

## The Actuarial Tontine

Brendan Quill was anxious to get to the monthly meeting at the tony Mayfair Club, so he put aside his research and placed the Delphi Cone in his home lab's safe. He ordered up an Uber to take him to his club's East 53 St. location. Their January meeting was usually a combination of reflections of the past year and some ideas on how to spend the new one. He hoped it would be less boring than most, at least the bar was free.

He checked his appearance and generally approved of how his Brooks Brothers suit fit his slim build, but was slightly concerned over his graying hair and wondered if he should have it dyed. Slipping on his camelhair overcoat and donning his horn-rimmed glasses he stepped into a cold January New York City evening.

Brendan found his usual seat and awaited the arrival of the remaining seven Theta Lads. The name Theta Lads was chosen way back in the first few years of founding the Mayfair. The name was derived from theta the 8<sup>th</sup> letter of the Greek Alphabet; however, they soon became known as the Lads. In part since using Theta was considered too pretentious even for this smug group.

As was their custom a designated Lad member would offer a topic for discussion at the meeting. This January, Jason Adderley a semi-retired professor of media studies at NYU spoke of his most recent viewing of the film *House of Fear*, a Sherlock Holmes story about a tontine. Adderley, a spritely octogenarian, quoted an online dictionary for those unfamiliar with the term- "A tontine is a joint financial arrangement whereby the participants usually contribute equally to a prize that is awarded entirely to the participant who survives all the others".

In the movie a group of single men take out a life insurance policy with the proceeds going to the last survivor. A series of murders and mutilation soon captures the attention of Sherlock Holmes. Adderley recommends the film for those curious about the outcome and then asks the question could a tontine be arranged today and if so, how would it work?

After considerable debate it was decided that yes indeed a tontine could be arranged and furthermore this group of eight would be an excellent place to start this experiment.

Initially it was suggested that each member ante up an equal amount of \$100,000. However, Jackson Porter, a retired insurance executive with knowledge of actuarial science, noted that this was quite favorable for the youngest members but not very attractive to the elders. Porter recommended that the ante be weighted by each member's life expectancy. The Lads agreed and christened this experiment the actuarial tontine or AT when non-Lad members were around.

The Lads were so intrigued that they asked Porter to develop for the February meeting a table of what the weighted ante would be for each Lad. Porter in turn asked that each member email or text him their date of birth.

Porter enlisted an actuarial student to do the calculations. At the February meeting he presented the results. The antes ranged from \$3.7m for the 45-year-olds to \$500,000 for the 85-year-old. The total AT

amount was a bit over \$17m. A lively debate ensued as to whether this was too steep and if the \$100,000 reference ante should be lowered? Porter knew his audience well and their considerable egos so he proposed that any member who could not raise their ante could appeal for a lower amount. Shortly thereafter, all agreed that the reference ante should stay at \$100,000.

It was agreed that checks would be collected at the March meeting and Mr. Jenkins Mayfair's Secretary would be brought in and given instructions about what role he would play in the actuarial tontine. Jenkins would be told to open a secret account and deposit the \$17m that would ultimately go to last surviving Lad. Several Lads were to be listed as joint owners of the account. Secrecy was of the utmost importance and if even a whisper of this reached the group he would be summarily dismissed.

Quill returned home quickly and fretted about his \$2.8m ante, a sum that was beyond his financial capability. He desperately needed to win the money, so he went about trying to secure his ante. He consulted his financial advisor and was told even if he mortgaged his condo, he would still be \$1.2m short. However, knowing that Brandan had recently changed jobs to a start-up with generous stock option, the advisor suggested that he contact an investment banker. The banker offered to provide a \$200,000 loan with the stock options as collateral. Still short by \$1 million, Quill realized he would need to sell his beloved condo.

He was depressed---- even if he won, how long would it take to get the \$17m? He needed a way to significantly improve his odds and shortened the timeframe. Yes, he needed a miracle.

Pacing around his room, as luck would have it, Brendan found himself standing in front of his safe. Restless and irritated, he decided to do some housekeeping and opened the safe. There stood the Delphi Cone.

The Delphi Cone was discovered during a trip to the planet Jupiter by Quill and five other research biologists looking for signs of life on the planet. The Cone was about six inches high with a ten-inch circumference. It was remarkable in many ways, but to the researchers its most valuable attribute was the vast knowledge it held of the advanced civilization that created it. The Cone was like Alexa on steroids almost certainly using some highly developed artificial intelligence. Since the expedition was financed by the wealthy mother of a colleague, the Delphi was deemed to be owned by the group and each biologist rotated possession of it for two months per year. This was the first year it was shared, and Quill had it for the months of January and February.

Brendan wondered- Had he overlooked the Cone? Could this curiosity be his answer?

Quill began to formulate questions that the Delphi Cone might answer. His first question was – Can the DNA of a living person be edited to alter their life span? Delphi took more than the usual time, but ultimately said that yes this could be done, but warned of the moral hazards involved. Undeterred Brendan asked- What genes need to be edited to decrease a person's normal life expectancy?

The Cone responded once again with a stern warning that the social strife from this technology ultimately led to the destruction of his civilization. The richer old wanted to be young and the younger generations bitterly opposed them. Political lines were now drawn along age, families divided in a likewise manner and hostilities grew. Just before the end of civilization came, 100 Delphi Cones were placed throughout the solar system to share some of the discoveries and warn of their unintended consequences.

Brendan acknowledged the warnings, but quickly dismissed them. He asked for the detailed formula that would advance age. Also, he wanted to know how it was to be administered. Delphi went on to give a brief history of genetic age-altering technology citing 2023 breakthrough with mice. It also warned that it took many decades to overcome the serious side-effects in humans and many more decades to develop a safe way to deliver the end-product. Finally, the Cone detailed the formula and stated it would produce a one-ounce liquid that would age anyone who drank it. Furthermore, the Cone added the result would be an average of a 50% drop in life expectancy.

Armed with this information, Quill was elated and sped off to his company's lab. As the Executive Vice President for Research at Omega Pharmaceuticals, Dr. Quill had all the necessary equipment, but still had further questions - How to get the Lads to drink the potent solution? Would one dose be enough? He put these questions aside and started to work on the formula.

Unbeknownst to Quill, further south and east in Manhattan, another Lad member was thinking about the same issue- How to improve his odds of winning the AT prize. This man, called Tata, was a retired Russian drug lord who had connections all over the world. Using his enormous wealth, he created a new persona who was welcomed in the most elite social circles. The name Tata, slang for Dad, was given to him by his Czech ally who revered him as if he were his father. Tata was a name still feared throughout the underworld. No one had any idea that this man was really Tata, a vicious and remorseless criminal.

Tata had always relied on force to remove obstacles that blocked his road to success. To him, this was just another case where calculated violence would serve him well. Tata certainly didn't need the millions, but he wanted to win and would find a way to do it.

His first step was to outline a plan of action. Of his seven Lad colleagues, he reasoned that the three most elderly would be left to the Grim Reaper and for now his focus would be on dispatching the two youngest members - Travis Knox and Jack Kelly - both 45 years' old. Tata instructed his lawyer to do an extensive background check on both men.

Dressed in his designer dark blue sweat suit and gleaming white running shoes Tata, who stood six feet four with a freshly shaven bald head was an impressive figure. He strolled down East 67 St. passing Memorial Sloan Kettering hospital and the local public school and continued around the block returning to First Avenue and the two-apartment building he called home.

He did a quick calculation using a three-year outlook, concluding that with the three elderly Lads gone plus the two youngest eliminated, only he, the retired insurance executive and the biologist remained. Certainly, a manageable situation. Satisfied with his plan, Tata went to bed.

The next morning, he read over the report on Travis Knox. This trust fund-baby had a net worth of four billion and was known to have a big cocaine habit. Perfect. Tata sent out instructions that Knox's next cocaine buy should be laced with enough fentanyl to end his participation.

Turning to the next stack of papers he learned that Jack Kelly was a self-made Silicon Valley multi-billionaire. Unfortunately, Jack had no exploitable bad habits. He spent a good deal of time travelling on his private jet to interests all over the world. Tata noted that Jack flew to Russia several times each month so he immediately sent word to his Russian colleagues asked them to suggest ideas of how Jack's plane accident could be arranged. Satisfied with today's work Tata ordered breakfast.

While Tata was plotting on his end, Quill was making good progress in his lab. He returned to his two unanswered questions - How to get the Lads to drink the potent solution? Would one dose be enough?

He knew the Lads liked their drink and decided that he would bring something special to the March meeting to toast the start of their actuarial tontine. Brendan visited an upscale liquor store and asked the owner what he would recommend for a very special occasion. The owner asked if he liked bourbon, if so, he recommended Pappy Van Winkle. Quill asked how much it cost and was taken back when he heard that 10-year-old bottle would be \$1,000. While he was stunned at the price, after a moments reflection he felt this was perfect since this snobbish group probably knew how expensive it was and would eagerly drink up. He bought the bottle and made plans to lace it with the age-altering liquid.

Quill got to the March meeting early, poured himself some Pappy Winkle and spiked the remainder. When all the Lads were present, Brendan stood and offered a toast to their newest venture. All but one gladly accepted the libation. The lone refusal was the large bald man directly across the table who said his doctor had required him to give up alcohol. The oldest Lad Adderley spoke up saying it would be a tragedy to waste such a splendid brew and volunteered to drink it. Amid chuckles the old Lad quickly put away the unwanted bourbon.

The ante checks were collected, and the Mayfair's Secretary Jenkins was brought in and given his instructions.

Time passed.

The January meeting marked the first anniversary of their tontine experiment and brought the somber news that two Lads had died during the year. Their oldest member Jason Adderley, who many happily recalled was a jolly fellow who had enjoyed a second Pappy Winkle, passed away in Florida during the winter. Sadly, Travis Knox, one of the youngest Lads, had recently died of a heart attack. Tata inwardly smiled and thought yes fentanyl can certainly blow up your heart. While Quill was shocked to hear about Travis, the elderly Jason's death was expected.

Brendan returned home and realized that the Delphi Cone was now his for another two months and wondered what further use he could make of it. Suddenly it came to him, he was overlooking the other aspect of his discovery. Namely he could ask the Cone how to become younger. Receiving the age reversal instructions, he sped off to the lab to begin work.

Meanwhile Tata continued working on his plan to win the \$17m. With Knox out of the way, it was time to deal with Jack Kelly and his upcoming plane accident. His Russian operatives were contacted and directed to arrange for the accident to happen over Russia so that any investigation would be contained within the country. With Kelly gone, five Lads would be left – the two elderly, Jackson Porter, Brendan Quill and Tata. Satisfied with progress to date, he felt it best to wait until next year to plan for Porter and Quill.

At the second anniversary of the tontine the Lads opened the January meeting with the announcement that the another of their elderly members had died that winter in Palm Springs. Also, Jack Kelly had perished in a plane accident. A moment of silence was observed for the four deceased Lads. With only four Lads left the mood was oppressive and the meeting lasted only thirty minutes.

Another year passed without any changes; however, the fourth year of the tontine would prove to be a decisive one.

The fourth anniversary was dispiriting as only three Lads attended, the eldest member was too ill to make it. Jackson Porter the retired insurance executive shared that his health was poor, and the prognosis was not good. Before the meeting ended the group was notified that sadly the eldest member had died. Now there were three. Porter commented that the tontine had turned into a grotesque exercise were a Lad's death was both sadly acknowledged and perhaps secretly cheered.

Tata returned home and reasoned that it was highly likely that he and Quill would be the last survivors, so he ordered a complete background on Brendan Quill. The next morning Tata scanned Quill's background and was surprised to learn that his net worth was only several million dollars. He speculated if a lab accident would be the best way to eliminate him. He needed to consider his options more carefully before any action was taken.

For his part Brendan was feeling good about his chances of winning the actuarial tontine but decided that to improve his odds he would drink the age-reversing solution that the Cone had provided.

In June Tata and Quill were called by Jenkins and informed that Jackson Porter had died. Now there were but two Lads left.

Jenkins was invited to the July meeting and was instructed that on the next death he was to reach out to the survivor and escort him to the bank for the transfer of the \$17m.

On a balmy August evening Tata was heading across First Avenue at 67th Street when a shot rang out and he collapsed dead on the pavement. During the investigation it was revealed that Tata was a notorious drug lord and speculated that his death was a mob killing.

When Jenkins heard the news, he did as instructed and contacted Quill. Brendan decided it was best to move quickly, so he arranged for Jenkins to pick him up the next morning.

Quill woke up early somewhat relieved that it was finally over. After a quick breakfast he was anxious to get going. At 10 am sharp he was in front as Jenkins rolled up in an old Lincoln Continental with tinted windows. As he headed though the 86th Street Central Park bypass, Jenkins turned and fired two shots into Quill killing him.

Jenkins (his alias name) headed north to the Bronx at a moderate pace, he was in no hurry. He thought about the twists and turns in the road that led him here. After high school he joined the Marines graduating from the Scout Sniper School. Unfortunately, there was little need for a sniper in civilian life, so Jenkins started robbing jewelry stores. Jenkins was not a very good thief. He was caught and sentenced to five years at Green Haven Correctional Facility. It was there that Jenkins learned so many useful things.

Jenkins' prison education started with where he could get weapons. This is how he acquired the Glock 19 that he shot Quill with and an M40 sniper rifle that sent Tata off to his ancestors. Only in prison could you meet someone who told you where a body could be disposed of. In fact, he was heading to Louie's Salvage where for \$500 the Lincoln and Mr. Quill would be crushed into a metal mass.

Need some documents forged? He knew how to do this too. This was how he created many documents, including Mr. Jenkins' letter of recommendations, employment history, social security card, passport, driver's license and a host of credit cards. The passports would be vital since his \$17m now resided in an island country without extradition and a very accommodating banking system.

Also, while he knew the basics of how to steal a car, he learned how to choose the best makes/models to cater to ones needs. A Lincoln Continental with tinted windows was the perfect vehicle for killing Quill. With the sniper rifle was in the trunk, Jenkins he tossed the Glock into the backseat and entered Louie's Salvage, paid the \$500, and watched the eternal melding of Brendan Quill and the Lincoln.

Jenkins called an Uber to take him to JFK and sat back to enjoy the ride. His mind wandered back to Green Haven and the time when he first saw Tata. Prison society is organized around gangs: Black, Latino; and White. Tata was the leader of the white gang and was about to be released after serving time for extortion. During that time in prison, Tata had hair down to his shoulders and had a full-length beard. Now he was bald and clean-shaven but Jenkins spotted him immediately at Mayfair and became wary.

It was Tata's presence as a Lad that dissuaded Jenkins from taking the money at the outset and leaving. He understood that no matter where he went Tata could reach him, then kill him and take the money. So he settled in as Mayfair's Secretary and waited to see how things developed. And things worked out just fine.

Yes, in retrospect all his previous experiences had prepared Jenkins for this. He liked to think of this as the perfect crime. Maybe so, and some day maybe he would write a story about it.