm prone to feeling guilty about my sister . . ." She paused. "Because of our history."

"Do you want to talk about that?" asked Dana.

Zareenah hesitated, and then went on. "Years ago, when we were teenagers, we both studied dance, but she was much better than me. She got an audition to attend Juilliard, but I was so jealous that I sabotaged her."

Now this was interesting: legitimately bad behavior. Nat hadn't heard anything like this in the group before, but she was careful not to lean forward too eagerly.

"I put caffeine in her water bottle because I knew that would throw her off. She didn't get accepted." Zareenah put her face in her hands. "I feel like I can never make up for what I've done. You probably can't relate to that."

A pained look crossed Dana's face, but she quickly rearranged her expression. "We've all made mistakes," she said. "Believe me, I've made my share. But there's a difference between accepting responsibility for our actions and taking the blame for random misfortunes."

Nat studied Dana as she spoke. Dana's face had returned to its usual calm acceptance, but her momentary loss of composure had caught Nat's attention. She'd never seen that in a group facilitator before. The one time she heard a facilitator in rehab recount his past, it was a guy who was so practiced at it that his story sounded like part of a sales pitch. It made her curious: What had Dana done that she felt so guilty about?

As prisms with larger pads became available, data brokers began offering personal research services for people who wanted to

learn about the other paths their lives might have taken. This was a much riskier venture than selling news from other branches, for a couple reasons. First, it might take years before the divergences had grown large enough to be interesting, and the brokers had to stockpile prisms, activating them but not exchanging any information, saving their pads for use later. Second, it required a higher level of cooperation between the parallel versions of the company. If customer Jill wanted to know about her parallel selves, several versions of the company would have to do research in their branches, but Jill could only pay the version in her branch; there was no way for money to be shared across branches. The hope was that cross-branch cooperation would enable every version of a company to get paying customers in their branch, and over time this would work to everyone's advantage: a form of reciprocal altruism between all of the company's parallel versions.

Predictably, some individuals became depressed after learning that their parallel selves had enjoyed successes that they themselves hadn't. For a time there was concern that these private queries would gain a reputation as a product that made buyers unhappy. However, most people decided that they liked more things about their life than they did about their parallel selves' lives, and so concluded that they had made the right decisions. While this was likely just confirmation bias, it was common enough that personal research services remained a profitable business for data brokers.

Some people avoided the data brokers entirely, afraid of what they might learn, while others became obsessed with them. There were married couples where one person fell into the former category while the other fell into the latter, which often led to divorce. Data brokers made various attempts to expand their

customer base, but rarely met with success. The product that was most successful at winning over naysayers was one aimed at those who had lost a loved one: the data brokers would find a branch where the person was still alive and forward their social-media updates, so the bereaved could see the life their loved one might have lived. This practice only solidified the most common criticism offered by pundits: that data brokers were promoting unhealthy behavior in their customers.

. . .

Nat expected that Morrow would be satisfied for a while given the success of his plan with Mrs. Oehlsen. The woman had transferred some money into a dummy account a couple weeks ago, and her parallel self had bought the story about confusion from the pain meds. Now that Mrs. Oehlsen had passed away, everything was wrapped up tidily. But instead of being content with that, Morrow now seemed more eager than ever for a bigger score.

They were in the office at SelfTalk eating tacos that Morrow had brought from a food truck two blocks away when he raised the topic. "Where are we with Lyle?" he asked.

"I'm making progress," said Nat. "I can tell he's thinking that he'd be happier without a prism."

Morrow finished his taco and drained his can of soda. "We can't just sit around waiting for him to decide to give up his prism."

Nat frowned at him. "Just sit around'? You think that's what I've been doing?"

He waved a hand at her. "Take it easy, I didn't mean anything by it. But it's no good for us if he hangs on to that prism for years. We need to make him want to get rid of it."

"I know, and that's exactly what I've been working on."

"I was thinking about something more concrete."

"Like what?"

"I know a guy, he works with a crew doing identity theft. I could ask him to target Lyle, ruin his credit. After that, Lyle really won't want to hear about how well his paraself is doing."

Nat grimaced. "Is that the sort of thing we're doing now?"

He shrugged. "If there were a way to make Lyle's parallel life look better, I'd be fine with that, but that's not an option. The only thing we can do is make his life here look worse."

A plea based on squeamishness wouldn't sway Morrow; she needed a more pragmatic argument. "You don't want to make him so miserable that he holds on to the prism as his only connection to a happy life."

That seemed to work. "You've got a point there," he admitted.

"Give me a few more meetings before you do that."

Morrow crumpled up his paper food tray and empty soda can and tossed them into the wastebasket. "All right, we'll try it your way for a while longer. But you've got to speed things up."

She nodded. "I have an idea."

. . .

Dana was a little surprised when Nat announced to the group that she had sold her prism; in previous meetings she hadn't gotten the feeling that Nat was ready to make the leap, although she knew it wasn't always possible to anticipate these things. Nat seemed to be happy with her decision, but that was typical; everyone felt good when they first quit. She did notice that Nat very subtly checked Lyle's reaction to her announcement, something that Dana had seen her doing before. It didn't appear that Nat's interest was romantic, or if it was, she wasn't pursuing it,

maybe so as to not complicate things while she worked on her own issues.

At the next meeting Nat talked for longer than usual, describing the ways she felt her attitude had improved since giving up the prism. While she wasn't overly effusive, Dana was a little concerned that she might have unrealistic expectations and was setting herself up for a fall. Kevin expressed a similar sentiment, somewhat indelicately, and he seemed to be motivated more by envy than compassion; he'd been in the group much longer than Nat, and in all that time had made only modest progress. Fortunately, Nat didn't become defensive; she said that she understood that getting rid of her prism hadn't magically solved all the problems in her life. Then the group spent the rest of the meeting focusing on Kevin and what he'd been going through in the last week, without Dana having to steer them at all.

She was feeling pretty pleased about both the group and herself afterward, but her good mood didn't last long. She had just taken the coffeemaker back to the church kitchen and was locking up the meeting room when Vinessa showed up.

"Hey Dana."

"Vinessa? What are you doing here?"

"I looked for you at your office," Vinessa explained, "but you weren't there, so I figured I'd try here."

"What's up?"

"It's about the money."

Of course it was; Vinessa had decided to go back to school and had asked Dana for help with the tuition. "What about it?"

"I need it now. The enrollment period is closing this week."

"This week? The last time we talked about this, you were saying this fall."

“Yeah, I know, but I decided that the sooner I started, the better. So can you get me the money this week?”

Dana hesitated, thinking about how she would have to rearrange her budget.

“Are you changing your mind?”

“No—”

“Because I took you at your word before, and I made plans based on that. But if you’re changing your mind, say so.”

“No, no, I can get it to you. I’ll send it to you tomorrow, okay?”

“Great, thanks. You won’t be sorry, I promise. I’m going to make it work this time.”

“I know you will.”

The two of them stood there awkwardly for a moment, and then Vinessa left. As Dana watched her walk away, she wondered what was the right word to describe their relationship.

Back in high school they’d been best friends. They spent all their time together, confided in each other, reduced each other to tears laughing. More than that, Dana had admired the way Vinessa didn’t care what anyone thought, how she refused to be boxed in; she got good grades because it was easy for her, and then openly mocked the teachers until they had no choice but to give her detention. Sometimes Dana wished she could have been as brave, but she was too comfortable with the role of teacher’s pet to do anything that might jeopardize that.

Then came the field trip to Washington, D.C. The two of them had planned to host a party in their hotel room for their last evening in the city, but there was the problem of what to do if a teacher knocked on the door: alcohol was too hard to hide, marijuana too easy to smell. Instead they collected Vicodin from

their parents' medicine cabinets, leftovers from Dana's father's gum surgery and Vinessa's mother's hysterectomy, enough for them and their friends.

What they hadn't counted on was that one of the teachers had borrowed a key card from housekeeping to do surprise room checks. The very first night, Ms. Archer came in just as the two of them were recounting their stash, two dozen pills arranged in neat rows across the top of the dresser.

"What in the world is going on here?"

They both stood there for a long moment, mute as statues. Dana could see all her future plans evaporating like morning mist.

"Neither of you have anything to say?"

That was when she said it. "They're Vinessa's."

And Vinessa looked at her, more shocked than anything else. She could have denied it, but they both knew it wouldn't change anything, that Dana would be believed and Vinessa wouldn't. There was a moment when Dana could have taken back what she said, when she could have confessed the truth, but she didn't.

Vinessa was suspended. When she returned to school, she pointedly ignored Dana, for which Dana could hardly blame her, but that wasn't the end of it. Angry at the world, she began acting out: shoplifting, staying out all night, coming to school drunk or stoned, and hanging out with kids who did the same. Her grades plummeted, and her chances of getting into a good college vanished. It was as if, before that night, Vinessa had been balanced on a knife's edge; she could have become either what society considered a good girl or a bad girl. Dana's lie had pushed her off the edge, onto the side of being bad, and with that label the course of Vinessa's life had taken a different direction.

They lost touch after that, but Dana ran into her several years

later. Vinessa told her she forgave her, said she understood why Dana had done it. Now, after some time in jail and a stint in rehab, she was trying to get her life back on track; she wanted to take classes at a community college, but she couldn't afford the tuition on her own, and her parents had given up on her. Dana had immediately offered to help.

That first attempt hadn't been a success; Vinessa had discovered that she couldn't engage with college on an emotional level and dropped out. Later on she had tried to start her own business online, and asked Dana for some money to help her get off the ground. That hadn't worked out, either; she had misjudged the expenses involved. Now she had an idea for another venture, but she wasn't asking Dana for money for it. Vinessa's plan was to take the classes needed for her to draw up a sound business proposal, which she would present to potential investors. And so now she was asking Dana for tuition money again.

Dana knew Vinessa was taking advantage of her feelings of guilt, but it didn't matter. Dana was guilty. She owed her.

. . .

Nat was coming out of the restroom when she heard Dana talking to someone just around the corner, in the hallway. Nat stopped, leaned against the wall, and held her phone up to her ear as camouflage. Then she slid over until she could eavesdrop: someone was getting money out of Dana, but it wasn't clear what the situation was. Was this woman running some kind of scam? Nat told herself she ought to find out more, just to make sure that there weren't any surprises that could affect what she and Morrow were doing, but mostly she was just curious.

She went outside and caught up with the woman. "Excuse me, but do you know Dana?"

The woman eyed her suspiciously. "Why do you want to know?"

"I'm in a support group that she facilitates. I was just about to leave when I saw you two talking. I couldn't hear what you were saying, but it looked like you were angry with her. I was just wondering if you had been in a group she facilitated, or been a patient of hers, and had a bad experience with her. I don't mean to pry, I'm just wondering if there's anything I ought to know about Dana."

The woman chuckled. "That's an interesting question. What kind of group are you in?"

"It's for people who have issues with using prisms," said Nat. At the dismissive look on the woman's face, Nat decided to play a hunch. "I used to be in NA before, though."

She gave a single nod. "But Dana wasn't your facilitator for that, was she?"

"No."

"Good, because I wouldn't trust her with that. For that prism stuff, though, I'm sure she's fine. You've got nothing to worry about."

"Can you tell me why you wouldn't trust her for an NA group?"

She considered it, and then shrugged. "Sure, why not. Drinks are on you."

They went to a nearby bar. The woman's name was Vinessa, and Nat bought her a Maker's Mark while sticking with a cranberry and soda for herself. Nat told a sanitized version of her history of drug use, one that could plausibly dovetail with her cover in the support group; she didn't think Vinessa would mention this conversation to Dana, but it couldn't hurt to be careful. Once she was satisfied with Nat's cred, Vinessa started talking about

her own past; she explained that she'd had all the potential in the world when she was in high school, that she'd been on the path to a prestigious college and a charmed life. It all came to an end when her best friend had betrayed her, selling her out to protect her own prospects. Ever since then Vinessa had been traveling a hard road, a road that she was getting off only now.

"Which is why I wouldn't want her for an NA group. You can't trust her not to turn you in."

"Everything that happens in those groups is supposed to be confidential," said Nat.

"So is a secret between best friends!" Some other people in the bar turned to look at them. Vinessa resumed at a regular speaking volume, "It's not like she's the worst person I've ever met; at least she has the decency to feel bad about what she did. But there are people you can count on for anything, and then there are people you can count on only for some things, and you've got to know who's who."

"You still see her, though."

"Well, like I said, Dana's good for some things. My point is she's not good for everything. I learned that the hard way."

Then Vinessa started talking about her plans to start her own business. Nat didn't ask her about the money that she was getting from Dana, but she could tell it wasn't a deliberate scam. Vinessa was just using Dana, offering her a chance to atone for her sins by providing financial support for Vinessa's latest venture. Nat thanked Vinessa and promised she wouldn't mention their conversation to anyone, and then headed home.

Nat used to be like Vinessa, always blaming someone else for her problems. For years she believed it was her parents' fault that she was arrested for breaking and entering, because if they hadn't changed the locks on their house, she wouldn't have had

to break in to find something she could sell for drug money. It had taken a long time for Nat to take responsibility for the things she did. Clearly Vinessa hadn't gotten there yet, and maybe it was because in Dana she had found someone willing to accept the blame. Dana had done something shitty to Vinessa, no doubt about it, but that was years ago. If Vinessa hadn't gotten her act together by now, it was her own fault, not Dana's.

. . .

When prisms became affordable to individual consumers, retailers initially advertised them as a private alternative to visiting a data broker. They targeted new parents, encouraging them to buy one now, activate it, and store it until their child was an adult, at which point the child could see how her life might have gone differently. This approach won a few customers, but not nearly the numbers that retailers had hoped for. Instead, it turned out that when people were able to buy prisms themselves, they found uses for them beyond exploring scenarios of "what might have been."

A popular use of a prism was to enable collaboration with yourself, increasing your productivity by dividing the tasks on a project between your two versions; each of you did one half the job, and then you shared the results. Some individuals tried to buy multiple prisms so that they'd be part of a team consisting solely of versions of themselves, but not all the parallel selves were in direct contact with each other, which meant that information needed to be relayed from one to another, consuming the prisms' pads faster. A number of projects came to an abrupt end because someone had underestimated their data usage, exhausting the prism before the work done in one branch could be transmitted, leaving it forever inaccessible.

More than data brokers, the availability of private prisms had an enormous impact on the public imagination; even people who never used prisms found themselves thinking about the enormous role that contingency played in their lives. Some people experienced identity crises, feeling that their sense of self was undermined by the countless parallel versions of themselves. A few bought multiple prisms and tried to keep all their parallel selves in sync, forcing everyone to maintain the same course even as their respective branches diverged. This proved to be unworkable in the long term, but proponents of this practice simply bought more prisms and repeated their efforts with a new set of parallel selves, arguing that any attempt to reduce their dispersal was worthwhile.

Many worried that their choices were rendered meaningless because every action they took was counterbalanced by a branch in which they had made the opposite choice. Experts tried to explain that human decision-making was a classical rather than quantum phenomenon, so the act of making a choice didn't by itself cause new branches to split; it was quantum phenomena that generated new branches, and your choices in those branches were as meaningful as they ever were. Despite such efforts, many people became convinced that prisms nullified the moral weight of their actions.

Few acted so rashly as to commit murder or other felonies; the consequences of your actions still fell on you in this branch, not any other. But there was a shift in behavior that, while falling short of a mass outbreak of criminality, was readily discernible by social scientists. Edgar Allan Poe had used the phrase "the imp of the perverse" to describe the temptation to do the wrong thing simply because you could, and for many people the imp had become more persuasive.

Not for the first time, Nat wished there were some way to tell how Lyle felt about his prism, some visible gauge of her progress. A month had gone by since her gambit of announcing she had given up her prism, and while she knew Lyle was closer to giving his up than when she started, she had no way of telling how much longer it would be. Another month? Another six months? Morrow's patience would run out soon, and then they'd have to try something more drastic.

Once everyone was seated, Lyle volunteered to go first. He turned to Dana. "When I first started attending this group, you said one of the goals was to have a healthy relationship with your paraself."

"One of the possible goals, yes," said Dana.

"The other day I was talking to this guy who goes to the same gym I go to, and he seems to have that. He says he and his paraself are friends, they exchange tips that they've learned, they encourage each other to do better. It sounded amazing."

Nat was immediately alert. Was Lyle resolving to make that his goal? That would be a disaster. If he was set on that, even Morrow's plan wouldn't be enough to get him to sell his prism.

"And I realized that I will never, ever have that kind of relationship with my paraself. So I've decided that I'm going to get rid of my prism."

Nat was so relieved that for a moment she thought it must have been obvious to the others, but no one noticed. Zareenah asked Lyle, "Did you talk it over with your paraself?"

"Yeah. At first he suggested we just take a break for a while but still hang on to our prisms. I had thought about doing that before, because then I could show him when things were going

better for me. But a couple meetings back, Nat mentioned that she didn't need to prove anything to anyone. I think that keeping my prism would just keep me in that mind-set, wanting to prove something. So I told my paraself that, and he understood. We're going to sell our prisms."

Kevin said, "Just because your relationship with your paraself isn't perfect doesn't mean you have to give it up. That's like saying if your marriage isn't fairy-tale happy all the time, you don't want to be married at all."

"I don't think it's like that," said Zareenah. "Maintaining your marriage is a lot more important than maintaining your relationship with your paraself. Everyone got by just fine before prisms were invented."

"But is getting rid of your prism going to be what everyone in this group is expected to do? First Nat, now you. I don't know if I want to give up my prism."

"Don't worry, Kevin," said Dana. "You get to choose what your goal is. Not everyone has to have the same one."

The group spent some more time reassuring Kevin and discussing the validity of different ways of living with prisms. When the meeting was over, Nat went to talk to Lyle. "I think you're making the right decision," she told him.

"Thanks, Nat. You definitely helped me make it."

"I'm glad." Now came the crucial part. Nat was surprised by how nervous she felt. As casually as she could, she said, "You know what, you should sell your prism at the same place I sold mine. They'll give you and your paraself a good price."

"Really? What's it called?"

"SelfTalk, on Fourth Street."

"Oh yeah, I think I saw a flyer of theirs around here."

"Yeah, that's where I got their name, too. If you want some

moral support when you sell it, I can go with you, and afterward we can go get coffee or something.”

Lyle nodded. “Sure, let’s do that.”

And just like that, the plan was right on track. “How about Sunday?” she said.

. . .

Nat was waiting outside of SelfTalk for Lyle to arrive. She knew there was a chance he had changed his mind, but he showed up right on time and had the prism with him. It was a little anticlimactic to finally see it; here was what she and Morrow had been working toward for months, but it didn’t look any different from any other late-model prism, just a blue aluminum briefcase. Nat was suddenly struck by how the situation was both extraordinary and surprisingly mundane: each prism was like something out of a fairy tale, a bag containing a door to another world, and yet most of those worlds weren’t particularly interesting, most of those doors weren’t especially valuable. It was only because this one might reunite a prince with his beloved that it was precious.

“Still ready to do this?” she asked.

“One hundred percent,” said Lyle. “I checked with my para-self this morning, and he’s still on board. He should be at his version of SelfTalk right now.”

“Great. Let’s go.”

They went inside, and Morrow was at the counter. “Can I help you?” he asked.

Lyle took a deep breath. “I’d like to sell this prism.”

Morrow did the usual, checking the keyboard, the video camera, the microphone. This was the biggest variable in their plan: they couldn’t be sure who was working the counter on the other side of the prism, who was going to make parallel Lyle an offer.

It was very likely parallel Morrow or parallel Nat, in which case things would be fine; even though they had no idea what the plan was, they would follow this Morrow's lead. But there was always the chance that someone else was working the counter at Self-Talk in the other branch, which might make things complicated.

Nat saw that Morrow kept typing longer than the hardware check would require, which was a good sign. Morrow was telling the person on the other end to trust him, to pay parallel Lyle more than market price for the prism and act as if it were perfectly normal, that he would explain later. Fortunately Lyle had no idea of how long a prism inspection usually took.

Morrow made his offer, and then Lyle briefly conferred with his paraself. Since they had already agreed to sell their prisms, they weren't talking about the price; just a final farewell. Nat made sure not to exchange looks with Morrow while they waited, but she wasn't sure where she ought to look. It didn't make sense to stare at Lyle, so she just looked out the front window.

Finally Lyle handed the prism over and took his payment. Once it was done, Nat asked him, "How do you feel?"

"Kind of sad, kind of relieved."

"Let's go get some coffee."

They chatted for a while at the coffee shop. Afterward they hugged goodbye, and she told him she'd see him at the next meeting. Her plan was to attend one more meeting and then announce that she felt like she didn't need to go to the meetings anymore.

When she got back to SelfTalk, it was a half hour before closing time, and there were only a couple of customers left in the store. She found Morrow in his office, typing on Lyle's prism. "You're just in time," he said. "I'm on with my paraself." He gestured for her to look at the screen as he typed.

Hey bro.

You want to tell me why I just paid so much for this prism?

Car crash, six months ago, Scott Otsuka and Roderick Ferris. Who survived in your branch?

Roderick Ferris.

Here it was Scott Otsuka.

Got it! Great find, bro!

Yeah, it's your lucky day. Here's what you have to do next.

Morrow had already found a printed copy of a six-month-old newspaper whose headline said Roderick Ferris died in the car crash while Scott Otsuka lived. Parallel Morrow's job now was to find a printed newspaper in his branch that covered the same crash, the one in which Otsuka died while Ferris lived. They scheduled a time a few days from now when they would converse again.

Morrow folded up the keyboard and put the prism on a shelf at the rear of the storeroom. He grinned at Nat when he came back into the office. "You didn't think we'd pull it off, did you?"

She'd had her doubts, and even now she could hardly believe it. "We haven't pulled it off yet," she said.

"The hard part's done. The rest is going to be easy." He laughed. "Cheer up, you're going to be rich."

“I suppose I am.” Which was worrying in itself; for an addict, a giant windfall could trigger a relapse just as easily as a traumatic event.

As if he were reading her mind, Morrow said, “You worried about falling back into old habits? I could hold your money for you, keep it safe so you don’t spend it on the wrong things.”

Nat gave a little laugh. “Thanks, Morrow, but I think I’ll just take my share.”

“Just trying to be helpful.”

Nat wondered about the version of herself on the opposite side of the prism. She and that parallel self had been the same person up until just under a year ago, when the prism had been activated. Now Nat was going to be rich, while her parallel self wasn’t. Parallel Morrow was going to be rich, but he wasn’t the type to share the money with parallel Nat. Not that she particularly deserved any of it; parallel Nat hadn’t gone to the support-group meetings, hadn’t done any of the work. Parallel Morrow hadn’t done any work, either; he was just lucky enough to have been working the counter when they made contact. If parallel Nat had been working the counter at that moment, she would probably have to split things with parallel Morrow—she was the boss—but she’d still be making a lot of money for being in the right place at the right time. So much came down to luck.

Someone had come in the front door, a man in his forties wearing a windbreaker, so Nat went to the front counter. “Can I help you?”

“Is there a guy named Morrow here?”

Morrow came out of the office. “I’m Morrow.”

The man stared at him. “I’m Glenn Oehlsen. You stole twenty thousand dollars from my mother.”

Morrow looked mystified. “There’s been a mistake. I was helping your mother stay in touch with her paraself—”

“Yeah, and you convinced her to give away her money. That money belonged to me!”

“It belonged to your mother,” said Morrow. “She could do whatever she wanted with it.”

“Well, I’m here now, and I want it back.”

“I don’t have the money, it’s been transferred into the other branch.”

Oehlsen’s face twisted with contempt. “Don’t give me that, I know you can’t send money into another timeline. I’m not an idiot!”

“If you give me a few days, I can see if your mother’s paraself would be willing to return—”

“Fuck that noise.” Oehlsen pulled a pistol out of his jacket and aimed it at Morrow. “Give me the money!”

Morrow and Nat raised their hands. “Okay, let’s relax,” said Morrow.

“I’ll relax once you give me the money.”

“I don’t have what you’re looking for.”

“Bullshit!”

From her vantage point Nat could tell that a customer in one of the carrels had seen what was happening and was calling the police. “There’s some cash in the register,” she said. “You can have that.”

“I’m not a goddamned robber, I just want what’s mine. What this guy cheated out of my mother.” With his free hand, Oehlsen pulled his phone out and put it on the counter. “Now you take yours out,” he said to Morrow.

Slowly, Morrow took out his phone and laid it next to Oehlsen’s.

Oehlsen tapped open the digital wallet on his phone. "Now you're going to make a transfer. Twenty thousand dollars."

Morrow shook his head. "No."

"You think I'm joking?"

"I'm not paying you," he said.

Nat looked at him incredulously. "Just—"

"Shut up," said Morrow with a glare. He returned his attention to Oehlsen. "I'm not going to pay you."

Oehlsen was clearly flustered. "You think I won't do it?"

"I think you don't want to go to jail."

"You work with prisms. You know there's some timeline where I shoot you right now."

"Yeah, but I don't think this is the one."

"If it's going to happen anyway, why shouldn't I be the one to do it?"

"You kill me, you're the one that goes to jail. And like I said, you don't want that."

Oehlsen stared at him for a minute. Then he lowered the pistol, picked up his phone, and walked out of the store.

Nat and Morrow both let out enormous sighs of relief. "Jesus Christ, Morrow," said Nat. "What the fuck were you thinking?"

Morrow smiled weakly. "I knew he didn't have it in him."

"When a guy is holding a gun on you, you do what he says." Nat realized her heart was racing; she tried some deep breathing to slow it down. Her shirt was soaked with sweat. "I better check on the customers—" Oehlsen was standing in the doorway again.

"Fuck it," he said, "what difference does it make?" He raised the pistol, shot Morrow in the face, and walked away.

The police picked Glenn Oehlsen up a few miles away. Officers questioned Nat, the customers who were in the store, and an executive who came from SelfTalk's main office. Nat told the officers she had no idea what Morrow had been up to, and they seemed to believe her. She admitted to the executive that she knew Morrow had been taking a prism out of the store and visiting Jessica Oehlsen at the nursing home, and was reprimanded for failing to report a violation of company policy. The next day a temporary store manager arrived; he ordered an inventory of all the prisms in the store and established new procedures for checking them in and out of the storeroom, but Nat had already taken home the prism that Morrow had bought from Lyle.

At the next scheduled meeting with parallel Morrow, Nat got on the keyboard:

Hey bro.

This isn't Morrow. This is Nat.

Hey Nat. Why are you on the prism?

We've had problems here.
Morrow's dead.

What? Are you serious?

He ran a scam on a woman named Jessica Oehlsen. Her son Glenn came in here and shot him. I don't know if you're running a scam on her in your branch, but if you are, back off. Her son's unstable.

Shit. That's fucked up.

You're telling me. So what do you want to do now?

There was a long pause. Eventually a reply appeared on the screen.

We can still go ahead with the deal. You'll have to take care of things on your end by yourself. Think you can handle that?

Nat thought about it. Selling the prism to Scott Otsuka would mean going to Los Angeles, a bus ride of several hours each way. There would probably have to be a preliminary meeting before the actual sale could take place, which would mean at least two trips.

I can handle it.

For the first time, Nat wasn't acting as the buyer; she was the seller. She would have to provide evidence of what made her prism valuable. Nat and parallel Morrow exchanged photos of their respective printed newspapers; these were harder to forge than screenshots of the newspaper websites.

Now she had to contact someone who worked for Scott Otsuka, explain what she was offering, and send the photo as proof.

. . .

Ornella had worked as Scott's personal assistant for ten years, well before he met and married Roderick. Roderick's assistant

had moved to France a couple years ago, and while he got someone to accompany him when he was filming on location or doing a publicity tour, when Roderick was at home Ornella worked as assistant for both of them. Until six months ago, when a drunk driver had changed everything. Now she worked just for Scott again.

Before the car crash, Ornella had never paid much attention to prisms. She knew that Scott's fans circulated pirated copies of other versions of his songs, but he had never listened to any of them, so she hadn't, either; the same was true of Roderick and his films. But ever since the car crash, it seemed like she was barraged by advertisements from prism data brokers: "Subscribe now and be the first to see the movies Roderick Ferris would have made if he had lived."

And then there were the offers from fans who owned prisms and wanted to give them to Scott. They knew from interviews that Scott and Roderick hadn't owned a prism, and while it would have been easy for Scott to buy one from a data broker, a lot of his fans wanted to connect with him, to be the one who eased his pain. Ornella knew Scott had thought about finding a prism; he would have given anything to see Roderick alive again. But the problem was obvious: in every one of those branches where the car crash hadn't happened and his husband was still alive, his paraself was there, too. Scott would be a grieving widower intruding upon a happily married couple, a reminder that disaster could strike out of nowhere, a specter at the feast. That wasn't what he wanted. If Scott were going to see a parallel Roderick, it couldn't be as an object of pity or dread.

This newest offer was different: a prism connecting to a branch where there was no parallel Scott, only a grieving Roder-

ick. This was something Scott might be interested in. She wasn't going to mention it to him without making sure it was a legitimate offer first, though.

Ornella had asked an expert to examine the image she'd received, of course. He'd told her it wasn't an obvious forgery, but he could easily create one just as good, so by itself the image wasn't proof of anything. She told the seller that she wanted to talk to the Ornella in the other branch first, so they arranged a time when that could happen.

She was a little surprised when the seller arrived. She had assumed "Nat" was a man, but it was a woman who showed up at the front gate carrying a prism. Nat was thin and could have been pretty if she tried, but she had a certain sadness about her. Ornella's years of working for Scott had given her a lot of experience identifying opportunists, but she didn't get that sense from Nat, at least not right off the bat.

"I want to be clear," Ornella told her when she came in. "You're not going to see Scott today. He's not even in the house. If I'm satisfied by what I see, then we'll schedule another appointment."

"Of course, that's what I figured," said Nat. She seemed almost apologetic about what she was doing.

Ornella had her set up the prism on a coffee table. At first Nat had a text conversation with the person on the other side, and then she switched to video and slid the prism over to Ornella. A face appeared on the screen, but it wasn't a parallel version of Nat, it was a man, lean and lanky. An opportunist. "Who are you?" she asked.

"Name's Morrow." He stepped away and then the screen was filled by another version of herself. Ornella could see that the room in the background was the same one she was in now, and she recognized the outfit her parallel self was wearing, too.

“Is this for real?” she asked, tentatively. “Roderick is alive in your branch?”

Her parallel self looked like she could hardly believe it, either. “He is. And Scott’s alive in yours?”

“Yes.”

“I have a few questions.”

“The same ones I have, probably.” The two Ornellas exchanged information about the car crash. It had happened the same way in both branches: same movie premiere, same drunk driver. Just a different survivor.

They agreed that Ornella would talk to Scott, and her parallel self would talk to Roderick. Assuming both of them were open to the possibility, the Ornellas scheduled a date next week for them to try the prisms and decide if they wanted to buy them.

“Now let’s talk about the price,” said Ornella.

“We’re not talking price now,” Morrow said firmly, from the other side. “After your bosses have tried the product, I’ll name a price. Either you pay it, or we walk.”

Which was a sensible strategy; assuming Scott and Roderick wanted to buy, they’d be in no mood to haggle. It was clear that this Morrow was the one running the show. “Okay,” said Ornella. “We’ll talk then.” She slid the prism back to Nat, who conferred briefly with Morrow before closing it up.

“I guess that’s it,” said Nat. “I’ll be back next week.”

“Fine,” said Ornella. She accompanied Nat to the front door and let her out. As Nat began walking down the steps, Ornella asked, “How is it that I’m working with you on this?”

Nat turned around. “Say what?”

“My paraself is working with a guy named Morrow. Why am I working with you instead of a version of Morrow?”

The woman sighed. “Long story.”

Nat got herself a cup of coffee and took her seat. This was her second meeting since getting the prism from Lyle; last week she'd been planning on announcing that she wasn't going to be coming back, but she had wound up hardly saying anything at all. So she had had to attend at least one more and say that she was going to take a break from the meetings; people would wonder if she simply stopped.

Dana smiled at the group and said, "Who wants to start us off today?"

Without intending to, Nat found herself speaking, just as Lyle began saying something as well. Both of them stopped.

"You go," said Nat.

"No, you should go," said Lyle. "I don't think you've ever started off a meeting before."

Nat realized that he was right. What had come over her? She opened her mouth, but for once she couldn't think of a good lie. Eventually, she said, "A guy I work with, I guess you'd call him my supervisor, he was killed recently. Murdered, actually."

The group was shocked, with assorted "Oh my Gods" being murmured.

"Do you want to tell us about your relationship with him?" asked Dana.

"Yeah," asked Kevin. "Was he a friend?"

"Kind of," Nat admitted. "But that's not why it's been on my mind. I know this isn't a grief support group . . . I guess I brought this up because I wanted your take on something."

"Of course," said Dana. "Go ahead."

"I keep thinking about the randomness of this murder. I don't mean the killer picked him at random. I mean, when he had the

gun pointed at my supervisor, he said that some version of him was going to pull the trigger, so why shouldn't it be him? We've all heard that line before, but I never paid any attention to it. But now I'm wondering, are the people who say that actually right?"

"That's a good question," said Dana. "I agree that we've all heard people make similar claims." She addressed the group. "Does anyone have any thoughts on that? Do you think that every time someone makes you angry, there's a branch where you pick up a gun and shoot the guy?"

Zareenah spoke up. "I've read that there's been an increase in crimes of passion since prisms became popular. Not an enormous one, but statistically significant."

"Yeah," said Kevin, "which is why the theory can't be true. The fact that there's been an increase, even a small one, disproves the theory."

"How do you figure?" asked Zareenah.

"Branches are generated by any quantum event, right? Even before we had prisms, branches were still splitting off constantly; we just didn't have access to any of them. If it were true that there's *always* a branch where you pick up a gun and shoot someone on a whim, then we should have seen the same number of random murders every day before the prism was invented as we saw every day after. The invention of prisms wouldn't cause more of those murders to line up in this particular branch. So if we're seeing more people killing one another since prisms became popular, it can't be because there's always a branch where you pick up a gun."

"I follow your reasoning," said Zareenah, "but then what's causing the rise in murders?"

Kevin shrugged. "It's like a suicide fad. People hear about other people doing it, and it gives them ideas."

Nat thought about it. "That proves that the argument can't be right, but it doesn't explain why it's wrong."

"If you know the theory's wrong, why do you need more?"

"I want to know whether my decisions matter!" That came out more emphatically than she intended. Nat took a breath, and then continued. "Forget about murder; that's not the kind of thing I'm talking about. But when I have a choice to do the right thing or the wrong thing, am I always choosing to do both in different branches? Why should I bother being nice to other people, if every time I'm also being a dick to them?"

There was some discussion among the members for a while, but eventually Nat turned to Dana. "Can you tell me what you think?"

"Sure," said Dana. She paused to gather her thoughts. "In general, I think your actions are consistent with your character. There might be more than one thing that would be in character for you to do, because your behavior is going to vary depending on your mood, but there are a lot more things that would be utterly out of character. If you're someone who's always loved animals, there isn't a branch where you kick a puppy just because it barked at you. If you're someone who's always obeyed the law, there's no branch where you suddenly rob a convenience store instead of going into work in the morning."

Kevin said, "What about branches that diverged when you were a baby and your life took a totally different course?"

"I don't care about that," said Nat. "I'm asking about branches where I, having lived the life I led, am faced with a choice."

"Kevin, we can talk about bigger divergences later, if you want," said Dana.

"No, that's fine. Proceed."

"Okay, so let's imagine you're in a situation where you have a

couple options, and either course of action would be consistent with your character. For example, suppose a cashier has given you too much change, and you can either give it back or just keep it. Suppose you could see yourself doing either of those, depending on the kind of day you're having. In that case, I'd say it's entirely possible that there's a branch where you keep the extra change, as well as a branch where you give it back."

Nat realized there probably weren't any branches out there where she gave back the extra change. For as long as she could remember, if she was having a good day, getting extra change would have just made it a better day.

Kevin asked, "So does that mean it doesn't matter if we act like jerks?"

"It matters to the person in this branch that you're acting like a jerk to," said Zareenah.

"But what about globally? Does being a jerk in this branch increase the percentage of jerkish behavior across all branches?"

"I'm not sure about the math," said Dana. "But I definitely think that your choices matter. Every decision you make contributes to your character and shapes the kind of person you are. If you want to be someone who always gives the extra money back to the cashier, the actions you take now affect whether you'll become that person.

"The branch where you're having a bad day and keep the extra change is one that split off in the past; your actions can't affect it anymore. But if you act compassionately in this branch, that's still meaningful, because it has an effect on the branches that will split off in the future. The more often you make compassionate choices, the less likely it is that you'll make selfish choices in the future, even in the branches where you're having a bad day."

“That sounds good, but—” Nat thought about how years of acting a certain way could wear ruts in a person’s brain, so that you would keep slipping into the same habits without trying to. “But it’s not easy,” said Nat.

“I know it’s not,” said Dana. “But the question was, given that we know about other branches, whether making good choices is worth doing. I think it absolutely is. None of us are saints, but we can all try to be better. Each time you do something generous, you’re shaping yourself into someone who’s more likely to be generous next time, and that matters.

“And it’s not just your behavior in this branch that you’re changing: you’re inoculating all the versions of you that split off in the future. By becoming a better person, you’re ensuring that more and more of the branches that split off from this point forward are populated by better versions of you.”

Better versions of Nat. “Thanks,” she said. “That’s what I was looking for.”

. . .

Ornella had known it would be awkward when Nat and Scott met, but it was even more so than she expected. Scott had hardly spoken to anyone who wasn’t a family member or close friend in months and was out of practice at wearing his public face; the prospect of seeing Roderick alive again was making him particularly anxious. As for Nat, she seemed distant, which was not what Ornella had expected from someone who stood to make a lot of money in the next few minutes.

Nat set the prism up on the coffee table again. Ornella switched it to video and saw Morrow’s face; then it was her parallel self, who looked as nervous as she felt. For a moment Ornella had an impulse to call the whole thing off, afraid that

Scott would only be hurt more, but she knew they couldn't pass up this opportunity. She gestured for Scott to sit down on the couch next to her at the same time that her parallel self gestured to someone offscreen, and then Ornella turned the prism so that it faced Scott.

On the screen was a face that was doubly familiar, first because it was Roderick and second because his face was worn from months of grief, the same pattern of wear that Ornella saw on Scott's face every day. Scott and Roderick must have had the same reaction because simultaneously they started to cry, and never before had Ornella felt so strongly that these two men were meant to be together, the way that each one could look into the other's face and see himself.

Scott and Roderick started talking, their words overlapping. Ornella didn't want strangers to hear what they said, and stood up. "Can we give them some privacy?"

The woman, Nat, nodded and made to leave the room, but Ornella heard Morrow on the other side of the prism speak up. "They can have all the private conversations they want once the prisms are theirs. But first they have to buy them."

At the same time, the two Ornellas asked, "How much?"

Morrow named a figure. Ornella saw Nat react, as if the number was higher than she expected.

Scott and Roderick didn't hesitate. "Pay them."

Ornella took Scott's hand and looked at him, wordlessly asking, Are you sure about this? He squeezed her hand and nodded. Earlier they had talked about the finiteness of what the prism offered. No matter how much he and Roderick tried to conserve, the amount of data left on its pad wouldn't last the rest of their lives. They wouldn't be satisfied with just text; they would want to hear each other's voices and see each other's faces, so the pad

would eventually run out, and then they'd have to say goodbye. Scott had been willing to go ahead with it; any extra time they had together was worth it, as far as he was concerned, and when the end came, at least it wouldn't come as a surprise.

Ornella stood and turned to Nat. "Come with me and I'll issue the payment." She could hear her parallel self telling Morrow the same thing. The screen shifted away from Roderick's face to Morrow's, and then the screen went dark; he wasn't going to let his prism out of his sight until the money was in his account.

Nat, by contrast, was content to leave her prism on the table with Scott. She looked at him awkwardly for a moment, and then said, "I'm very sorry for your loss."

"Thank you," Scott said, wiping away tears.

Nat followed Ornella into the room where she had her desk. Ornella unlocked her work phone and opened the digital wallet. She and Nat exchanged their account numbers and then laid their phones next to each other on the desk. Ornella entered the dollar amount and hit SEND. Nat's phone acknowledged the offered transfer, but Nat didn't touch the ACCEPT button.

"I suppose Scott has a lot of fans who would have given him that prism for free," said Nat, staring at the screen.

Ornella nodded, although Nat wasn't looking at her. "Yes," she said. "He absolutely does."

"There are probably people who aren't even fans of his who would have done the same."

"Probably." Ornella was about to say that there were still good Samaritans in the world, but didn't want to offend Nat by implying she wasn't one of them. After a long moment, Ornella said, "Since the money's right there, do you mind if I make a personal observation?"

"Go ahead."

"You're not like Morrow."

"How do you mean?"

"I understand why he's doing this." How could she put this tactfully? "He sees a grieving person as an opportunity to make a profit."

Nat gave a reluctant nod. "Yeah, he does."

"But you're not like that. So why are you doing this?"

"Everyone needs money."

Ornella felt emboldened enough to be frank. "If you don't mind me saying it, there are better ways of making money than this."

"I don't mind. I've been thinking the same thing myself."

Ornella wasn't sure what she should say. Eventually, she said, "Scott's happy to pay you for what you've done. But if you wouldn't feel good about taking the money, no one says you have to."

Nat's finger hovered over the button.

. . .

For the past several weeks, Dana had made sure that in her sessions with Jorge she didn't bring up the vandalism incident. Instead they talked about his efforts to recognize his own good qualities and ignore what other people might or might not think of him. She felt they were making progress and thought that she might be able to broach the topic in the near future.

So she was surprised when Jorge began a session by saying, "I've been wondering if I should go back to Lydoscope and ask them to contact my paraselves again."

"Really? Why?"

"I want to know if they've acted out since the last time I checked."

“Was there anything that prompted this?”

Jorge described a recent interaction with his manager. “And I felt really angry, like I wanted to smash things. And that made me think about what we talked about before, that it was like I had gotten the results of a medical test when I went to Lydoscope. I started thinking that maybe the test wasn’t sensitive enough.”

“And if you learn that your paraselves have acted out recently, then that would mean there’s something serious that the first test didn’t pick up?”

“I don’t know,” said Jorge. “Maybe.”

Dana decided to push him a little on this. “Jorge, I want to suggest something. Even if your paraselves haven’t acted on their anger recently, maybe it’s worth thinking about what happened here in this branch.”

“But how can I know if it was a freak accident or not unless I check my paraselves?”

“It was obviously out of character for you,” said Dana. “There’s no question about that. But it was still something you did. You, not your paraselves.”

“You’re saying I’m terrible.”

“That is absolutely not what I’m saying,” she assured him. “I know you’re a good person. But even a good person can get angry. You got angry and you acted on it. That’s okay. And it’s okay to acknowledge that you have that side of your personality.”

Jorge sat silently for a minute, and Dana worried that she had pushed him too far. Then he said, “Maybe you’re right. But isn’t it important that it was out of character for me, instead of being something typical for me?”

“Of course it is. But even if you were acting out of character, you have to take responsibility for your actions.”

A look of fear crossed his face. "You mean I have to tell my manager what I did?"

"I'm not talking about legal responsibility," Dana reassured him. "I don't care whether your manager ever finds out. What I mean by taking responsibility is admitting to yourself what you did, and taking it into consideration when deciding what you do in the future."

He sighed. "Why can't I just forget that this ever happened?"

"If I genuinely thought you'd be happier forgetting that it ever happened, I'd be fine with that. But the fact that you've spent so much energy on this indicates that it's bothering you."

Jorge looked down, and nodded. "You're right. It has been." He looked back up at her. "So what should I do now?"

"How would you feel about talking to Sharon about what happened?"

He paused for a long time. "I suppose . . . if I also tell her about how my paraselves didn't do the same things, then maybe she'd know that it wasn't something fundamental about me. Then she wouldn't get the wrong idea."

Dana allowed herself a tiny smile; he'd achieved a breakthrough.

. . .

A new town, a new apartment; Nat hadn't found a new job yet, but it was early yet. It had been easy to find an NA meeting to attend, though. Originally she had wanted to go to the prism support group one last time and tell them everything, but the more she thought about it, the more she was sure that doing so would have been purely for her own benefit, not anyone else's. Lyle was in a good place now; he wouldn't appreciate learning that she'd had ulterior motives the whole time they'd known each

other. Same for the rest of the group. Better for them to keep thinking that the Nat they knew was the real Nat.

Which was why she was now at an NA meeting. It was bigger than the prism support group—prisms would never be able to match drugs in terms of appeal—and it was the usual mix: people you'd never suspect were addicts and people who completely looked the part. She had no idea whether this group was hard core about working the steps or submitting to a higher power. She wasn't even sure she wanted to attend meetings regularly; she was just going to play it by ear.

The first person to speak was a man who described waking up from an overdose to realize that his thirteen-year-old daughter had had to give him an injection of Narcan. It wasn't easy to listen to, but Nat found something vaguely comforting about being back in a group of people whose experiences she could relate to. A woman spoke next, and then another man; neither recounted anything particularly harrowing, which was a relief. Nat didn't want to speak immediately after anyone with a horror story.

The group leader was a soft-spoken man with a salt-and-pepper beard. "I see some new faces here tonight. Would you like to say something to the group?"

Nat raised her hand, introduced herself. "I haven't been to one of these in a few years. I've been able to stay clean without them. But some things happened to me recently . . . it's not that I felt I needed a meeting to keep me from relapsing, but I've been thinking about stuff, and guess I wanted a place to talk."

Nat was silent for a while—it had been a long time since she'd done anything like this—but the group leader could tell she had more to say and he waited patiently. Eventually she continued, "There are people I've hurt that I'll probably never be able to make amends to. They'll never give me the chance, and I can't

blame them. But I suppose, at some level, that made me think that if I wasn't able to do right by them, the ones I'd hurt the most, then it didn't really matter whether I was nice to other people or not. So I stayed clean, but I would still lie, I would still cheat. Nothing terrible, nothing that hurt anyone the way I did when I was using. I just looked out for myself, and I never really thought much about it.

"But recently I had this . . . this opportunity to do something actually nice for another person. It wasn't anyone I had wronged, just someone who was hurting. It would have been easy for me to behave the way I always have. But I imagined what a better person might do, and I did that instead.

"I feel good about what I did, but it's not like I deserve a medal or anything. Because there are other people for whom being generous comes easily, without a struggle. And it's easy for them because in the past they made a lot of little decisions to be generous. It was hard for me because I've made a lot of little decisions to be selfish in the past. So I'm the reason it's hard for me to be generous. That's something I need to fix. Or that I want to fix. I'm not sure if this is the right group for that, but this is the first place I thought of."

"Thank you," said the group leader. "You are absolutely welcome to attend these meetings."

The other new person, a young man who looked like he'd just graduated from high school, introduced himself and started talking. Nat turned to him to listen.

. . .

There was a package waiting for her when Dana got home. Once she was in her apartment, she opened it and found a personal tablet inside; no retail packaging, just an adhesive note stuck to

the screen: "For Dana." She checked the wrapping, but there was no name or address for the sender.

Dana turned the tablet on; the only icons on the screen were half a dozen video files, each labeled with her name followed by a sequence of numbers. She tapped the first one to watch it, and the screen filled with a low-resolution image of her face. But it wasn't her, it was a parallel version of her, talking about her past.

"Ms. Archer came into our room and found us counting the pills. She asked us what was going on, and for a second I froze. Then I said they were mine, that Vinessa hadn't known anything about them. She was suspicious, because I'd never been in trouble before, but I convinced her. Eventually I got suspended from school, but it didn't turn into as big a deal as it could have; they put me on probation, so if I stayed out of trouble, it wouldn't go on my permanent record. I knew it would have been much worse for Vinessa because of the way the teachers felt about her.

"But Vinessa started avoiding me, and when I finally asked her why, she told me she felt guilty every time she saw me. I told her she didn't have to feel guilty and that I wanted to hang out with her, but she said I was just making it worse. I got angry at her; she got angry at me. She started spending time with these other girls who were constantly getting into trouble, and everything went downhill from there. She was caught dealing on school grounds, she was expelled, and she was in and out of jail all the time after that.

"And I keep thinking, if I hadn't said the pills were mine, everything would be different. If I had let Vinessa take her share of the blame, there wouldn't have been that wedge to drive us apart. We would have been in it together, she wouldn't have started hanging out with those troubled girls, and her life would have gone in a completely different direction."

What the hell? Fingers trembling, she tapped on the second video.

Another Dana: "One of the teachers came into our room just as we were counting the pills. I confessed everything immediately; I told her that Vinessa and I had stolen them from our parents so we could have a party. Eventually the school suspended us and put us on probation; I think they wanted to do something worse to Vinessa, but they had to punish us both equally.

"Vinessa was furious at me. She said I should have told the teacher we just found the pills, that someone must have slipped them into our bag at the airport, and we were about to tell a teacher about them. She said they wouldn't have been able to pin anything on us. But because I had confessed, she was on probation and the teachers who hated her could take her down at any time. She wasn't going to give them that power over her. As soon as our suspensions were over, Vinessa came into school drunk. After she did that a few times, the school expelled her, and she started getting arrested.

"And I keep thinking, if only I hadn't confessed, everything would be different. That close call would have been enough to warn Vinessa away from getting into real trouble. She only started acting out because she was angry at me. If it weren't for that, she would have gotten into a good college, and her life would have gone in a completely different direction."

The other videos made no mention about being caught with the pills, but they still followed a recognizable pattern. In one, Dana felt guilty about introducing Vinessa to a boy who got her addicted to drugs. In another, it was a successful shoplifting incident that emboldened Vinessa to attempt more dramatic thefts. All these Vinessas getting stuck in patterns of self-destructive

behavior. All these Danas blaming themselves for it, no matter what actions they took.

If the same thing happens in branches where you acted differently, then you aren't the cause.

She had lied about the pills being Vinessa's, but her lie wasn't what pushed Vinessa off the edge, what turned her into a delinquent. That was the direction Vinessa was always going to move in, no matter what anyone else did. And Dana had spent years and thousands of dollars trying to make amends for what she'd done, trying to fix Vinessa's life. Maybe she didn't need to do that anymore.

Dana took a look at the metadata on the video files. Each file included information about the prism it had come from; the prisms had activation dates that were fully fifteen years in the past.

Fifteen years was how long it had been since she and Vinessa had gone on that field trip. Data brokers were just getting started then, and the prisms of the time had much-smaller pads than modern ones. She was surprised that any data brokers still had prisms of that vintage, let alone ones with enough data left in their pads to transmit video. Those were the most valuable prisms that data brokers owned, and transmitting these videos had probably exhausted their pads.

Who would have paid for this? It must have cost a fortune.

outgrowth of the Copernican principle. It seemed to me that if humanity really were the reason the universe was made, then relativity shouldn't be true; physics should behave differently in different situations, and that should be detectable.

"ANXIETY IS THE DIZZINESS OF FREEDOM"

In discussions about free will, a lot of people say that for an action of yours to be freely chosen—for you to bear moral responsibility for that action—you must have had the ability to do something else under exactly the same circumstances. Philosophers have argued endlessly about what exactly this means. Some have pointed out that when Martin Luther defended his actions to the church in 1521, he reportedly said, "Here I stand, I can do no other," i.e., he couldn't have done anything else. But does that mean we shouldn't give Luther credit for his actions? Surely we don't think he would be worthier of praise if he had said, "I could have gone either way."

Then there's the many-worlds interpretation of quantum mechanics, which is popularly understood to mean that our universe is constantly splitting into a near-infinite number of differing versions. I'm largely agnostic about the idea, but I think its proponents would encounter less resistance if they made more modest claims about its implications. For example, some people argue that it renders our decisions meaningless, because whatever you do there's always another universe in which you make the opposite choice, negating the moral weight of your decision.

I'm pretty confident that even if the many-worlds interpretation is correct, it doesn't mean that all of our decisions are canceled out. If we say that an individual's character is revealed by the choices they make over time, then, in a similar fashion,

an individual's character would also be revealed by the choices they make across many worlds. If you could somehow examine a multitude of Martin Luthers across many worlds, I think you'd have to go far afield to find one that didn't defy the church, and that would say something about the kind of person he was.