

LOOKING FORWARD

Touch

Ce qui créa la foi au miracle ce fut l'idée qu'il devait y avoir un miracle.

— Marc Bloch, *Les Rois thaumaturges*

On Sept. 21, 2111, Bill Relso woke up to the horrific sound of his alarm clock clashing. Sighing, he flicked it off and went to take a shower. A few minutes later, he pulled out the large jug full of the chocolaty-brown liquid from the fridge: breakfast. He took a sip and wrinkled his nose. They really needed to work on the taste.

Half an hour later, Relso was sitting on the subway train. The other passengers stared out the windows, their eyes like reflective glass. Relso stared out the window too as the antiquated train emerged from the tunnel into a dreary, rainy day. Some might appreciate the romance of rain in the big city, but Relso felt like he had grit in the pores of his skin.

But as he walked toward the tall, white monolithic General Hospital a familiar sense of awe washed over Relso. He fell into step beside the other hospital employees heading toward the side door, ignoring the line of desperately poor people lined up in front of the main hospital doors. One woman clutched at his heels: “My baby, please, my baby is sick!”

Relso brushed past her and walked toward the scanner. He paused while his DNA was checked and identity verified, sleeked down his hair and headed to the Diagnostics Department.

It was Relso's second week on practicum as a diagnostic systems analyst. He had already completed an undergraduate degree in systems analysis and managed to gain admission to the prestigious Medical Bioanalysis Academy. After two years of intensive study, this was his first year of practicum, actually applying his knowledge of systems analysis to the real world.



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Medical systems analysis had really gained traction over the last 50 years. For a long time, medicine had relied on the knowledge of individual doctors who trained for many years so they could accurately diagnose and treat illnesses. However, it became rapidly apparent that this system simply wasn't efficient or accurate enough. There was far too much knowledge for a single person to be able to grasp. In order to become competent, physicians had to specialize to such an extent that their usefulness was very limited.

That was when systems analysis revolutionized medicine. In 2052, Tony Babbage introduced diagnostic systems analysis (DSA) technology. Using a complex set of algorithms and specialized electroneural computing systems, Babbage could take any given set of molecular metrics from a patient and generate the most statistically likely diagnosis. Since Babbage's system

relied on molecular and genetic data, it was extremely accurate, and more important, incredibly efficient. The truly unique achievement of Babbage was the incorporation of *human* neural networks with DSA technology. Even more than 150 years after the first computer was invented, the human mind was still the most complex processor known to man. However, it required a number of years of training in systems analysis before users of Babbage's device could actually operate the DSA. That's what Relso had been doing for the last two years.

Relso swiped his card and the glass doors of the Diagnostics Department slid open with a hiss. He headed toward the front desk where the pretty secretary smiled up at him.

“Go right ahead, Mr. Relso. The Input Room is ready for you.”

Relso nodded and followed the signs through a maze of corridors until he

reached a large metal door marked, "INPUT ROOM." He opened the door. Despite the fact that this room was protected by the best electroneuronic firewalls ever built, the room itself wasn't much to look at. It was a large white room, with a single chair. There were no wires or fancy holo-screens. Relso made his way to the chair placed in the centre of the room. He sat down, placed his hands on the armrest contacts and closed his eyes.

"Hello William Relso," the cool female voice said in his ears. "Are you ready?"

"Yes," said Relso.

Relso could suddenly see in front of him (though his eyes were still closed) a video feed of an emaciated old man in a thin gown lying on the table in a completely empty room. His eyes were closed, and his wrinkled forehead looked relaxed.

"Patient number 7155. Age 92. Metastatic pancreatic cancer," the voice purred in Relso's ears. Relso furrowed his brows.

"Pull up the Chance of Survival Matrix."

It was total mayhem. There were people running around everywhere in the semi-darkness.

He instantly saw a list of numbers, inputting all the data available from Patient #7155. This was the point where the person operating the DSA became important. After all the information was inputted, Relso's mind, with the help of the DSA's circuitry, had to be able to create a configuration out of all the numbers.

"Chance of survival: 1%."

Relso sighed. The Health Care Act of 2089 had given explicit criteria for life-saving interventions. The statistical predictions generated by the DSA were extremely accurate and if there were a less than 5% chance of survival, the patient's chances weren't considered

good enough to justify any treatment. It was a shame really — most people in the Western world could expect to live at least 120 years. In this case, Relso would order sedatives to be given to the patient to make his suffering easier and the patient would be released from the hospital. It was time to say goodbye.

"Computer, please input Code 1924. Next case please."

Suddenly, everything went dark. Relso blinked a few times: It was still dark. This wasn't supposed to happen. After waiting a few minutes for the lights to turn back on, he got up out of his chair and found the door. The door swung open. The corridors were lit with emergency lighting. For the first time, Relso felt an inkling of fear.

As Relso headed back toward the front desk, he heard a vague rumbling. Emerging from the maze of corridors, he gasped. It was total mayhem. There were people running around everywhere in the semi-darkness. The secretary crouched under her desk, cowering in fear. A booming voice called out over the intercom, "Please do not panic. We have temporarily lost power.

Please try to make your way to an exit in an orderly fashion while we reboot the system."

The secretary motioned to him and whispered, "The main gate has been broken. You can't go out there. Those crazy poor people are looting everything trying to find medicine. Find somewhere to hide."

He headed back past the front desk and opened the first door he found. He locked the door, and sank down to the floor. After a few minutes, he started to peer around the room, still dimly lit by the emergency lighting. The room looked vaguely familiar. In the centre of the room was a table. Relso noticed

that someone was lying on the table. In a flash, he realized he was in the room of Patient #7155. On the bed, the elderly man was groaning in pain.

"Please," croaked the man, "help me."

Relso sighed. What was he supposed to do in this situation? The man cried out again.

"Uh, sir, I'll see if I can get you some painkiller ..." Relso rummaged uselessly around the room, but all the cabinets had been sealed, presumably to prevent the looters outside from stealing medications. Relso wasn't even sure what he would have done if he had found the medications — he didn't know how to even give an injection.

"No, no. Just come here," whispered Patient #7155.

Something about the old man's voice caught at Relso, and as if in a trance, he walked toward the old man. Somehow, before this, he had never noticed how fragile the old man looked, how alone, and how exposed lying on this table.

The man took hold of Relso's hand, and put it on his chest. Relso felt the thump, thump, thump of the man's heart beating. His hand was warm, and soft. His piercing grey eyes met with Relso's.

"Thank you," he breathed, and his eyes closed.

Relso felt the heart slow, and stop. As the lights flickered back on, he bowed his head and cried as he had never cried before.

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The author confirms that all the characters in this work are fictitious.

This essay was one of two winning entries in the "To Essayer" contest for medical students, interns and residents, commemorating 100 Years of Medical Knowledge at *CMAJ*. The other winning entry is "Skill, drive and luck: the discovery and development of heparin."

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