Taunting Death by

I'm standing in my hallway next to the front door, just staring at it, willing myself to move. I'm completely bundled up – insulated jacket, thick winter gloves, knit cap and scarf...yet a shiver runs down my spine just thinking about stepping outside. Such is life in Chicago in late January. I take a deep breath, reluctantly open the door, and step outside. My face is immediately hit by a stinging wind, and I recoil from the initial shock. Instinctively, I bury my chin into my chest, squint my eyes, and let out a groan, "ERRRRRGHHHHH."

The walk to the grocery store is only six blocks north, but in this bitter cold, it feels like a mile. The wind dies down for a moment, and I tell myself the same lie I always do. *If it weren't so windy, this cold really wouldn't be so bad.* Ha, yeah right. I begin my trek through the snow-covered sidewalks, knowing that I'll begin to warm up if I pick up my pace. Anyway, this is for my own good. Next month, I'll be retired in Orlando, living a stone's throw from the green on the 14th hole of the Presque Isle Country Club. I can practically feel the warm rays of the sun hit my face as I line up a putt on the gree..."ERRRRRGHHHHH."

Stupid wind. It feels like a thousand razor blades attacking my face. Around this time last year, I was counting down my final few months to retirement. I had found the perfect townhome, only a few blocks from the golf course. But somehow, I managed to let my boss talk me into staying on for one more year. At the time, I had justified the decision by telling myself I could find a place closer to the course. Imagine waking up on a Sunday morning, sitting on the back patio, steam rising from my mug of black coffee. My feet up on the chair in front of me, reading the newspaper, watching group after group finish putting for par on the green.

As I trudge forward, a faint sound of rustling in a nearby bush startles me out of my warm thoughts. My pulse races as I spin around, expecting to see a small animal, but nothing is there. A quick shiver runs through my body, completely unrelated to the cold. The hairs on the back of my neck stand up as I suddenly feel like I'm not alone. My eyes frantically scan up and down the dimly lit street, but again, nothing.

Calm down, Steve, there's nobody around. You walk this route every week, and rarely see another soul. Of course, that comforting thought only starts my mind racing down a different path. Being a creature of habit would clearly just make me more vulnerable to attack. Here we go again. Something as unassuming as an animal looking for a warm place to sleep has triggered my paranoia. I take a deep breath and try to shake the thoughts from my mind.

This is my parents' fault. *I wish they had never bought me that stupid annuity.* They used to tell me I would thank them one day, but so far, the annual checks haven't been worth the increasing paranoia. In my case, the annuity is similarly structured to one from long ago called a tontine, and on the surface, the mechanics are brilliant.

Originally introduced in the late 17th century, tontines were created as a way for governments to borrow from the public in an era before long-term bonds or central banks. Like a long-term bond, the government would offer a guaranteed payout stream in exchange for an initial investment. But unlike other fixed-income products, the tontine's annual payout amount is shared amongst the remaining living beneficiaries. This has the obvious advantage of allowing the tontine's sponsor to pass the mortality risks to the beneficiaries. But the real kicker is that the investor selected the beneficiary who would receive the payments, and that beneficiary was often named as a very young child in his or her family.

Hundreds of years later, the original tontines had fallen out of favor, mostly due to moral hazard concerns. By its design, a beneficiary's payout increases as other members of the tontine pass away. Thanks Mum and Pop, no better way to keep your memory alive than my annual letter reminding me that I'm gaining wealth directly on the deaths of others. Doesn't that just warm my heart.

My cell phone in my pocket vibrates, signaling a text message. I resist the urge to immediately read it, to avoid sacrificing my hands to the bitter cold and instead allow them to stay in the relatively warm cocoon of my coat pockets. In any other situation, I'd find it nearly impossible to resist the temptation of knowing the reason for the vibration alert. Bitter cold versus my phone addiction. Score yet another one for the freezing temps.

In the centuries that followed, tontines had been all but eliminated. However, around the time I was born, Microzon Corporation financed its operations with what my parents would lovingly call a "creative, speculative investment opportunity." Well, at that time, Microzon Corporation was better known as Genesis AI, a small start-up company with the goal of revolutionizing all aspects of our lives at home through automation.

My parents knew Genesis AI's founder, Lorenzo Toney, from their first job at a machine learning solutions company in Silicon Valley that specialized in next generation technologies. It was through this connection with Mr. Toney that they had discovered Genesis AI's "unique" investment opportunity. Similar to the tontines from the 17th century, investors were given the opportunity to purchase shares, with annual payouts directed to a beneficiary of the investor's choice. However, in the case of this investment, the annual payout is tied to the price of the company stock. "Think of it as a blend between a traditional retirement security and an investment in a company with an eye toward the future," my parents would often tell me. *I sure do miss them. They had a way of making anything sound so warm and cozy.*

The quiet crunch of footsteps on the densely packed snow from across the street breaks me out of my memories. A man shuffles ahead in the opposite direction, head down in the cold. The smell of cigarette smoke lingers, making it even more difficult than usual to breathe in this thin air.

Who would want to have their face exposed to these frigid temps just to smoke? The man is closer now as he passes by, and I notice he's wearing a ski mask, only his eyes exposed. Despite wearing multiple layers of clothing, he looks like he's shivering underneath it all. He shoots me a shifty glance, or possibly an accusatory one, seeing as how we're the only people around and I'm clearly staring a hole through him. Whoops.

But the smell of cigarette smoke lingers. I hate this smell, especially in the cold. It's amazing how the smell of smoke in the winter tends to linger long after the cigarette is put out. Either that or I'm being followed. WHERE IS THIS SMOKE COMING FROM? I stop my walk, and bend down to pretend to adjust my shoe. I glance behind me but see nothing. Just a long line of shuffle marks in the snow where I've trudged through the sidewalks that have yet to be shoveled.

Ugh. My paranoia wins again. I've always blamed my anxiety on a number of different issues, but I can feel it getting worse as I approach my retirement. My best friend Frank tells me it's natural to feel a general sense of uneasiness as I approach a huge change in my life. Frank, I love you to death, but taking social advice from you is like getting medical advice from the internet.

I've known Frank for the past 30 years, and he's been a retirement actuary for even longer than that. He's one of the smartest, kindest people I know, but he's just so easy to mess with. My absolute favorite prank is to wait until he's had a beer or two in a social setting, and then ask him something like, "Hey Frank, I just took up smoking cigars as a hobby, tell me again when I'm going to die!" Predictably flustered, Frank will fumble with a response, something like, "Wwaaaaa...well see now, it's not a question of simply predicting the exact age at which you're most likely to die, but more a question of estimating your future life expectancy based on a number of analytical and predictive factors. In fact, did you know that the Society of Actuaries has just released their annually updated mortality projection scale..." But see, by then, I'm at the cooler grabbing another beer, stealing a glance at the unsuspecting sap that was standing next to Frank, who by now is casually stepping back, and slowly turning to blend into the rest of the crowd. Heh, classic Frank.

That reminds me, I need to schedule dinner with Frank soon. Last week, I received my annual Microzon check and benefit statement. And once again, the payment amount was significantly higher than projected last year. My parents named me as the beneficiary when I was just twelve years old. For decades, I hadn't paid any attention as the modest annual payouts were immediately rolled into my IRA and invested in some basic target date retirement fund. But eight years ago, Genesis was acquired by Microzon, and my annual payout spiked. With Frank's help, we dug into the terms of the policy and found that Genesis had anticipated that it might be difficult to get investors interested in a start-up company with innovative ideas for business growth in a largely undefined industry. So they structured the payouts to be tied to their stock price, potentially fluctuating wildly at the whims of the market, and divided among the named beneficiaries according to their initial investment.

I can still vividly recall Frank looking up from his computer as he researched the terms of the policy saying, "Steve, I've never seen a policy structured this way before. At its core, it's a tontine, in which Microzon has eliminated the risk of the beneficiaries living longer than expected. And since the payouts are tied to the success of their business, they've structured a high upside investment vehicle in which they've managed to transfer the longevity risk of the payout structure along with their company's market stock price risk. Steve, I sure hope your retirement portfolio is adequately diversified. I'm honestly surprised this type of policy is even legal." *Thanks Frank. What a buzzkill. Heh, classic Frank.*

"ERRRRGHHHHH." A rush of frigid air blasts my face head on, and I spin around to walk backward for a short distance to shelter my face from the stinging wind. I really should have retired last year. I could be walking off the 18th green at this very moment, shooting Frank a text message about my lowest round of the year.

Had I known my annuity payment would spike again, I never would have delayed my retirement another year. And this recent benefit statement has me more concerned than ever. Initially, I enjoyed watching Microzon's stock price climb, while reading about their latest innovations in artificial intelligence for mobile devices. Not to mention the corresponding increases in my annual check. But when I dug into the correlation between my check amount and Microzon's stock price, I realized that the pool of beneficiaries seemed to be declining faster than it had been in past years. I mentioned this to Frank, who immediately responded, "Well of course they are! You're all getting older, now aren't you, Steve?" Wow, thanks Frank. Always one for a sardonic comeback when it comes to mortality.

My apprehension doesn't so much stem from the fact that the mortality experience of our group has gone up in recent years. It's more the fact that the rate of deaths has seemed to soar in years after the Microzon/Genesis merger as compared to the years prior. But maybe Frank is right; we are all getting older.

The last time I really pressed him on it, he reminded me, "Have I ever talked to you about the Society of Actuaries' MP-2020 projection scale? It was extremely significant in that the data had shown a very substantial <u>decline</u> in future rates of mortality improvement." I remember looking up from my beer bottle with a half-peeled label thinking, why yes Frank, I believe you've mentioned that...only every time you have a chance. Heh, classic Frank.

Regardless of my misgivings, his point was valid. Short term fluctuations in mortality can be unpredictable, especially when evaluating the experience of a small group. But that's precisely what's fueling my paranoia. I simply have no way of knowing anything about the demographics of the beneficiary group. The benefit statements simply show the number of surviving beneficiaries in the denominator of an equation, without a clue as to the average age of the group, where we live, or who we are.

My parents would often remind me that the personal identities of the beneficiaries are NEVER to be made public, and that blockchain technologies ensure that the payment process can be made anonymously. Easy for them to say. I've seen too many movies where the impenetrable network gets hacked by a black hat millennial played by the likes of Chris Hemsworth. Heh, okay, maybe I'm getting a little too caught up in the movies after all. But seriously, does anyone really understand blockchain anyway? Well, probably Frank...but I think I'll pass on that one.

An especially fierce gust of wind forces my pace to slow, and I stop for a moment as it becomes difficult to breathe. I spin around once again to avoid the headwind, and I see a man fumbling with keys by his car, unsuccessfully trying to find the remote key fob in the cold. He leans over a bit and lets out a dry, hacking cough that causes me to shutter and continue my trek forward.

Great, flu season is upon us. Although I've been lucky enough to avoid getting the flu in recent years, Frank theorized that the same might not be true for others in my tontine. A few years ago, there was a particularly deadly strain of the flu, and mortality rates saw a spike around the country.

A year or two after that, Frank noted that the rapid increase in drug overdoses were causing a spike in mortality rates. This idea hit too close to home for me. Despite leaving my hometown after college, I still managed to keep in touch with Jason and Pete, two high school friends. Our families had been close in high school, but as typically happens, we drifted apart once I moved away. For a while, we did our best to keep in touch, making every effort to meet up once a year for a long weekend to catch up. But even that had fallen by the wayside in recent years. Imagine my shock to learn that they both had overdosed on opioids, within a few weeks of one another. I knew that Jason had gone through some struggles following a difficult medical procedure, but Pete had shown absolutely no signs of addiction for as long as I knew him.

I guess it's hard to say you really know someone when you haven't seen them in years. Still, I can't help but feel uneasy about their deaths. We were all part of the same tontine, as my parents had alerted theirs to the same investment opportunity. We would often joke about taking an annual, all-inclusive beach vacation to some island in the Caribbean once Genesis made it big.

Forget the Caribbean, at this point, I can't wait to get inside to pick out some apples in the produce aisle. A rush of frigid air makes me gasp, and I stop to catch my breath. The wind tears through my jacket, and it feels as thin as a ratty, old T-shirt. My toes are numb, and I curse myself for not wearing multiple layers of socks. As I trudge forward, the wind slams my face again, causing me to bury my chin in my jacket, desperate to escape the stinging cold. I spin around to walk backward again to escape the unrelenting headwind. As I turn, I hear a quick shuffle of footsteps, and I gasp as I'm staring directly into the eyes of the man in the ski mask. Without hesitation, he drives a knife deep into my chest and lays me down gently on the sidewalk. I try to scream but can only manage a soft groan, "errrrrghhhhhh." A searing pain begins to grow in my core, and the feeling spreads throughout my entire body. The man looks at me and whispers, "Don't worry, you'll join your friends someplace warm very soon..."