

Threshold of Perception
by
Scott Mackay

On a crisp March night in 1910, I parked my bicycle outside the Meudon Observatory and, arching my back to ease the strain of the ride up the hill, gazed to the northeast where Mars rose, bright and clear, in the faultless air above Paris. I glanced up at the observatory, and knew that within its vaulted dome I had at my disposal the largest telescope in the world, the Grand Lunette, a 33-inch refractor capable of producing the most minutely detailed views of the red planet. I looked forward with great anticipation to a night of protracted observation.

I entered the observatory through the south door and climbed the steps to the concierge's compartment. The concierge, Herbert, looked up from his newspaper, rose from his chair, and gave me the keys.

"An exemplary night for you, Monsieur Marcotte," he said.

I produced a bottle of wine for Herbert, a vintage my mother sent by the crate-load from Marseilles. "Was there any mail today? I'm expecting correspondence from Percival Lowell."

"I believe Monsieur Flammarion took some to the observatory earlier this afternoon."

"And is Monsieur Flammarion here?" I asked.

"No. He's busy getting ready for his tour of Italy. You might as well go through his private chambers. It'll save you the trip up the tower."

"Merci, Herbert."

I gave the wine to Herbert – a way to have his own exemplary evening – and passed through Camille Flammarion's private chambers to the observatory.

There she stood, the Grand Lunette, its miraculous eye lifted skyward, its focusing knobs beckoning to me, its lens angled majestically so that it peered out the open slit of the observatory dome. I was so eager to begin, I didn't bother taking off my hat. I didn't even remove my coat. I hurried directly to the telescope. I made the necessary adjustments. I sighted Mars. Then I put my eye to the eyepiece and observed that wondrous planet with the keenness of a schoolboy and the reverence of a true devotee. Yet in the end it was as a scientist I studied our great red neighbor. And, as a scientist, I again thought of the elaborate claims Percival Lowell had made about Mars.

No matter how hard I tried to believe in Lowell's famous but hotly contested canals, I simply couldn't see them. Were the canals there? No. A civilization building a worldwide system of water-bearing canals to save itself from the merciless advance of the Martian desert seemed too grand an assertion on Lowell's part, especially when I couldn't see any evidence of the canals through my 33-inch refractor.

Mars appeared as a pale disk, with colours ranging from lemon to ocher, and showed immense detail, none remotely resembling artificial waterways. The surface held steadily. A maze of complex markings covered the southern part of Syrtis Major. Mare Tyrrhenum looked as spotted as a leopard's back. What Percival Lowell observed as a gridwork of organized canals, I perceived as a desert wilderness, with no sign of civilization at all.

I pulled my eye from the telescope and sighed. As a professional astronomer I knew I had a responsibility to tell the world, as I had done in two previous papers, that there were no artificially constructed waterways on Mars. But I hated so much to be at loggerheads with my good friend Percival, and I was reluctant to put pen to paper.

I glanced around the observatory. I heard footsteps. In a moment Herbert appeared with a glass of my mother's wine on a tray for me.

"Ah ... Herbert. You're always so thoughtful."

"I would never forget you, Monsieur Marcotte. I see you've already rolled up your sleeves."

"I have indeed." I took my glass of wine and looked through the open observatory dome. The red planet hovered just above the horizon, a bright speck to the naked eye. "Mars is particularly clear tonight."

"So I imagine you can see the canals," said Herbert.

I felt my lower jaw protrude a fraction as my brow settled. "No, Herbert, I don't think I will. I've never seen the canals. In fact, Monsieur Lowell and I are conducting a vigorous correspondence debating their very existence."

"Monsieur Lowell is a great man. A great American."

I felt the corners of my lips tighten. I put my wine down, and took off my hat and coat. "Oui, a great American. And a dear friend to both myself and Monsieur Flammarion. But I sometimes question his observations. First it was his canals on Mars – that was strange enough – but now he's written a paper about spoke-like markings on Venus." I took a sip of wine. "I sometimes wonder how such an intelligent man like Monsieur Lowell can let wishful thinking so easily distort his perception. How can he so readily fall sway to Schiaparelli's grand illusion?"

Herbert peered through the slit in the observatory dome. "To a man like myself, it's fun to believe in the canals. And I pity those poor creatures living on Mars. Their whole planet is dying out. Imagine! Having to build all those waterways just so they can stay alive! It's something I wouldn't like to see here on Earth. Though with so much water here, I wonder where it would all go."

Herbert left me to my work. I made a few sketches of Mars and wondered how Monsieur Lowell would react when I sent them by the next post. I grew suddenly eager – even anxious – to read his latest correspondence. I glanced around the observatory. I spied the pile of mail Monsieur Flammarion had brought up. I went to the table and, sifting through the various missives, found my much-awaited letter from the American astronomer, his response to my latest findings.

I tore open the letter and read.

I expected a vitriolic attack. But his remarks on the warrior planet were unexpectedly mild and surprisingly brief. "One needs a diaphragm, my dear Georges," he wrote, "usually from 12 to 16 inches if one is to catch the finest details. You'll have to stop your lens down. You'll never see the canals with a fully open refractor, especially one as large as the Grand Lunette." Throwaway remarks. Off-the-cuff remarks. What he seemed most concerned about was Halley's Comet. "I've been observing its approach with a new photographic technique my assistant, Mr. Lampland, has devised."

He then wrote extensively of Monsieur Lampland's photographic technique, a process using various chemicals and fluids to enhance the light-gathering properties of photographic paper, especially during long exposures.

“Until late August,” continued Monsieur Lowell, “I concurred with most other astronomers about the likely course of Halley’s comet. But now I’m not so sure. The comet’s orbit has grown aberrant. Lampland has photographically charted the comet’s trajectory since May, and, using the stars of the Orion Constellation as guide-points, now detects a measurable distortion in the icy visitor’s projected route.” The American then made a grandiose and typical Lowellian claim. “I fear a direct strike against Earth is possible.” I shook my head, saddened by this faulty conclusion. Why did he always come up with the most romantic and confabulist notions? “I plan to publicize my findings any way I can. To this end, I speak in London on April 2nd, and hope I can meet you there. As scientists, it’s our job to convince the world of my findings any way we can.” And why did Monsieur Lowell always have to be so evangelical about his suspect scientific discoveries? “I trust I can count on your support. Too often we’re confronted with a skeptical world, and I fear that skepticism under such dire circumstances would be fatal.”

I put the letter down. I sighed heavily. Much of the scientific world had already discounted Monsieur Lowell’s theories about Mars. I couldn’t help thinking of the story about the little boy who cried wolf. Who was going to believe this fantastical notion about Halley’s Comet? Not only that, I was highly suspicious of Monsieur Lampland’s new photographic technique. With such chemically sensitive paper, I feared an abundance of “phantom” light – light that could mislead even the most astute observer.

I walked back to the Grand Lunette. I sat down and tilted the telescope away from Mars. I sighted the comet and put my eye to the eyepiece. There it was, Halley’s Comet. It streaked through the sky, captured perfectly in the excellent refractor of the Grand Lunette, its tail stretching out for millions of miles, its frothy coma fizzing like an effervescent confection around its diamond-like core. I mentally charted its position against the stars of the Orion Constellation, then checked my logbook. I shook my head. Exactly where it should be. Monsieur Lowell had once again fooled himself.

#

On the evening of April 2nd, 1910, the streets around the London Palladium were jammed with motorcars. People crowded the sidewalks trying to get in to see Percival Lowell. I pulled my collar around my ears and hurried down the alley to the stage door. I climbed the back steps and showed the custodian my special pass. Not for Lowell the discreet Langdon Lecture Hall at Victoria College, home of the British Astronomical Association. I was glad he was speaking at the Palladium. I would sooner him make a fool of himself before this fun-seeking rabble, not in front of the stodgy but respected members of the much-vaunted BAA.

I found my way to the green room where I was greeted by the aging American astronomer himself.

“Bonjour, Georges,” he said, speaking French, shaking my hand vigorously. “I was afraid you weren’t going to make it.”

I was alarmed by the change I saw in Monsieur Lowell. He was pale, had dark rings under his eyes, and looked as if he hadn’t slept in days. He was fifty-four, but tonight he looked much older. His suit, though impeccably tailored and of the highest quality, looked too big for him.

“Monsieur,” I said, “I’m sorry, but traffic was bad. I had to leave my taxi at Charing Cross and walk the rest of the way.”

“This infernal London,” he said. “It gets busier every year.” He arched his brow. “Have you been spreading word of my latest findings in Paris?”

I glanced away, where I saw a bouquet of yellow roses sitting on a table under a portrait of King Edward. “Monsieur, I ... I’ve been following the path of the comet carefully since I received your letter in October, and I’m sorry to say I haven’t detected any change. I’ve discreetly asked a few members of the Société de Astronomie to keep an eye on it, and we’ve taken a few of our own photographs, but we failed to spot the aberration you wrote of in your letter.”

He broke into English. “Georges ... please. You must understand Mr. Lampland’s new technique. More conventional exposures simply won’t capture the shift in the comet’s path. Without an extremely long exposure, your observations will be blinkered. I’m on a mission here, Georges, and you have to help me. We must convince the scientific world that I’m correct in my calculations. If we get enough of the professional community to join us, we might at least make some preliminary preparations against the collision.”

My lips stiffened. I wondered how such a brilliant man could so misconstrue the observations of his own eyes. Even so, I felt I had to meet him at least half way, if only for the sake of our friendship.

“I’ll take additional exposures when I get back to Paris,” I said. “But please realize that the members of the Société de Astronomie can easily dismiss any exposure I take. Photographic astronomy is a bit like ... like cheating to them, Percival. Before I can persuade them of the evidence, I have to convince them that I’m playing a fair game.”

The stage manager came for Monsieur Lowell a few minutes later. I followed them to the wings. I sat in an exclusive seating area backstage with a few special guests. The stage manager announced Monsieur Lowell. The astronomer gave me a sad grin as he stood by the curtain waiting to go on. He went onstage to thunderous applause.

I peered out beyond the wings to the brightly lit stage. In this age, when popular lectures were all the rage, the American had drawn a good crowd. And because of the appearance of the Great Daylight Comet earlier in the year, a bright cousin to Halley’s, his topic was of particular interest. As the applause died down, Monsieur Lowell placed a few notes on the lectern. He cleared his throat.

He began by explaining Monsieur Lampland’s new photographic technique, how it allowed him to chart Halley’s Comet with an extensive index of open-exposure negatives heretofore unequalled in the annals of modern astronomy. Then, by reciting in his best oratorical style a history of Halley’s Comet, he eased his way into the bad news.

“All was well until last September,” he said. “That’s when Mr. Lampland and I discovered an unexpected deviation in the comet’s projected orbit. We don’t know why the comet has changed course. Maybe it was affected by Jupiter’s immense gravitational pull. Or maybe an asteroid out near Mars gave it a good knock. Whatever the case, I’m afraid the comet’s trajectory now looks ominous.” The members of his audience contemplated Lowell somberly, fearfully. He looked at them as if they were all doomed. “We now know that Halley’s Comet is heading directly toward Earth.”

He let this pronouncement sink in. I felt acutely embarrassed for him. Alarmed murmuring swept through the theater. Why needlessly scare and panic these people? I wanted to go out there and tell them that Percival Lowell was wrong, that Lampland’s photographic technique was far from perfect, that the light-blasted exposures were prone to misinterpretation, and that Monsieur Lowell had a history of making elaborate

and grandiose claims. But I didn't want to publicly humiliate my good friend. So I sat there and listened, hoping he would finish his regrettable performance soon.

"A direct strike against Earth by Halley's Comet is bound to bring catastrophe on a global scale," he continued. "Widespread loss of life is inevitable. We might even face extinction, like our unfortunate Martian neighbors are. But if we begin making preparations now, I believe a sizable portion of humanity can survive. I think it's possible that mankind can come through this, if we all pull together and act now."

Here it was again, the grand Lowellian theme. Just as civilization on Mars was doomed, so now civilization on Earth was doomed. A tragic tale destined to stir the imaginations of these clerks and dockworkers in their Sunday best. As fantastical and unlikely a story as a fiction of scientific romance. I sank more deeply into my seat, desperately wanting to support Monsieur Lowell in his extravagant assertions, but fearing that by this time next year, after Halley's Comet had safely passed, he would once and for all be dismissed as a dilettante and charlatan.

#

On April 10th, Percival and I sat at the table next to the Grand Lunette looking at his photographs of the comet for the hundredth time. The photographs were small, barely six centimeters square, and had to be viewed with a magnifying glass. Camille Flammarion, head of the Société de Astronomie, was now down in Italy on his long-awaited sabbatical, and had offered Monsieur Lowell the use of his private chambers in the Meudon Observatory, as well as unlimited access to the Grand Lunette.

"Georges, if you would just give me your support on this," he said. "We could take the photographs to the Société tomorrow, and with your backing I'm sure we could make a case for my findings."

I again felt sorry for Monsieur Lowell. "Percival, these photographs are misleading. I'm not sure you've properly identified the comet in at least half of them. Monsieur Lampland's exposures aren't detailed enough to make any but the most rudimentary guesses about the comet's trajectory."

"I assure you, Georges, the comet has been identified properly in every frame. If only I'd brought the negatives. Maybe if you had the opportunity to compare these exposures to the negatives, you'd quickly see that I'm right. What must I do to convince you? Can you not understand what's at stake here?"

I shook my head. "I don't know, monsieur. These photographs are no bigger than postage stamps. One might as well look at tarot cards. Monsieur Lampland's chemicals are too sensitive. I see nothing but a rat's nest of light."

Percival shook his head, bewildered by my skepticism. Didn't he understand that science was science? One couldn't make outlandish claims without the necessary evidence to support them. I lamented all the scare-mongering that was going on with this particular comet. First it was Camille Flammarion and his claim that cyanogen gas from the comet's tail would impregnate the Earth's atmosphere and wipe out all life. Now Lowell insisted the comet would actually strike Earth. And no reasonable proof for either claim! I watched him scrutinize the photographs one more time through the magnifying glass. His belief was fervent. I pitied him. He had reached that threshold of perception where accuracy and objectivity no longer mattered.

"If only Monsieur Lampland were here," he said at last, putting down his magnifying glass.

He looked downcast, worried sick. I wanted to cheer him up. “Monsieur, let’s take another look at the comet through the refractor. Maybe tonight we’ll find something suggestive of your conclusions.”

But he was too disheartened to make use of the telescope tonight.

“You go ahead, Georges,” he said. “Every time I look at that comet I feel like I’m looking at a loaded gun. No one believes me, but I know I’m right.”

“It’s not that we don’t believe you, monsieur. It’s just that we need proof.”

I got up and searched for that proof through the great 33-inch refracting mirror of the Grand Lunette. As seen through the telescope, the comet was now two-thirds the size of the moon. It spewed off gases like an overheated steam engine, nothing like the restful pink orb of Mars I liked to watch so much. The sublimation of ice into gas was spectacular. Here was the age-old portent. I felt mesmerized by the apparition, so mesmerized, in fact, that I at first didn’t immediately observe the comet’s unexpected change of position. A slight alteration, yes, just by a degree or two, but enough to tell me that it wasn’t where it should be, that it had moved to the left of the Orion Constellation by a measurable if minute distance, and that maybe Monsieur Lowell might be right about the direct strike after all.

Then I heard a loud crash behind me. I whirled around and saw Percival lying on the floor. The magnifying glass clattered to the tiles beside him, remaining intact. I hurried over and knelt next to the stricken man.

“Percival!” I cried.

He stared up at me sightlessly, the left side of his face drooping in a ghastly fashion. I knew a stroke when I saw one. He lifted his right hand and clawed the air, his thumb and his baby finger twitching toward each other while his middle digits splayed in a spasmodic fashion. It was as if he meant to pluck the comet from the sky.

I stood up and turned to the door. “Herbert, come quickly! Monsieur Lowell has suffered a stroke! We must fetch the doctor!”

#

I took my latest findings to the Société de Astronomie a few days later. The staid and mustachioed president of our Société, Dr. Maurice Durey, studied my newest exposures with growing concern. A line appeared on his forehead, and he looked at his colleagues. He went through my calculations line by line, then did some of his own mathematical jottings on a piece of scrap paper. Finally he sat back.

“It looks as if the comet’s orbit deviates from what we originally anticipated,” he admitted, “but I still don’t see proof that it will intersect with Earth.”

I pulled out Monsieur Lowell’s photographs and calculations. “Yes, but if you take my observations together with Monsieur Lowell’s, you realize that he might be right. I know he’s been guilty of some elaborate claims in the past – the canals on Mars, and now these spokes on Venus – but these calculations look ominous to me, and I think we should take them into serious consideration.”

Dr. Durey peered at Monsieur Lowell’s calculations, then went through Monsieur Lampland’s light-saturated exposures one by one. He then showed everything to his two colleagues, Drs. Covillaud and Lenéru. They studied the photographs and examined the calculations with exhaustive thoroughness. Dr. Lenéru finally raised his left eyebrow and pointed to a particularly worrisome equation regarding the comet’s projected perihelion.

“I think Monsieur Lowell might have something here,” he said.

For the next hour, the four of us went through the equations again and again.

By the end of it all, Dr. Durey's face had turned white. He looked up at me, and I had the impression that he had aged a number of years in the space of a few moments. He lifted the calculations again, placed his monocle in his left eye, studied them once more, and all the while I couldn't help noticing how the paper shook in his hands, like a leaf caught in the repetitive eddy of a summer breeze, the corner of the twenty-pound bond quivering, beating with the speed of a bird's heart.

"Perhaps there's some substance to these calculations after all," he said, his voice calm, but somehow smaller.

#

On the evening of May 12th, 1910, I pushed Percival in a wheelchair around the grounds of the Meudon Observatory. He stared at the comet, which was now easily visible to the naked eye.

"I want to go home," said Monsieur Lowell.

His speech was badly slurred and it took me several moments to make out what he had said. "The doctor says you're too ill for the voyage, Percival. You'll have to recuperate in Paris before you can risk the Atlantic." I gestured toward the comet. "And in any case, the government has restricted travel for the time being."

Monsieur Lowell's face sagged.

Far in the distance, I saw Paris: the Seine snaking past the Louvre and the Tuileries, winding around the Eiffel Tower, curving south through the Arrondissements of Passy and Vaugirard. The sun was setting, and a lavender mist cloaked the city.

The comet hovered high in the western sky. I held two telegrams in my hand. One was from Camille Flammarion. He was postponing his return to Paris, was going to stay in his chalet in the Italian Alps, on high ground. What better place to weather the strike? The other telegram was from Lowell's family in Boston. They were leaving Boston. They would take refuge in Flagstaff.

I was about to tell Monsieur Lowell all this when the sky lit up with an eye-smarting flash. Here it was, I thought, the age-old portent, blanching the pastel air of Paris with its malignant glare, looking as if it were heading straight for the North Atlantic. I glanced at Lowell. His face was alabaster-white in the flash of the comet. But he was smiling. Why would he smile like that? Here was the day of our doom. The light faded as the comet dipped below the horizon. What possible joy could he take in something so horrible?

Then I understood ...

"You were right after all," I said, feeling irrationally resentful toward the astronomer. "But your vindication must be bitter, Percival, mustn't it?"

A faint rumble swept through Paris.

He looked at me, his white hair wild around his bald pate, his blue eyes twinkling. "Bitter indeed, Georges."

#

Seven weeks after the end of the world, as I rode my bicycle up the hill to the Meudon Observatory, I felt within my breast the growing desperation of an encroaching hopelessness. I had one of my mother's wine crates fixed to my back fender, and it was full of canned goods I had scavenged from a number of abandoned stores in Paris. The road had turned to mud, and the rain still came down, a biblical forty days of it so far, with no sign of it letting up. As hard as I pedaled, the mud finally overwhelmed my

tires, and I had to stop, get off, and push my bicycle up to the parkland surrounding the observatory.

The round reflecting pool in front of the observatory had filled to overflowing and now spilled out onto the lawn. The observatory pond was flooded. A number of motorcars were parked around Meudon, the vehicles of survivors who had sought refuge on the observatory's higher ground. A few cows and goats grazed miserably in the pouring rain.

I reached a tree near the reflecting pool and took shelter. The end of June, and this should have been a pretty time in Paris. But Paris was dark below me. The sinewy stripe of the Seine had disappeared beneath the grey-green flood of this modern-day Armageddon, and the smell of rotting bodies reached my nostrils, even all the way up here, at the top Avenue du Château.

I felt as if I had outlived my usefulness. Who needed astronomers anymore, when the sky was always cloudy. I was like the Meudon Observatory itself, a rococo relic from the past – with Paris steadily encroaching from the north, bringing with it a sea of light, the neo-classical Observatory was now only of secondary importance to the astronomy world. Yet I had to remember, it was here at Meudon that we had first confirmed the current Lowellian catastrophe. For that reason, Meudon would always remain in the history books.

I pushed my bicycle across the grounds and entered the observatory.

I found Percival asleep in his chair beside the Grand Lunette, facing the windows overlooking Paris. I walked to the windows and gazed at the capital once more. I saw the Eiffel Tower dominating at its center. So many buildings had been toppled in the initial riverine surge. The city was no longer a city of light, but a city of darkness.

Then I saw a brief spark in the vicinity of Jardin du Luxembourg. Then another, and another ... till the spark flickered into life and glowed steadily, a sharp and caustic blue. I walked to the office adjoining the main observatory, lifted my 3-inch refractor, and proceeded out to the terrace. I lifted the refractor to my eye and peered toward Jardin du Luxembourg.

My observations were exact and unmistakable. French troops blow-torched their way through twisted debris, while others cleared the rubble away. Still others erected what looked like the beginning of dyke along Rue de Vaugirard, building a bulwark against the flood. My encroaching hopelessness deepened.

I couldn't help thinking of the doomed Martians building their canals.

#

May 12th, 1911. I write in my journal on the anniversary of the comet strike. Exactly one year has passed. The rain stopped briefly one day last week. Percival sleeps in a cot beside me. I'm afraid he's grown much weaker. I fear he might die soon. We have many survivors living in the observatory with us. Much of Paris is still under water. A hundred families are living here now. I am the nominal mayor of this small community.

So far we've been lucky. We've scavenged enough food to survive. But conditions are deteriorating. There were no crops last year. There's been nothing to feed livestock. To make matters worse, Kaiser Wilhelm has finally chosen his moment. His troops invaded Belgium last Monday and are expected to enter France any day now. I don't know how much longer we can hang on. I rue the day Percival ever turned out to be right. I wish the comet strike was nothing but a mirage, like all those canals on Mars.

I put my pen down and turned to Percival. He coughed in his sleep. He woke up, opened his eyes, and looked at me.

“Brandy,” he whispered.

“Percival, the brandy is gone. We have one crate of my mother’s wine left, that’s it.”

“Then give me some of that.”

I got up from the table, walked to the desk, and poured wine for Monsieur Lowell. He couldn’t go home. Not now, not ever. There were no ships crossing the Atlantic these days.

The rain rattled like a thousand snare drums against the observatory dome. The dome was closed and the Grand Lunette sat unused, covered with cobwebs. With the sky overcast all the time, there was never anything to look at anyway.

Percival propped himself up on his elbow. He looked steadier than usual. This was our private chamber now. We lived here, the two of us, subsisting on canned Spam and the mushrooms I grew in the corner. I gave Percival his glass of wine. He drank it quickly and it seemed to restore him greatly.

“Help me to my wheelchair,” he said. “I want to see how the troops are making out.”

“Percival,” I said, “our troops have been redeployed. Kaiser Wilhelm is making a nuisance of himself in Belgium.”

“Let’s take a look anyway,” he said.

I helped him out of his cot and got him into his wheelchair. I pushed him to the office, and we looked out the window. The trees outside, having lost their leaves in autumn, had failed to regrow them in spring; with the world darkened by a globe-spanning blanket of cloud, photosynthesis had all but stopped. We planned to chop the trees down soon for firewood.

We saw the famous buildings of Paris sticking out of the water – the Sorbonne, Notre Dame, the Hôtel de Invalides – all under the grey-green flood of the comet. To the west we saw the great earthworks, a massive dike system the French Army had been constructing all year, now stretching through the Arrondissements of Vaugirard, Passy, Batignoles, La Chapelle, and La Villette. The artificial construction seemed to amaze Percival every time he saw it.

“Some day, when all these clouds clear ...” But he lost his train of thought as he gazed at the dike system through his spectacles. He swallowed, squeezing hard, as if he had a sore spot in his throat. “Some day ... when we finally have blue sky again ... the Martians will look down on us through their telescopes ... and they’ll see that they’re not alone. They’ll see our dikes ... and they’ll know that we, too, are having difficulties. They’ll understand that they finally have somebody they can share their suffering with.”

The rain lessened, and with it, came relative quiet. Percival Lowell’s Martians. I remembered his writings. Three times the size of a human being and fifty times as strong. Easily able to build a vast network of canals. Possessed of inventions we couldn’t even begin to imagine, inventions that made our present-day electrophones and kinoscopes look like the clumsy contrivances of cavemen. Was he right about the Martians? Certainly he’d been right about the comet. But could I believe his grander notions about an alien civilization? When it came right down to it, I didn’t know what to believe anymore.

I took a deep breath and glanced up at the dust-covered Grand Lunette. Why not believe in Lowell’s sentient civilization on Mars? There was no proof to the contrary. Outside, the rain stopped. It was easy to believe anything now. Easy to believe that

Kaiser Wilhelm would wage war in the sea of mud that was now Europe. Easy to believe that Halley's Comet could strike the North Atlantic and cause world-wide destruction. Even easy to believe in Lowell's grand and dramatic Martian canals, that which I had stubbornly refuted with all my scientific might for the last ten years.

#

Later that night, when Percival was sleeping, I went to the office, looked out the window, and to my great surprise saw a break in the clouds, miles wide, showing the pale stars of the evening above. And lo and behold, there was Mars! I quickly seized my three-inch refractor and gazed at noble Ares for the first time since 1910. A spectacular image, reassuring, a beacon of light and wonder. And do you know, for just a moment, I saw them – they were there, unmistakable, steady in my lens, the canals of Mars!

I saw what Monsieur Lowell meant by their wonderful mathematical fitness. I saw what he meant by their overwhelming exactitude. And yes, I finally believed in them, these great inland waterways, and not only in the waterways, but in Monsieur Lowell's noble and wondrous Martians as well. Accuracy and objectivity no longer mattered. Not in this dark time. What mattered was belief.

I heard footsteps behind me. I turned. It was Herbert, formerly the concierge, now part of our little community here in the Meudon Observatory, bringing one of the last glasses of wine to me on a tray.

"Finally a clear night for you, Monsieur Marcotte."

I nodded. I took the wine. "And Mars is resplendent, Herbert."

"An extra treat for you, then, monsieur."

"And do you know, I think I finally might believe in the canals after all. I think they're up there."

"Of course they're up there, monsieur. I never doubted it for a minute."

I put my telescope down and looked at Mars with the naked eye. What mattered, I thought, was faith. The warrior planet shone like a message of perseverance.

"If they can do it, Herbert," I said, "so can we."

END