By David Erik Nelson



AS it turned out, Lizzie Bradford—tall and lean as a Kenyan distance runner—was a freakish outlier in her family. With almost no exceptions the Bradfords appeared to come in two varieties: Short and short-n-round. Chet—barely 5'4" and built like a dorm fridge—immediately dissolved into the crowd of rolly-polly aunties and cousins milling around the loaded picnic tables and fragrant grills arrayed across the large yard between the picturesque little whitewashed church and its large cinderblock gathering hall. Meanwhile, even as her extended family enfolded her, Lizzie continued to stand out like a daffodil among clover.

And then a woman tall and lean as Lizzie, but at least twice her age, stepped out of the dark doorway of the cinderblock hall. The resemblance was absolutely unmistakable.

Lizzie stiffened at his side, and Bram had no doubt that this was Granny Gin. He stepped forward and offered his hand. "Pleased to meet you, Mrs. Bradford."

Granny Gin's hand was hard and dry. Squeeze. Single pump. Release.

"Mrs. Chester," she corrected. "Betsy's paternal grandmother is Mrs. Bradford." A little part of Bram curled up and died.

Mrs. Chester was shaking her head. "Don't you know not to assume, young man? It makes an ass out of u."

"And me," Bram finished the aphorism.

"Yes, you," Granny Gin said. She stared him down for a moment longer, then smirked and released his eyes the same way she'd released his hand: Like a fisherman tossing back a fry too small to be worth gutting. She turned her attention to Lizzie. "Glad to see you aren't stooping to conquer."

Bram looked to Lizzie hopefully.

"She just means you're tall," she said flatly. "Thank you, Granny Gin." Lizzie kissed her cheek.

Granny Gin motioned to Bram and turned back toward the hall, "C'mere, big

fella." Bram turned to check in with Lizzie, and found her already brightly chatting with a pair of identical older women in identical cats-eye glasses. One woman had her hair fixed in a stiff grey wave, the other in long grey dreadlocks. Bram felt like a jackass standing around doing nothing, so he followed Granny Gin into the dim building in the hopes of making himself useful.

Bram and Granny Gin crossed the empty banquet hall in silence, heading toward the swinging steel doors. Bram assumed these lead to the kitchen—and immediately shied away from the word assume, like a cat avoiding a burner that had once been hot.

"So," he said, uncertain how to proceed. "You're Granny Gin?"

"I'm Ovander's and Betsy's Granny Gin, yes." She hit the names sharply, which Bram took to mean that she was certainly not "Granny Gin" to him. Then he wondered if he was assuming, and his mind jerked away from the word assume. Then he felt like a jackass all over again. He took another stab at conversation.

"Chet says you can tell people when they're going to die."

"Ovander said that?" she asked without a glance, her gait slow and smooth, implacable as a glacier.

"If 'Ovander' is 'Chet'—"

"Ovander Chester Bradford, yes." She tsked, pushing open the swinging kitchen door. "Chet.' Have you ever heard of a black man named 'Chet' that amounted to anything?"

"Chet Baker?" Bram suggested.

Granny Gin stopped midway into the kitchen, turned, and just looked at him.

"The horn player?" she asked. "From Oklahoma?" She looked over her glasses. "Was white." Bram grimaced involuntarily.

She stepped through the door, letting it swing shut. Bram heard the kitchen lights clack on, and took the briefest moment of silence in the cool, dim vacant banquet hall to finish dying of embarrassment. Then he shook it off—just as Taylor Swift advised—and pushed in after the Bradford-Chester matriarch. Granny Gin was already halfway across the kitchen, heading toward the open door of a storage closet or pantry.

"Ch—" he caught himself, "Lizzie's brother said that you could tell people how long they had to live." He reviewed the conversation in his head, realized he wasassuming, and then backtracked. "Actually, he implied you could."

"And?"

"And that seemed like a pretty . . . interesting claim. Most people, if they talk about their granny, it's either because she made great cookies or said something outlandishly raci—outlandish. Outlandishly outlandish." He was babbling, and he was helpless to stop himself. Granny Gin should have been an interrogator. He abruptly realized that, for all he knew, she had been an interrogator. "My own grandmother—of blessed memory—the best we could say for her was that she only sued my uncle's widow once."

Granny Gin snorted at this, and Bram's heart swelled with the tiny victory. She clicked on the light in the storage room, and pointed at the top shelf. "Coffee urns. We told them we'd need three, they put out one, because stupid people always think they know better. Please pull down two more. I'd do it myself, but..." she indicated her lower back. Bram was already eagerly nodding. He grabbed the first, nearly overbalanced it, but righted it without Granny Gin appearing to notice that she'd just almost been brained with a coffee pot. He hustled the urn over to the steel counter, then hustled back for the second.

"So," he asked as he huffed to the counter, "can you? Like Lizzie's brother said, can you tell folks when they'll die?"

"Yes." The silence spun out, and Bram let it do so. He stood next to the urns, watching her, and saw that she was waiting for him to get nervous and drop the topic. And so he waited. Finally, she said, "And you'd like to know?"

"Yeah, I sorta would."

For the first time she looked at him, really looked at him personally, not at his height and skin, a pair of arms and a strong back. She tipped her head back, so that she could stare down her nose at him, scoping him out below the lower edge of her glasses. Then she turned back to the pantry shelves and scanned them side to side, like a machine seeking a barcode.

"You eaten, drank, smoked, chewed gum, brushed your teeth, used mouthwash, or kissed anyone on the mouth," she took a moment to give him the hairy eyeball, "in the last 30 minutes?"

Bram thought for a minute—a pause she seemed to appreciate; no more assuming for this guy—then answered: "No."

She spotted a box of snack-sized Ziplock bags, plucked it down, pulled out a bag, and handed it to him.

"Spit," she said.

"Pardon?"

"We need 2mL. That's about half a teaspoon. And don't work your mouth against your cheeks and lips—don't want a whole mess of epithelial cells. And no phlegm."

"I'm sorry," Bram said, "You want me to spit in this bag?"

"What, you think I was gonna give you a cup of English Breakfast and then read the leaves?" This was precisely what he'd assumed—despite having just been warned of whom assumptions make an ass.

"You're very good at that." Bram said.

"At what? Saying what people are thinking? Maybe you're just very good at thinking very obvious things, Big Fella."

"Touché."

She grunted. "You even know what that means?"

Bram realized he did not.

"I didn't think so," she said. "Look things up. At least try to know what you're talking about. You know what telomeres are, Big Bram?"

"Sure," Bram replied, the word popping out of his mouth like a knee popping up when it's struck with the doctor's little rubber mallet. Granny Gin looked at him, eyes slitted almost imperceptibly. He could feel her on the verge of asking 'OK, then, please tell me what a telomere is,' and quickly backtracked.

"Actually, to be honest, I recognize the word, but I'm not really sure what it is. Something with cells?"

"Yes," she said, "That's good; something with cells. That narrows it down quite a bit. If that's as close as you can get—"

"Yeah, then I must have a helluva time parallel parking. You know, you and Lizzie are a lot alike."

Granny Gin chuckled. "A smart boy would keep that opinion to himself. I don't think Betsy would find it flattering."

Bram nodded. It seemed better not to speak.

"Telomeres are 'extra' material at the ends of each chromosome—which are the packages of proteins in each cell's nucleus that carry the instructions for how that cell should be structured. The telomeres are base pairs that carry no information. Some folks liken them to the end of the shoelace."

"The aglet," Bram heard the word pop out of his mouth unbidden, then blushed. "It's called an aglet."

"Yes. You must be absolute murder on a crossword puzzle. Like your aglet, the telomere isn't really part of the active business of a shoelace—you can't tie a knot in it—it just protects the shoelace from wear and tear. Are you following?"

Bram nodded mutely.

"Good. When chromosomes replicate—you study much biology, Bram." "No," Bram said, "Mostly social sciences—sociology, political science—" "You know, if they put 'science' in the name, that's because it isn't a science?" Bram nodded again.

"Any matter, chromosome replication is sloppy. Chromosomes in general are sloppy. It isn't a coincidence that the more folks learn about how bodies work, the less likely they are to believe in 'Intelligent Design.' There's not an intelligent thing about any of it; just hacks on top of quick-fixes, duct tape and tin-foil. Telomeres are a quick-fix to keep chromosomes from getting stuck together or losing important information during replication. Every time a cell divides, a bit of telomere gets lost not great, but better than the chromosomes being damaged. Over time, the telomeres are repaired, but that process is also imperfect. The end of the story is this: You look at an organism's chromosomes, measure the telomeres; how much telomere is left correlates to how much time that organism has left before cell division starts to get too error-filled to carry on sustainably."

Bram nodded. "And then . . ."

"And then, death: Cancer, stroke, heart valve failure. The usual."

"And measuring the telomeres, it gives you a number, like a number of years left? An expiration date?"

"No. Telomeres are just the start; you also need to know what the individual's telomerase levels are—that's the ribonucleoprotein that repairs the telomeres—plus baseline rates of cell replication, other things" she rolled her hand implying that there were a lot of little details she wasn't going to bother to list, since she knew Bram had no idea what any of it meant. "All that together, that gives us a number."

"A date?"

"Well, a number of weeks left. You can calculate a date from that. But that is just for natural death."

"Why?"

"Because plenty of folks die for reasons other than their cells replicating poorly: Car accidents. Gun shot. Fall off a canoe. Choke on a carrot. You'll never see that coming in the telomeres."

Bram nodded again. "Got it. For that, you rely on tea leaves."

She smiled. "No. You ever heard of 'tachyons'?" She asked.

"Yes," Bram answered. Specifically, he'd heard of them on Star Trek: The Next Generation when he was eight.

"Well, it's nothing like that." Bram was relieved. "But 'Oh, like tachyons!' is what you'd probably say if I described it, and I'd say 'Yeah, sort of,' just so you wouldn't feel stupid and I wouldn't have to try and explain it again. Faster-thanlight particles that 'travel backward through time' are made up. But you can take a condensed sample from a physical system, accelerate it, fire it through a drift chamber, plot trajectories, correlate that against a supertranslation—you ever hear a physicist say that 'Black holes have hair?"

Bram shook his head; the only thing he'd ever knowingly heard a physicist say was "I'd like a small flat white, please."

Granny Gin shrugged and again waved off all the technical details that Bram need not worry his pretty little head about. Bram really did appreciate this handwave; he had no idea what any of it meant after she'd said tachyons were BS. But he thought he understood where she was headed:

"You do some particle accelerate math, or whatever, and end up with a precise number for how long a person keeps being a coherent thing?"

"That's almost completely wrong, but you get the gist of it. You get another number, one that's in minutes. Sometimes it's basically in the range of the telomere number—"

"And that's a person who dies of 'natural causes.' "

She nodded.

"Other times, they're far enough apart that it's pretty clear you're dealing with two separate events."

"Bullet, boat, baby carrot."

Another nod. "Technically we'll only know how long your head persists as a functional physical system, because we're just using a spit sample, but that's a pretty good indicator of how long you persist. I don't imagine you care very much about the period during which your body persists and your head is gone. So, you want to know?"

He did. "Then spit." He did. And then he hauled the coffee pots out to the drinks table.

For the rest of the morning and deep into the afternoon Bram enjoyed the spoils of his height—which made him especially popular when Lizzie's cousins began their annual volleyball and three-on-three basketball tournaments. He didn't think about the baggie of spit Granny Gin had taken from him until the drive home, when he realized she'd never asked him for contact info. She didn't even know his last name.



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