<u>I - Dinner</u>

Carter drops his work bag by the door while sliding off his shoes. His hairline is still sweaty from the gym and a quick shower is followed by meal prep. His sister Sarah made plans earlier in the week to come over but his phone chimed for a text alert with her cancellation. She drank more than she anticipated at a work happy hour and was "leaving overly honest and entering downright sloppy territory". The marketing firm she works for landed some creative work for the iPhone 19. An apology was followed by a gif of a politician making an expression of "oops". She asked if tomorrow would work and he agreed. He went through his mail once his food was in the oven. He has requested paperless billing from the utility company twice and yet the monthly paper bill persists. He joked aloud how the electric company can't seem to understand electronic mail to no one in particular.

An issue of Travel & Health magazine accompanied the electricity bill. Magazine subscriptions were a perennial gift from his grandmother since his childhood, starting with her neighbor's niece selling subscriptions for a school fundraiser. By now, the neighbors had moved away and the niece could have kids of her own but she continued to order the magazines from the same company. Carter once told her about a trip he took to Iceland and she switched to travel magazines for him ever since. While finishing up his dinner, he begins his usual routine of casually flipping through the pages for interesting pictures before tossing it down his apartment building's recycling chute. An article caught his eye about the healthy lifestyle of the indigenous people of Pitagada, an island in the Pacific. This cover story spanned a few pages and he lingered on a picture of the coast at sunset before scanning the text.

blah blah ...just under 1,000 people live on the island, with only a few people traveling to other islands for... yadda yadda vadda... their diet, lifestyle, and family structure are unchanged for generations... details details details ...and strong community. The weddings, births and funerals are all public affairs and we were welcomed to all of... blah blah. Blah blah blah ... the close-knit families. Every home is intergenerational. Grandparents, and often great grandparents, are active in raising children. Details details ...so they don't keep track of their ages precisely, but the healthy lifestyle on Pitagada carries many of them well into old age. And so on.

Carter scoffs at article's incongruity. The detailed descriptions of life on the island allude to a causal link between their behavior and great health. Then the author finishes with an admission of ignorance of the residents' ages. This anecdotal filler has the predictive power of a horoscope. Something like discovering a Blue Zone, demonstrating an outlier in longevity, would be a real accomplishment. He steps back into the kitchen after finishing his food, leaving the magazine on the table. He texts with a friend, swipes on a dating app, studies for an actuarial exam, swipes a little more, and gets ready for

bed.

II - Dinner, again



The front lobby of Carter's apartment calls a few minutes later to tell him he has a guest. His sister walks in with the takeout bag. He pulls plates from the cupboard and grabs the chopsticks he bought while on a trip to Japan.

"Sounds like your happy hour was fun." Carter started, while they were plating the rolls.

"Yeah, everyone was really happy. Sorry to bail last minute. We weren't expecting to hear back yet on this project with Apple and the principal of the technology markets team wanted to take us out to celebrate. She was not taking no for an answer."

"That's awesome. It has to be a big deal."

"Oh absolutely. It is exciting, but scary, too."

"So what will you actually be doing?"

"Our team supports the marketing campaign's strategy. My job is to build up a color story that highlights the customizable product features."

Carter finishes his first roll and reveals the soft grin that always precedes a teasing comment, "So you pick colors. That sounds tough."

Sarah rolls her eyes and lets out a mocking laugh to acknowledge but not encourage. She feels belittled, but she has stopped expecting her little brother to understand her job. To be fair, she doesn't get Carter's job but he always gives a meandering description. At least she tries to make it understandable for him. She decides to change topic and finishes her bite. A magazine is sitting open at arm's length and she reaches for it.

"This place looks nice. Your next trip?"

"No, I was just reading the article yesterday. It's about these really healthy people on an island. A team of researchers went there to study their lifestyle and learn about their culture."

"I would feel pretty good if I woke up to this sunrise every day instead of checking emails."

"Yeah, it mentions their natural lifestyle, close family ties, the usual stuff. I stopped reading it when they said they don't keep track of birthdays though."

She furls her brow without looking up at Carter, "Why?"

"It completely deflated their point. How can you go on and on about their long lives when you don't know how old they are?"

Sarah nods her head and pauses. "I'm sure you could figure it out." It came out a bit harsher than she intended. A subconscious counterpunch from the lingering sting of the color comment he made. "That's the kind of thing you do, right? Figure out how long people are going to live?"

"Umm, in a manner of speaking. But I already have a bunch of data on the people and mortality tables from a broader population to draw from."

"Then use the tables and draw from a broader population in the same way? They might not know exactly how old the people are, but you can usually tell about how old someone is once you get to know them."

"That isn't quite how it works. Besides, the data they collected is probably all proprietary anyway." "Alright." Sarah kept flipping the pages as they chatted.

The question lingers in Carter's mind. Sarah leaves to spend the night at her boyfriend lan's apartment. Carter cleans up in the kitchen and his eyes keep returning to the magazine, sitting closed on the table. He dries his hands when the chores are done and goes over to his laptop. He flips through the magazine to find the Pitagada article and scans to the author credit at the end. He types the email address and then spends an hour writing to the author.

III - Please See Attachment

Carter is settling into the booth of the fast casual restaurant closest to his office at the beginning of the lunch rush. He pulls up his phone and checks email.

RE: Travel and Health Magazine 2031 Issue 3 - Pitagada Article Questions Mr. Carter Sanders,

Thank you for reaching out. I am glad you enjoyed the article and appreciate the thorough list of questions you have regarding our data.

Most of our work with the people of Pitagada focused on family and community dynamics so we did not collect all of the information you reference, though I can appreciate the important connection between data and understanding health outcomes you imply. The best thing I have for you is our records of the families. We collected comprehensive information on family structure and major life events during our time on the island. Please see attachment.

Thank you, Dr. Anne Xiu

Carter opens the attachment on his phone and scrolls through the document. It lists hundreds of people with descriptions of their families: who is in the household, how many children they have, their parents, etc. His mind flashes forward to an intellectual victory as a foregone conclusion. He fantasizes of writing the return letter demonstrating nothing special about the mortality. He envisions typing "claims of a healthy lifestyle is a stretch when you compare these mortality outcomes to those of your readership" or "while I can appreciate the good use of hyperbole to sell magazines, the basis doesn't appear to be here." The reality before him was a daunting feat of data manipulation. He was used to conveniently formatted databases of policyholder data, not this. There was no time to start pulling this apart now. He wrote Dr. Xiu a quick note of gratitude and then headed back up to his desk to finish the day, only realizing he didn't finish his lunch when his stomach's growling reminded him a couple hours later.

The data taunts him through the coming days. Not sure what to do with it. He has information about who these people are and their relationships to each other, but none of their actual ages. The minutiae feels like more of a curse than a blessing as he reads yet another line about grandparents preparing the meals as the mother nurses. He feels frustration with the roadblock. Countless hours have been devoted to this skillset and he's paralyzed without a birthdate, just one missing detail, despite the pages and pages of rich information.

The weeks go on before he makes the breakthrough. Carter's realization begins the process of turning the pages into data. The data feeds code. The code produces output. The output is a surprise. With results ready, he sends an email back to Dr. Xiu.

IV - Actuarial Judgment

Sarah invited him over to her apartment to join for dinner. She greets him with a hug and they head into the kitchen. She already started cooking and he sits at the barstool across the kitchen island. "Ian will be coming over later. He was caught up with work stuff but is trying to get out when he can." "No problem. We can wait to eat if you like; I'm not starving."

"We'll see how much longer he takes once I am wrapping this up." She grabs a bottle of red wine. "I'm definitely not waiting for him to start drinking. This week has been outrageous." She gestures towards Carter with the bottle and he nods. She opens the drawer for the corkscrew.

"Busy with work?"

"So busy." Pop! The wine pours into the two glasses. "This project with Apple has been moving nonstop. We sent out some work today and I'm so happy to have the weekend without anything hanging over me."

"You have your colors all picked out, I take it."

She returns her attention to the stove. Carter reaches for his phone as Sarah is focused on the food. His eyes pass over the promotional emails and he opens a new email from Dr. Xiu.

Mr. Carter Sanders,

Thank you for your note responding to the information I shared. Your response seems enthusiastic and I am glad you have put it to good use.

I have to admit that I am not clear on all the points you are making here. I think you are supporting my hypothesis of good health outcomes for the people of Pitagada. Your message has a lot of technical jargon outside of my field of expertise. Do you think it would be possible to clarify?

Thank you, Dr. Anne Xiu

He scrolled back to the top and read the email a second time, hoping for something different within. "I can't believe this."

"What's that?"

"Remember when you were at my apartment and we were talking about an article? These researchers lived with the people from the island of Pitagada."

"Umm, I think so." She paused. "Oh, the picture with the sunset. It said the people were healthy and you were calling bullshit."

"I emailed the author and asked for the data. I went through it all and actually did the analysis. I reviewed their mortality and it turned out to be really good."

"Ha, of course you did."

"I emailed her back a few days ago to describe what I did. Her data didn't have actual birthdays listed, so I assumed age ranges based on their life stage and then stochastically generated millions of possible combinations of attained ages for the population and then worked backwards to find the mortality tables that satisfy all of the constraints I programmed. I described the comparison to the VM-20 mortality tables and the impressively tight confidence intervals I was able to band around many of the adult ages for mortality. I found some pretty remarkable evidence supporting her claims. And after all this, she emails me back to say 'glad you agree, but I don't get it'. All this work and she doesn't understand the significance. This person is a doctor and a visiting professor at a really good university; you'd think she was smart enough not to just throw this away."

Sarah stirred the contents of the frying pan and then turned back around to face him. "So... she was right?"

"Exactly! You see my point!"

She paused and took another sip of her wine. She looked at him and took a quick inhale and exhale. "Do you think I'm stupid?"

"What? Of course not! Why would you even ask that?"

"Carter, I'm hearing you talk about how this person is dumb. She did all that research and was published in a major magazine saying something about these people and you called her out. Then she offers you the information and you come to the same conclusion. You tell her that she was right and she doesn't throw you a party for you telling her what she already knows so you think she's dumb. I hear you saying all of this about someone doing something you actually admire and have to wonder what you think of me. When I told you my team won the account for Apple, you made a joke about how I was just picking out colors. I'm sorry that my work doesn't require the use of established actuarial methodology but that doesn't mean it isn't difficult. There were over 20 companies bidding on this and my portfolio was a big part of how we got the deal."

"I was just kidding around with you on that. Of course I am proud of you; it's an amazing accomplishment."

She lifts her hand from the countertop and waves it, stopping Carter from trying to diffuse the wrong point. "The way you're talking about her sounds a lot like the way you talk to me. But this time you're revealing your critical judgment because you don't have to say it to her face. Maybe she is actually a really smart person with a different way of doing things than you have. I didn't understand anything you just said about what you emailed her. You might be more successful getting your message across if you considered putting it in a way that actually means something to her instead of throwing around all the jargon. My job is to get into others' minds and deliver the simplest message. You could consider asking me for advice on how to do it."

Carter can't find any words and his flushed face says everything.

"I can tell you're embarrassed. It's fine. Just know that it hurts my feelings sometimes and you can be better."

He nods. "I'm sorry, Sarah."

"It's fine." Her phone dings and she picks it up to read the message. "Ian just left work. He'll be over soon." There was a moment of silence while she typed a reply. She puts her phone down and claps her hands to break the mood. "So, tell me what you're trying to prove to this person... in English. Not the way you would describe it at work, but the way the magazine would write about it."

"That's a good question. Let me think about this." Carter summarized his approach and how he proved it. He stumbles through the description and falls back into jargon before starting over to try again. Sarah cuts him off, "No, all of that is still about your process. The reader doesn't want to know how the sausage is made. Let's try something else. What does it look like to have mortality like you described? Tell me what is on the island that only exists because of the mortality table you proved."
"More people grow old than you would expect. So there are a lot of older people."
"Okay, there we go. Where do they live?"
"They stay with their children. There are a lot of multi-generational homes."
"That's good. Now you're saying something I can see. This person is an anthropologist and we have something that connects back to the culture. There are a lot of grandmas around the house."
"Yes," Carter laughs, "Favorable mortality means too many grandmas."
Sarah laughs as well, "Grandmas as far as the eye can see in Pitagada."

Ian walks in the door, "Hi Sarah, what's so funny?"

"We're just laughing about how there are too many grandmas in Pitagada."

It does nothing to change the confused expression on his face but they explain it all to him over dinner. Sarah navigates around some of the pricklier moments of the conversation, leaving it as family business. It is getting dark and Carter gets ready to go home. He pauses as he grabs his jacket and gets ready to head out the door.

"Sarah, thanks for all of this. I appreciate your help and am really proud of you. I want you to know something. I struggled with how to do this work for days and days. The breakthrough that I made after pounding my head against the wall was because of you. You said how you can tell how old someone is by getting to know them. Looking at the characteristics of their life was the basis of my approach in simulating possible attained ages. Listening to you is what finally got me to a final solution." She smiles. "That's because I'm so much smarter than you."

He responds to Dr. Xiu's email once back in his apartment. Over the next month, he went back and forth with Dr. Xiu a few times but is mostly preoccupied with work and studying for next month's actuarial exam.

<u>V – Update</u>

Carter walks into his apartment and drops his work bag while sliding off his shoes. He skipped the gym, too excited to get home and read his mail, knowing the next issue of Travel & Health Magazine waited.

Since publication in the summer issue, we found a significant development to share with our readers. Further review of the data revealed the people of the island were doing even better than... and so on. Blah blah blah ...the authors owe a debt of gratitude to a dedicated reader, Mr. Carter Sanders. His work in advancing our understanding of mortality issues in this community was instrumental in the official designation of the Island of Pitagada as a blue zone. For this reason, we give him the honorary title of actuarial anthropologist.