

2064: A Calculated Risk

by John A. Major, ASA

I watched an argument three thousand miles away.

Two motorists were stuck in traffic on I-210 in Pasadena, California. Words had been exchanged. One of them was our policyholder. I was at my carrel on the seventh floor of the Mitsubishi North America office tower in Hartford, Connecticut. My field of vision was split into four: two first-person viewpoints, an overhead from a drone, and a cluster of policy icons.

My palms were sweating.

"Don't you think it's time to intervene, Ethan?" the voice in my head purred.

"Not yet, Jewel. You're doing fine. Can you zoom in a little?" As an Underwriting Assistant, my job was to help the AI cope with nuances of human behavior, and to intervene when a human authority figure was needed.

Jewel understood conflict. She had warned our policyholder that his continuous premium rate was rising sharply. I was waiting for the right moment to step in.

Suddenly, our policyholder got out of his car, hefting a tire iron. This automatically triggered a call to Claim Response. Telebots were on their way. But until they arrived, Underwriting was still in charge.

"Ethan, speak up!"

I froze. I couldn't speak. Jewel kept talking to them, but they weren't listening. Our policyholder swung and smashed a tail light. The other driver got out of his car, waving a baseball bat. Our policyholder backed away a few steps. They each stood, swaying slightly, watching the other.

"Gentlemen," Jewel called out in the fresh silence. "Claim Response telebots are on their way. Return to your vehicles!" They eyed each other warily but did not move.

Fifty seconds later three telebots landed. Claim Response was in control.

I gestured to disconnect. My view cleared and I was again looking out over five rows of underwriters, each seated in a small, half-open booth. I was breathing heavily. A few of my peers turned to look.

My name is Ethan Whittaker. I was born in 2030, just before the Big Wave, that perfect storm of social, technological, and natural disasters, which had upended so many institutions and ways of doing things.

After I graduated college with a small nation's worth of debt, I snagged a contractor spot in MNA's underwriting department. Just temporary. I had chosen the "Jewel" avatar for working with the ThinkNet AI early on. It was the least grating, the least condescending. Six years later, I was still renting the same carrel. My corporate interFace - a slim black Foxconn strapped across my eyes - had been upgraded, but little else had changed.

Until this year. Today wasn't the first time I couldn't bring myself to intervene in other people's lives. At first it was a reluctance, a prick of conscience, I had told myself. But it had grown into a full-blown dread, and today was the worst yet.

I needed a break.

The My-Serv in the hall was a dull metallic section of wall with a two-foot-square window at waist level. What I saw through my interFace, however, was a beachside bar on a tropical island, with a glittering sign advertising today's specials. I gestured to bring up the menu and navigated to cheesecakes. A nudge icon in the form of a stylized elbow blinked in the corner of my vision.

I flicked a finger and opened a report that contained a nutritional summary, my latest cholesterol readings, their projections if I continued to eat a cheesecake snack every day (as I had been), and the resulting changes to my premium rates. There was also a highlighted note that my blood pressure was in an unsafe zone right now. No kidding.

I chose the Empire apple. A dollar fifty instead of three dollars, and potentially hundreds a year saved if I made the right choice more often. The My-Serv window slid open and I retrieved a plastic envelope of apple chunks.

Walking back to my carrel, I got a message from my supervisor, Ms. Nti.

"Mister Whittaker," her recorded image said, spitting staccato syllables in an upper-class Jamaican accent, "Thanks to you we are defending our policyholder on charges of aggravated assault. Also, there was significant damage to one of our telebots. This does not bode well for your contract renewal."

I winced. It's not easy to damage a claim telebot.

"May I remind you we have waiting lists of people who want to become underwriters? Your carrel is valuable. Do the job or quit."

Do the job or quit, Ethan. What's it going to be?

As a contractor, I had some flexibility with my hours, so I checked the corporate interFace back into its safe and made my way to the door.

The main stairwell had only one camera at the top. A senior underwriter with unrestricted camera access had shown me. By sticking to the outside edge, one could walk down, unseen, all the way to the lobby. Today I trudged down that path, willing my feet to deepen the gouges in the century-old granite.

Only when I got to the sidewalk did I take my personal interFace out of its case. It was the iPhace 3 I had used in college, outdated but still functioning.

I waited a few seconds while it connected with ThinkNet. The muted browns and grays of the city were suddenly overlaid with brightly colored information icons and arrows, and flashing storefront marquees. The sky was full of cartoon characters clamoring for my attention. Such was the price of a budget ThinkNet connection.

I checked the MNA green umbrella icon, always visible to the lower left. My rate was currently 5.2 cents per minute, about normal for walking outdoors in the city at this hour.

An unctuous male voice popped into my head. "Good afternoon, Ethan. I am afraid I must remonstrate you. You really should have interFaced sooner. We did not have complete information on you for nearly three minutes."

It could have been Jewel's voice, but I preferred the Hector avatar when on the receiving end of underwriting.

"Sadly, we were forced to set your premium rate to the default anonymous-B standard of five dollars per minute during that interval. You shouldn't have to be reminded that a rate review can complicate your financial picture, and being reunderwritten can be disastrous."

Yeah, right. A few bucks well spent to get some privacy. All these years and still, it irked me. On the job was one thing, but being outside, on my own time, and knowing I was being monitored every second... Growing up, it just hadn't mattered, but now it felt like the whole world was watching me.

I bought a risk-neutral cup of coffee from a street vendor and sipped it in the shady side of the Gold Building. Images from this morning's fiasco looped through my mind, unwelcome, like a pop-up advertisement you can't get rid of.

I gradually became aware of an antique Subaru motionless at the intersection of Main and Pearl. The rest of noon traffic crossed simultaneously from all directions in the usual telematic ballet.

I tossed the coffee into a recycling bin and gestured to open a link with the driver. Nothing happened. I started walking towards the car.

"I really don't think that's a good idea," Hector said. A large uplifted hand materialized in front of me. I walked through it. I could see my premium rate jump to a dollar twenty-five per minute.

An elderly woman was in the driver's seat. I tapped on the window. "Excuse me, ma'am, do you need help getting through the intersection?"

"Yes," she said, her voice trembling a bit. "My car's computer doesn't seem to be working...."

"You heard it Hector; help the lady." I snapped my fingers and stepped back.

Moments later, cross traffic stopped. The Subaru drove slowly through the intersection. Traffic resumed.

"Hey Hector," I said a bit aggressively, "How about waiving that premium surcharge? Helping the lady was a justifiable risk, wouldn't you say?"

"I'm afraid I must call an underwriter on-line if you want to address this."

"Forget it." I clenched my teeth. It wasn't the three bucks - it was the principle. But neither was worth the hassle and risk of getting an unpredictable human involved.

A few minutes later, I was north of the I-84 tunnel. In this section of town, near the ruins of Dunkin Donuts Stadium, road maintenance had suffered. Hover cars and articulated six-wheelers picked their way carefully around the heaved and broken pavement. Along the crumbling sidewalk, a low line of cheap 3D-printed buildings had sprung up about ten years ago.

One of them housed Jay's Guns. Jay was my uncle. I often stopped to say Hi. As usual, when I got near the door, a large warning sign in the guise of a brick wall blocked my vision. "YOU HAVE NOT BEEN RATED TO ENTER THIS BUILDING," appeared in block letters.

I walked a few steps more, then looked through the display window and waved. Jay saw me. He spoke through his military issue interFace.

"Ethan! When are you coming to the shooting range with me? It's been a long time."

"My youth certification lapsed when I turned eighteen," I reminded him.

"Well, your Aunt Liz would love to see you up at the club, even if you don't go on the range. Lemme know if you're ever in the mood and I'll give you a lift."

"Will do. Thanks." I didn't really want to talk today.

Ten minutes later, I was inside my three hundred square foot apartment. I Fosburied onto the second-hand leather sofa and kicked off my shoes.

"Jewel?"

"Good afternoon, Ethan. Are you working off-site now?"

"Continuing education, not billable." I hesitated. "I wanted to ask you a few things."

"I'll do what I can. You know the parameters."

"OK. How do people feel about being monitored constantly?"

An inexplicable five-second pause. "That's rather vague and judgmental. You'll have to be more specific."

Right. Talking to a computer. "What proportion of policyholders have negative attitudes towards being monitored?"

"Ethan, this is the sort of query that takes a lot of effort to formulate correctly."

"Help me, then."

"I'm afraid you are not authorized to access the necessary information in MNA's data banks."

"Huh." I should have expected that. "Well who is, then?"

"Actuaries."

Aha.

Six months later, thanks to a surprisingly good letter of reference from Ms. Nti, and having passed the tensor calculus exam, I was accepted into MNA's actuarial program.

With a real salary, I had money for dating. Nobody serious enough to meet in real life yet, but one was particularly interesting: an MNA underwriter operating out of Atlanta with curly blonde hair and lots of attitude.

Although nine hundred miles apart, we stood on the same virtual balcony overlooking a virtual Angel Falls and talked about life. She asked why I became an actuary.

"When I was still an underwriter, I felt like a stalker. I hated intruding into peoples' lives like that."

She didn't get it. "Intruding? I feel like I'm helping them."

"And what if they don't want to be helped?"

She crinkled her nose. "Maybe they still need help."

I nodded. "And when you are the one being monitored? How do you feel?"

She hesitated, then looked down. "Maybe sometimes I need help, too."

I didn't see her again.

Three years later, I was an Associate of the Atlantic Actuarial Guild.

My conversations with Jewel on peoples' attitudes towards monitoring had ebbed and flowed. Prior to Associateship, I still couldn't issue the kinds of queries I needed. But we had had time to formulate them. Now, finally, I was getting answers.

Being an Associate, I was expected to contribute to new product development panels. This was an important opportunity for me.

The meeting, of course, was held in a virtual space. This time it was The wheelhouse, a cross between a boardroom and a planetarium. Attendees looked at each other across a plain of oxblood leather and green marble while all around us constantly evolving displays revealed MNA's operations and fortunes in real time.

There were three senior officers – Chief Actuary Suzy Chang, Assistant Chief Ed Mueller, and Chief Underwriter Marty Eliason. Another two dozen or so attendees were a mix of actuaries, underwriters, and product managers.

Eventually, my turn came. "My research suggests there is a sizable market for personal insurance with minimal or no monitoring or real-time rating."

I triggered my graphics to appear in mid-air over the table.

"While we now accept real-time rating as a necessity, historically, insurers were able to function on a much less granular level. I believe significant numbers of insureds would be willing to pay a reasonable premium – far short of the cost of a Self-Insured's two-million dollar bond – to be rated at more discrete intervals, based on less intrusive data gathering. Predictive analytics can be used...."

Mueller interrupted.

"So, you want to turn the clock back, is that it? You sound like my grandfather. People got used to constant surveillance decades ago, and nobody cares." He waved his hand. "Besides, it wouldn't work. Anyone care to explain why to Mr. Whittaker? Volunteers?"

Seven hands shot up.

"Ms. Garcia-Nguyen?"

"Antiselection!" she said excitedly, as if she were in a game show. "The people who want to avoid monitoring are precisely the people who need monitoring. Losses would explode, driving premiums up, and as a result, the better risks would drop out, leaving the worst in the pool. Classic death spiral."

"Exactly. Thank you, Mr. Whittaker, better luck next time. Next?"

I sat back down, fuming. I had expected resistance, not dismissal.

Later, I didn't know what to make of the two-word text message I got from the chief underwriter, Mr. Eliason: "Nice try." Was that sincere or sarcastic?

I started joining Uncle Jay at the North Central Gun Club, though I still stayed off the range. I might have been able to join in, but that would involve getting recertified and adding a rider to my personal coverage. As it was, approaching that particular door caused alarm bells and flashing neon signs to appear in my interFace.

I was happy enough to hang out with Jay and Liz and some of their buddies in the coffee bar. One day, Robby – a veteran with Jay at the Glassification of Khorramshahr – was complaining that his gun ownership premiums had gone up.

"That's because you're getting old and senile!" crowed Jay.

"Well that's not fair, you can't discriminate against old folks," Robby grumbled.

"There, you just proved both, old and senile," said Liz. "That's pre-wave talk. They can do anything they want. Just ask our insurance expert here! Right, Ethan?"

"Well...." I started.

"But two dollars for every round I fire on the range?" cried Robby. "Is that fair? It used to be one dollar."

I looked up what my rates would be.

"Well, here's what I would have to pay," I said. "An extra five cents a minute to own a handgun, fifty cents per minute when actually holding one in my hands. Let's see. And three dollars and fifty cents for every round fired at a firing range." I looked up. "You're a member of your armed neighborhood watch, right?"

"Yeah."

"OK, so that gets you a discount. Still, it sounds like you're getting a deal, just not as good as before. They must have received some new information."

"Humpf. Maybe it's that they don't have enough information. I'm more careful than those cowboys over there," Robby said, nodding his head in the direction of a table off in the far corner.

We all turned to look for a moment.

"Yeah, I've been watching them ever since they joined," said Jay in a conspiratorial whisper. "Betcha they get kicked out by the end of the year."

Liz made a face at him. "So far, they've followed the club rules. What's your problem?"

"It's their attitude. Like, see the guy in the purple shirt. See how his gun case is leaning against the wall? It's ready to fall over. And on the range the other day? He was joking around with his buddy, saying stuff like 'Go ahead, make my day' before every shot. Just not respecting his weapon."

"No, I guess not," Liz admitted.

"I would vouch for Robby any time. He's the right kind of careful. Them, not so much."

I stared at Jay for a moment. "Say that again."

"I said I would vouch for Robby being safe."

"Would you put money on it?"

"You mean like a bet?" His eyes narrowed.

"Yeah."

Jay sat back and twisted his mouth. "Depends on the specifics, but if it's not too out of whack, sure, I would bet on Robby."

I smiled a great, big smile.

At the next new product panel, I was prepared.

"Are we to understand you're back with the same proposal, Mr. Whittaker?" asked Assistant Chief Mueller with more than a hint of

scorn.

"Not exactly, sir. During my last presentation, the problem of information asymmetry was highlighted. Without state of the art monitoring, it seems that superior customer knowledge would lead to antiselection. But now I have a remedy for that."

I paused for dramatic effect. "We will use superior customer knowledge to our advantage through a mechanism of micro-mutualization."

An epidemic of subvocalizing broke out around the table.

I continued. "The traditional mutual insurance operation consists of policyholders paying loaded premiums up front and then receiving dividends later if the loss experience plays out near or better than expected. If experience is unfavorable, the policyholders receive smaller dividends or perhaps none at all in order to cover unexpected losses."

Mueller made a rolling motion with his hand. I talked faster.

"With this new type of mutualization, each policyholder has an opportunity to vouch for one or more others, most likely new customers they bring in through referral. A portion of the policyholder's dividends would be tied to the experience of those specific vouched-for individuals. The economic incentive would be to vouch only for individuals that are low-risk. In effect, the policyholders would be underwriting for us."

Half a dozen people began speaking at once. The assistant chief muted them all, and turned to look at the chief. The chief waved him away. The assistant chief turned to me.

"That," he said emphatically, "is the most ridiculous thing I've ever heard. Please do not waste the panel's time on this proposal again. Next, we will hear from Mr. Aardswell."

With a hard slap, I cut the connection and gripped the edge of my desk. I could feel my face flush with heat. What arrogance! Arrogance and willful ignorance!

Later that morning, I received the same cryptic message from Eliason: "Nice try."

I also received notice I was being removed from the Space Elevator risk analysis team, and joining a new team. The project was to investigate the potential of real-time brain wave monitoring. I felt sick to my stomach.

It was just before lunch, and I had had enough. I told Jewel to mark me down for half a vacation day. I left the building.

I headed north on Main Street, back to my apartment. I was moving fast and muttering to myself.

I went right past Jay's shop without stopping. The broken sidewalk felt like an obstacle course. Today I was enjoying it, running and leaping like the feral cats that lived behind the shops. My premium rate was up around five bucks a minute, and the elbow icon was pulsing and winking brightly, but I didn't care.

Hector was doing his best. "You really need to calm down, Ethan. You are not paying sufficient attention to your footing. You could sprain your ankle or even break a leg."

When I got to the six-way intersection where Main met Albany Avenue, I stopped to catch my breath. I noticed a drone hovering about fifty feet in front of me, which was odd. They usually make themselves invisible. And there it was again. That tense feeling of being watched, watched by people who were quietly laughing.

"Ethan?" Hector said with simulated concern.

"Ha!" I hopped back and forth between two tilted slabs of concrete. "Ever hear of parkour? Huh?"

I guess I pushed it too far. The umbrella icon went from a solid green to a translucent outline. A new voice popped into my head.

"Hello, Ethan, my name is George Volk. You probably don't remember me, but I was three rows ahead of you when you were an underwriter. How are you today?"

The standard greeting, intended to establish a friendly rapport. I stood still, breathing a bit heavily. I couldn't take my eyes off the umbrella icon. I knew what it meant.

"Good, George. Good. No problem, I was just heading home. Hector got a little worried, but it's all good now. Forget about it."

There was a pause and I knew George was reviewing the previous minute or two. "So," he said sympathetically, "It looks like you got flagged for a rate review."

"Yeah," I said between clenched teeth.

"And since you're an employee, your review will be done by old man Eliason."

I shook my head slowly. What did I just do to myself? A rate review could mean a doubling, even tripling, of my base rates. It could lead to being reunderwritten, or worse, my coverage could be canceled. It could affect my employment. The results would follow me to any new insurer, any new employer.

"Of course, you could appeal it," George said with a chuckle.

Worse than a rate review was appealing it. That meant facing awkward questions about one's habits – patterns of behavior revealed by hundreds of hours of monitoring. And that conversation itself would become part of the record.

Some kind of righteous indignation bubbled up inside me. "Maybe I should!"

"You're kidding, right?"

I just stood there for a few seconds, trying to get my brain to work. "No, I'm not kidding," I heard myself say. "Put me on his calendar."

"Are you sure?"

"Yes." It felt like the right decision, but I could not figure out why.

"OK, I'll put it in." A few seconds went by. "His office three weeks from Thursday. Oh, wait."

"What?"

"That's weird. Says if you want, you can meet him in ten minutes at the south edge of Bushnell Park."

I took a deep breath. My heart was pounding. "I'll take it."

"Okay. You sure you're all right? Anything I can do for you?"

"No, thanks."

"Okay." George broke the connection.

The rendezvous was about three quarters of a mile south. I turned left onto High. I had less than ten minutes to prepare my case. I

began a mental accounting of my recent behavior.

Three minutes later, as I crossed over the I-84 tunnel again, it hit me. Screw the rate review. This was my opportunity. I was about to meet a person who might, just might, understand my micro-mutualization idea. A person who undoubtedly had the position and authority to do something about it.

The next seven minutes went by quickly. Soon a blinking arrow pointed out an old man in an expensive suit sitting on a park bench.

"Ethan! Come, have a seat." Eliason leaned over with some effort and patted the wooden slats next to him. He looked a lot older now than in the virtual meeting. He wore no interface, but the gleaming emerald dots in the whites of his eyes suggested expensive implants.

I started to sweat. Suddenly, this didn't seem like such a good idea.

"Thank you, sir. I know I'm here to appeal my rate review, but I'd like to talk about something else first."

Eliason turned his palm upward and nodded once.

I swallowed hard and launched into my pitch. Eliason stared into the park as I spoke for a minute.

"Of course," I continued, "It only makes sense to start with a pilot program. I think we should start with a particularly promising demographic, namely g...."

"That's enough," Eliason interrupted. He was still looking away from me, staring into the park. "Let me give you some advice. Put your research notes in order, and post them to the firm's central repository. Then forget about it."

He went silent. I looked in the direction of his gaze. There was a squirrel on the concrete path, watching us. Far behind it, a man was supervising a team of robot hedge trimmers. To the side, a troupe of virtual dancers was rehearsing, allowing anyone to see them and react to them.

I held my arms tight to my chest. "I was hoping... I was hoping you might help me convince the new product panel that it's worth pursuing."

He watched the dancers. "Ethan, I'm eighty-two years old. I'm old enough to remember how it was before cameras were everywhere. I figured out pretty quickly which side of the lens I wanted to be on. What about you?"

Then he turned and locked his emerald-studded, two-million dollar bonded, Certified Self-Insured eyes onto mine. "What is it you want? To liberate the masses? Something like that?"

"Well," I fumbled, "I guess, something like that. Life doesn't have to be this way."

"Doesn't it? Tell me, what is the foundation of civilization?"

"Huh?" I was speechless.

"Actions have outcomes. Assigning bad outcomes back to the responsible actors, liability, that is the foundation of civilization. Now an advanced civilization - that goes an additional step and manages risk. Risk is a floating cloud of potential liability, waiting to precipitate somewhere. It has to be controlled."

He was still looking straight at me. He raised his eyebrows. "Doesn't it?"

"But surely," I cried, "There has to be a better way than this!"

"Maybe. But this is what we have." With a bit of effort, he stood up. He gave me a weak handshake. "Forget about the rate review. Your appeal is granted." He turned to leave.

"Wait! What did you mean in your messages when you said 'Nice try?'"

Eliason looked at me with a frown. For a moment I thought he would not speak.

"You're in or out, Ethan, you can't have it both ways. You admit risk control is necessary. But you oppose impersonal statistical algorithms and professional, disinterested underwriters. So you propose to replace them with... what? Relatives, friends, acquaintances, and neighbors who have a financial interest in your behavior? Constantly checking up on you, nagging, wheedling, lecturing you on how you should live? That's your alternative? Nice try."

He turned and walked away. Soon he was making small gestures with both hands, only half-seeing the path in front of him.

The dancers finished their routine, bowed, and vanished. The green umbrella icon winked back to full color. My rate was 3.7 cents per minute, about normal for sitting on a park bench in the afternoon under a cartoon-filled sky.

END