

The Chrysalis Pool

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How many scientists actually build the devices that make their discoveries? Not many. Most experimental equipment is assembled and operated by lab technicians. We are paid a lot less and are never recognized, but more often than not we are first to see the breakthrough results. For a few minutes, we stand alone on the edge of a new frontier, then we vanish from history. For me, there is no better feeling than being there first, and alone.

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The great thing about being a hardware specialist was that even people with PhDs and papers in *Nature* depended on my work. They came to my cubicle with a problem that needed an experimental device, I gave them an estimate of what it would cost, they went away and arranged funding, then I built it.

Alice Marshall was a psychologist with an impressive reputation in statistical analysis, but hardware was a blank spot for her. Perhaps for this reason she treated me more as a collaborator than a lackey. Normally when she had a new project, she arrived with takeaway coffee and donuts. This time she arranged to meet me at the university staff club and told me to order whatever I wanted.

“I’ve got a feeling that what you want is borderline impossible,” I said as I pointed at a poppy seed scroll.

“Maybe just difficult, Lucian,” she said hopefully. “I’m developing a database to identify medical conditions from the types of hallucinations that patients report. I have a subject who is having video-realistic hallucinations. Not just weird colors, but vivid images.”

“From drugs?”

“I’ve had him checked for drugs, pathogens, tumors, and every type of brain trauma in the database. He’s clean.”

“Then why come to me? Like, I can build kit to specification, but imaging hallucinations is so far into the frontier it’s over the horizon.”

“All I want is something simple, to prove to Leo that what he sees is really not there.”

Suddenly this was a no-brainer.

ANALOG

“Wearable cameras are easy,” I replied. “Give me five minutes and I can do you one out of spare parts.”

“We tried a phone camera clipped to his tracksuit, but he reported no hallucinations at all while wearing it. He only has his visions at night, while jogging. He says he meets a woman and talks to her.”

My job is solving problems with hardware, and there was an obvious solution here: lie.

“What about a camera and microphone disguised as something else?” I asked. “I could build a pinhead camera into a badge or a clip.”

“Lucian! That’s not ethical!” Alice exclaimed at once.

“But he consented to wearing the phone camera.”

“It would be a breach of trust if he doesn’t know. He must give informed consent to whatever we do.”

This was the sort of problem I really liked. Finding a solution that eludes even a scientist made me feel a bit superior, and I like feeling superior.

“Hallucinations would cause the guy’s brain activity to alter, so how about an electroencephalograph cap with a Bluetooth link to his phone? Would he consent to that?”

“I think so, but he only has the visions while jogging. An electroencephalograph would be too bulky.”

I took out my phone and called up the image of a human ear trailing cables and sensors.

“Have you heard of Denk’s work on human hearing?” I asked. “He’s with the University of Oldenberg.”

She stared at the screen, frowning.

“If you want numbers analyzed, I’m your doctor,” she said. “If hardware’s involved, forget it.”

“Then leave the equipment to me. See here, this gray thing with the gold dots? It’s a little electroencephalograph sensor unit.”

“Really? It’s tiny.”

“Give me two hours and I’ll build a couple of dozen sensors into a jogger’s cap. Your patient would just have to keep his hair shaved and gel his scalp before running.”

“Leo’s very cooperative, I’m sure he would do anything I ask.”

“I’ll need to meet him to do the fitting.”

“I can bring him over this afternoon.”

“Great. Is there anything else I need to know before we go face to face?”

“Probably not, but . . .”

“I always worry about words that follow *but*. Tell me now, in case there’s kit I need to borrow from another lab.”

“Er, it will seem silly.”

“I’ve built sensors for people studying sexual dysfunction. Some of that kit redefines the meaning of the word silly.”

“Well, when Leo goes jogging near a stream or lake he says he meets a naked water nymph.”

* * *

Alice was giving a lecture when Leo Hawker arrived at my cubicle, but she had briefed him over the phone about what I was doing. He was everything that I would expect an amateur marathon runner to be: in his mid-thirties, a little below average height, and lacking any evidence of fatty tissue. Even though it was winter, he was dressed in just a lightweight suit and shirt. I had a fan heater running in my workshop, and was wearing a jacket over a hoodie.

“I have Raynaud’s Syndrome,” I explained when Leo asked why my workspace was so hot. “That’s when the body withdraws blood from the fingers and toes on cold days. No known cause or cure, very distressing, but it can be managed.”

I held up the EEG rig that I had built. It looked like a sports cap with a black plastic rod clipped to the right hand side.

“Has Dr. Marshall explained that you need to shave your head before you can wear this?” I asked.

“She did. What’s that thing on the side?”

“Just batteries, a transmitter and a GPS unit. It’s very important to keep it on the right of your head.”

“Why’s that?”

“I’ve put more sensors on the right. The right hemisphere of the brain is better at creative and visual tasks, so if it’s creating hallucinations something may show up. Now remember, you must text us before you go for a run. Got all that?”

“Text before running, and wear the GPS unit on the right.”

“Great. Time to visit the university hairdresser.”

* * *

It is quite a long walk from the Faculty of Medicine to the student union building, and this seemed like a good time to ask about Leo’s hallucinations.

“My brief is that you see water nymphs when jogging alone, at night.”

“Just one,” he replied, uneasy and embarrassed.

“I’ve looked up Wikipedia,” I said, trying to reassure him. “Water nymphs like Undine and Rusalka are a bit like mermaids, but without the fins and scales. They’re common themes in folklore right around the world.”

“My water nymph looks like a young woman, Doctor, and she appears whenever I jog near rivers, ponds, lakes, or even the beach.”

Doctor? I liked being taken for a scientist.

“Can you describe her?”

“Maybe twenty, top model sort of thin, and with long, dark hair.”

“And you speak with her?”

“Yes.”

“But she never appears when you wear a camera?”

“Never.”

“Maybe modern nymphs don’t like the idea of being videoed naked then posted on YouTube.”

“So you don’t believe me?” he muttered, immediately on the defensive.

“I only believe experimental data. The cap I built just does brainwaves, so there will be no embarrassing videos.”

All this suggested that the water nymph only existed in Leo’s mind, but there was a chance that some third party was not playing by the rules. Maybe that someone was stalking Leo, trying to catch him with an entrapment scam. Maybe it was Leo himself. To allow for that, I had included a disguised camera in the GPS unit after all.

“What can brainwaves tell you?” he asked.

“The cap I built monitors your brain activity and has onboard GPS,” I explained. “Dr. Marshall thinks you might be having mild seizures that show up as hallucinations. If you report seeing the nymph, we can pinpoint the place and time, then check your brain’s activity.”

“So you won’t video what I see?”

“Don’t have to,” I said, skirting the truth rather than lying. “It’s more important to work out *why* you are seeing things.”

* * *

The hairdresser had worked for me before, and soon had Leo’s hair shaved clean. He kept running his hands over his scalp as we returned to the laboratory.

“This is weird, I’ve never had it this short before,” he said. “I wonder if the nymph will recognize me?”

“You will be wearing the cap, so same difference. How long have you been seeing her?”

“First time? Maybe two months ago. I was jogging around Albert Park Lake, and I saw what looked like a naked girl, swimming. It was a freezing cold winter’s night, but there was bright moonlight so visibility was good. I stopped and waved to her.”

“As one does.”

“I asked if she needed help, but she just called my name and beckoned me in. That made me think she was wearing a skin colored wetsuit and playing a joke. I took out my phone and

swiped up the camera, but when I looked back at the lake she was gone. When I jogged on I could hear her calling ‘Leo! Leo!’ behind me.”

By now I had formed my own theory about why Leo was seeing his nymph. It was a theory that might save his life.

“Do you play computer games?” I asked.

“Doesn’t everyone?”

“What sort?”

“Oh, worldbuilding stuff like *Forge of Empires*. Office admin is my day job, so I’m pretty good at organization.”

“You mean you like maintaining things for other people?”

“That’s it. Not very exciting, but I’m a boring sort of guy.”

I had decided that Leo was a potential suicide risk, stepping outside a drab existence, edging himself toward death by drowning. Within his mind a beautiful water nymph was stalking him, and the nymphs of mythology were known to drown their lovers. What a way to go, far more fun than a handful of sleeping pills washed down with a glass of wine.

“In stories like Undine and Rusalka the nymphs fall in love with a handsome mortal prince. Do you have fantasies about being a prince?”

“I don’t have to; I really am a prince.”

That sort of statement normally had me reaching for a little pocket Taser that I built for encounters with guys wearing hoodies and demanding money in return for not stabbing me.

“I don’t meet many princes,” is what I replied.

“It’s only technical, you don’t have to call me *your highness* or anything. Back in 1907 some social climber had an affair with King Edward. When he found out she was pregnant she was packed off to Australia to give birth.”

“Where nobody important would notice?”

“That’s it. Four generations later, I’m the eldest male in a line of eldest males. Burke’s Peerage would not class me as a prince, but a sixteenth of my DNA is royal.”

That made sense. Like the actor Benedict Cumberbatch and thousands of others with British ancestors, I shared a tiny amount of DNA with King Richard the Third. While I could hardly claim to be a prince, I too was very slightly royal.

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Back at my workshop, I showed Leo how to apply gel to his scalp and put the cap on. I displayed his brainwave readout on a screen.

“This is so cool, I feel like I’m in a science fiction movie,” was his reaction.

“The readouts don’t show thoughts, but I can run algorithms that filter for patterns that are unique to individuals,” I explained. “Here’s one from a colleague who shaves his head, I tested the cap on him this morning. See the way differences are highlighted when I superimpose his readout on yours? Now look here, this is an archive readout of a patient having an epileptic fit. See how the waves suddenly become more dense?”

“It all seems so easy.”

“It’s not, but my job is to look after the hard stuff. When can you go for a jog?”

“How about now? I’ve got my tracksuit and trainers in my backpack.”

* * *

Is there a mechanic anywhere who does not dream about strapping into the Formula One racer that they maintain, then pressing the throttle all the way forward? This was my secret moment in the seat. Alice was one of those scientists who could not tell a Raspberry Pi from a croissant, so she would not look too closely at my hardware.

I had built a police micro-bodycam into the rod on the side of Leo’s cap. Using this I could download sound and images to a server, and it gave three hours of recording time before needing a recharge.

Once Leo was in his tracksuit and trainers, I sent him on a test jog around the university perimeter. The unit worked perfectly, but I had to kill the sound and video when Alice called in to check how we were doing.

“See here, he’s turned into Tin Alley,” I said as the blinking dot on a screen map suddenly headed west.

“The EEG profile is characteristic of relaxation,” she said after just a glance at my screen. “He’s really at ease when jogging.”

“Sounds right for someone into amateur marathons.”

“Now he’s stopped!”

“That’s the Beaufort swimming pool,” I said, pointing to the GPS map. “He must be trying to have a vision.”

“Nothing significant in his brainwaves,” she said, sounding disappointed.

“Would you really expect a water nymph to appear in a heated swimming pool, during the day?”

“I suppose the chlorine and other swimmers would spoil the mood.”

“Oi, he’s moving on.”

“Do I have to come here to follow Leo when he goes jogging?” she asked, still staring intently at the screen.

“This is the twenty-first century, Dr. Marshall, you can do anything from anywhere. I’ll send you a link to the lab’s server, so you can watch on your laptop.”

Leo returned, collected his backpack, then jogged on to the CBD where he worked. As I configured Alice’s laptop to monitor him, she invited me to have dinner with her at University House that night. I wondered whether this might be a date in disguise but decided not. She was married, and made a point of wearing her wedding ring. What she really wanted was technical help on hand when Leo went for his nightly jog.

* * *

University House is the academic staff club and was not really my scene. The leather armchairs and open fires go back generations and are meant to help academics relax while discussing leading edge whatever. I built laboratory equipment and did not have a PhD, so I felt like an outsider.

“Why are water nymphs so popular?” I asked Alice over the main course. “Every culture seems to have versions of them, and they’re usually beautiful girls.”

“Ethnography is not my field, but as a psychologist I suspect that the nymphs of western countries are all about morality and the consequences of bad behavior. For example in the opera *Rusalka*, a nymph sacrifices her voice to be with a handsome prince. He gets tired of having a partner who can’t speak and dumps her for a mortal princess. Rusalka goes back to her lake, becomes a demon of death, and eventually kills him.”

She took out her smartphone, called up YouTube, and played Rusalka’s “Song to the Moon” from the opera. Even Pink Floyd is seriously old fashioned as far as I’m concerned, but there was something strangely haunting about the music. Haunting, alluring, and as cold as a moonlit forest in winter.

“The theme of nymphs drowning their lovers goes back a long way,” Alice continued, now doing a Google search. “This is an 1896 painting by the artist John Waterhouse, *Hylas and the Water Nymphs*. Hylas was a Greek prince who was lured into a pond by these magical girls. He was never seen again.”

I took the phone from her and zoomed in on the girls in the water. The artist had recruited seven stunningly attractive models to pose for his painting.

“If they’re typical nymphs, then I’d certainly be tempted,” I said as I gave the phone back.

“Art historians say the painting owes more to nineteenth-century Christian morality than Greek myth. The female body in general and women’s sexuality in particular were seen as powerful, dangerous temptations by the Victorians.”

“So this painting was a warning about the dangers of sex?”

“That, and an excuse to paint female nudes at a time when women covered up totally below the neck. Then again, in some European folk tales rusalkas are fertility spirits, bringing moisture to the earth after winter, and helping things grow.”

Maybe it was the general feeling of being in the staff club, but I found myself wanting to impress Alice, to show that I could see things that academics might miss.

“Have you thought of Leo as a suicide risk?” I asked.

This seemed to surprise her. It was gratifying.

“He displays none of the standard signs.”

“But he’s not a standard case. What’s his romantic background like?”

“I can’t tell you details.”

Her ethics threshold was a very high brick wall with razor wire on top. Mine was more of a speed bump.

“But in general?” I probed.

There was a pause as she wrestled with her conscience. She lost.

“I shouldn’t be telling you this, but his liaisons were disasters.”

“He does come across as the sort who lets other people walk all over him.”

“Well spotted. These days he’s pretty much asexual.”

“So he’s in a support job, his love life is going nowhere, his sport doesn’t involve much social contact, and he can’t stand up for himself. Maybe he dreams of going out spectacularly, drowned in the arms of a beautiful water nymph.”

“But people depend on him, he’s won three marathons, and he’s financially secure. That’s not a bad way to be.”

Her description of Leo might as well have been of myself. I have a support job, and my one serious relationship only lasted long enough for my partner to get a legal claim on half the value of my unit—which my parents had bought for me. I knew all about being walked over and feeling suicidal.

Both our phones pinged before I could tell her any of this. It was Leo, messaging that he was back in his East Melbourne unit but about to leave for a two hour run. I called up the monitoring software on Alice’s laptop, and Leo’s EEG readouts appeared on the screen, alongside an inset map from his GPS locator.

“I might leave you to it,” I said as I stood up. “I’ve got some sorting to do back at the lab.”

* * *

I am not great on exercise if it’s outside a heated gym, but I ran all the way back to the Faculty of Medicine. On my workstation’s screen I watched as Leo visited the pools in the Fitzroy and Treasury Gardens, but although he lingered by both for a minute or so, no nymphs appeared on camera and apparently he saw none. I expected him to turn south for the river but he jogged in the opposite direction, along Spring Street, then entered the Carlton Gardens. This suddenly made sense, because according to Google Maps there were several fountains and pools there.

Leo headed for an ornamental pool in the southwest corner. The lighting was not great, but the moon was full, the sky was cloudless, and the camera mounted on his cap was rated for military and police work in poor light. I watched and listened as he jogged along a walking track, but all I heard were footsteps, breathing and distant traffic.

As I expected, he stopped beside the pool.

“Why are you stalking me?” he asked.

I had not expected that. There was no reply, but the EEG readouts were displaying a pattern that was neither normal nor a seizure. There was absolutely no wind, and the water of the pool was like a black mirror. I shivered at the sight of it, even though I was watching from my heated workshop.

“It’s so cold,” he said. “How can you stand the cold?”

Again there was silence. Leo was hearing voices, but they were within his head. Quite possibly he was seeing something as well. I checked his brainwave activity, and it was not just elevated, it had the profile of someone under considerable stress.

“The water must be icy, yet you look so warm.”

Water makes all the difference when it comes to being chilled. Years ago the *Titanic* exhibition had come to town, and along with salvaged pieces of the ship and White Star Line crockery, there was a room chilled to the temperature of the North Atlantic on the night the *Titanic* sank. I remember thinking that it would be a ghastly way to die, plunging into such brutally cold water. That memory was in my mind as Leo waded out into the pool.

The camera displayed ripples radiating across the surface, sparkling in the moonlight, and the microphone picked up splashing. I shivered as I watched. It must have felt like knives of ice were slashing at Leo's legs. He reached out to embrace what was not there, then pitched face forward into the water.

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Without bothering to take my helmet, gloves, or leather jacket, I grabbed my bicycle and rode out into the back streets of Carlton. At red lights I slowed just enough to avoid being hit by cars that had the right of way and as luck would have it, there were no police patrolling.

By my estimate Leo could not have been in the water for more than four or five minutes when I reached the pool, but for those minutes he was floating face down in water only a degree or two above freezing and definitely not breathing. *The human brain can stand maybe five minutes without oxygen*, I told myself as I waded out to where he floated. I grasped him by the shoulders and raised his head above the surface . . . watched by a figure standing waist deep in the water. She was dressed in a lab coat as white as alabaster, with pale hair unbound and cascading over her shoulders!

I stared in astonishment while I continued dragging Leo out of the pool and onto the grass. My fingers were too numb with cold to feel for a pulse in his carotid artery, but I heard him wheeze for breath. That snapped me out of my reverie, and I pulled off his soaked tracksuit top and gave him my coat and thermalite zipup. As I phoned Alice I looked back at the pool. There was nobody standing in the dark water.

"Where are you?" I asked through chattering teeth.

"In University House, watching Leo's readouts. You would not believe the readings that—"

"Get in your car and come to the Carlton Gardens, Rathdowne Street side. Leo just tried to drown himself."

"Drown himself? What did he use for water?"

"There's a pond, didn't you look at Google Maps? Now hurry, or there'll be two frozen corpses here."

* * *

Leo lay under a blanket on a gurney in the laboratory, and I wore a towel while his clothes and my socks and trousers dried in an autoclave. The EEG cap was safely hidden in my locker.

"You were lucky we were following you in real-time," Alice told him.

"You knew where I was," he replied sharply.

Not *how did you know*, but *you knew*. Accusative. The tone in mild-mannered Leo's voice was definitely one of annoyance.

"There's GPS on the unit you were wearing, remember?" I said. "I saw you walk into the geolocation of the pool and it's a freezing cold night. I knew you needed help."

"I don't like the idea of being tracked."

This was not the old Leo speaking, he was suddenly assertive, defensive, even hostile. "We agreed you would only wear it while jogging," I pointed out. "Don't you remember?"

"I still don't like it."

"But it saved your life!" insisted Alice.

"That's no reason to keep wearing it. I don't want to be in any more experiments. Where are my clothes?"

"We should have a doctor check you," said Alice.

"No! I just want to go home. Now."

In my experience, people speaking in that tone were not far off throwing punches, so I fetched his clothes and my trousers. They were comfortingly hot from the autoclave, but they reeked of silt and pond water. Alice was reluctant to let him go, but I could not wait to get him out of the place. I had fitted him with a camera without any sort of consent, written or verbal, and that was lawsuit territory. I phoned for an Uber.

"I'd better get going too," said Alice as we stood watching the car leave. "My husband will think I'm having an affair."

"Not a problem," I said, hoping that I did not sound suspiciously anxious to have her gone. "I

need to get myself home, have a shower, and do some laundry.”

* * *

Back in my workshop, I pulled the EEG cap's electronics apart and removed the camera and microphone. Next, I took a very careful look at Leo's EEG records. Because I had expected him to be wearing the gear in all weathers, I had made it waterproof. Even better, the antenna part had remained above the surface when he was floating, so I had readings right up until I removed the unit from his head in the lab.

Leo's usual waveforms began to change as he entered the gardens, slowly building up to an activity level that resembled an epileptic seizure—yet such seizures usually have a sharp, well-defined onset. During his imaginary conversation with the nymph, his waveforms looked like they were swapping between the profiles of two different people, both fighting for control of his brain.

Most of what makes us individuals is hardwired at the neuron level, but there is some wriggle room. Everyone has pretty standard neural wiring to talk, eat, walk, use a phone, dress, drive a car, and perform all the other activities that allow us to get about in the world. Thus when people have multiple personalities, the extra overhead is not big, and swapping between them is not an issue. The nymph might well have been a second personality in Leo's cerebral cortex.

I watched the readouts as Leo's seizure lost intensity. After ninety seconds he raised his head from the water, and the picture from the camera returned as he took a great gasp of air. For a moment I thought he was back in control, but he plunged his face into the water again. The old Leo was being suffocated, but by what? After four minutes and forty seconds, I watched myself drag him out of the pool. The camera had been pointed directly at where I had seen my own apparition, but only moonlit pool and parkland had been recorded.

* * *

Alice was waiting at my cubicle when I arrived the next morning. She had already phoned Leo about having a doctor check him, but he had told her he was busy and rang off. I longed to tell her about my secret camera and microphone, but she would have turned me over to the Ethics Committee and said it was for my own good. All that I could safely share with her were the encephalograph readouts between when I hauled Leo out of the pool and when we removed the electrode cap. His profile had definitely changed, yet unless you knew that he had very nearly drowned you would swear that it was the readout of a normal human.

Once Alice had left, I watched the video of the moments when I was dragging Leo out of the pool. There was no woman in a white laboratory coat standing knee deep in the water, and the only sounds were of splashing and my own grunts and curses, yet I had seen her!

* * *

My father used to say that if you work intensively at anything for three weeks, you become passably good at it. After twenty-eight days of online sketching courses, I could do passably good sketches of the woman I had seen. Unlike the nymphs in the Victorian paintings and Leo's visions, she was clothed. That made sense, because having Raynaud's Syndrome means that even the sight of a nude makes me shiver, and is definitely not a turn-on.

In those same four weeks, Leo resigned from his job, set up an investment consultancy, and began recruiting contractors. Alice kept trying to get him in for more brain scans, but he was always too busy. I suppose you could say that she began stalking him, because she hung about in the cafes near where he had his new office, wearing sunshades and a hoodie.

Leo was definitely dating, she told me, but he was also part of a circle of people who wore expensive suits and shirts without ties, and did not seem to care when parking tickets were slapped on their Audis and Mercedes. More to the point, Leo now drove his own Audi.

“He's changed completely,” she kept saying. “The near-death experience really did change his life.”

“Can oxygen deprivation rewire a person's brain to be better?” I asked.

“No Lucian, that only happens in science fiction movies,” she said, sounding just a little condescending. “It's the psychological impact of nearly dying that often changes a person's outlook, but the effect is more like PTSD. I've never seen anyone actually enhanced by the experience.”

How could I run my theory past her? Even though she was treading the borderlands of her own ethical standards by stalking Leo, she could probably justify it to herself. Would she be as sympathetic about me putting a camera and microphone in his headset? I did not want to find out the hard way.

I was not qualified to say whether I had an inner self of my own, wrapped up tightly but waiting for oxygen starvation in chilled water to set it free. It was like having a suspicious looking spot on my skin, but not having the background and experience to tell whether it was skin cancer. I read books and surfed the websites, but got no useful answers.

Alluring visions were they key. Waterhouse and Leo favored naked, nubile women, but I needed to see someone wearing clothes. What did women see? A child wading into danger, or a wickedly alluring bad boy? Why did the visions manifest around the age of thirty-five? Perhaps the thing within the mind's chrysalis needed a mature personality as its foundation, or the result would be a wild and reckless prodigy.

Locked in my desk's drawer was a USB drive with secret, forbidden evidence. From what Al-ice had said, Leo had quickly attracted other high-octane people, and they were part of some sort of loose but obviously prosperous association. Did I qualify to join? I only had to skirt death in chilled water, and I would find out.

Ten weeks after the day I met Leo Hawker, I realized what I had to do.

* * *

I set off for the Carlton Gardens with my jacket and gloves in my backpack, walking. I was deliberately wearing only a T-shirt and jeans, and I walked slowly. According to my phone app, the night was on track to be the coldest of the year, so far. Thanks to Raynaud's Syndrome I could no longer feel my fingers and toes after just two blocks and was shivering so much that it felt like convulsions.

As far as I could tell, I had been born with a latent neural passenger, and my brain was configured for certain critical cells to die first when deprived of oxygen. Something that was greater than me would then emerge and enhance everything that had once been what I am. The thought was definitely exciting.

I passed the Prince Alfred Hotel, where students had been getting drunk since before my grandparents were born. How many were hosting nymphs? I continued on along Grattan Street, past the Royal Women's Hospital. I had been born there. How many babies being born that very night would be carrying a chrysalis?

Lygon Street is a long strip of restaurants and sidewalk cafes, jammed solid with people even with midnight approaching. Although it was bitterly cold, it was not raining and the sidewalk gas heaters made the place very cozy. There was something comforting about the crowds; they anchored me to a safe, secure city, even though I was wandering along a very remote scientific frontier.

Neural hijackers existed, and I had discovered them. Mine looked like a young woman. Was it truly female? Would she kill me? Was she the real me? This was an empty frontier; there were no laws. Could the police arrest rusalkas for stealing bodies they had shared since birth? Could they be put on trial for murder when the body was still alive?

I stopped at a gelato shop and bought a double rum and raisin scoop in a cone. This made me feel more like one of the crowd, and I desperately wanted to belong. Nobody else seemed to be alone; it was all couples, groups, and families. The gelato helped me feel colder, and I needed that.

At Queensberry Street I turned left. By now I was shivering violently and desperate to take refuge in my jacket and gloves, yet it would have been dangerous to get warm and comfortable. I thought about all the artwork, fairy tales, novels, operas, movies, and even folk songs that involved spirit creatures living in pools of cold, cold water. Was the Arthurian Lady of the Lake one of them? Gilgamesh and Beowulf had plunged into deep, mysterious pools and fought monsters. Were those monsters real, but within their minds? Were some works of art, literature, and music secret triggers to awaken the nymphs within us? How many of them walk the streets of our modern cities, dressed in suits . . . like Leo Hawker?

ANALOG

I reached Rathdowne Street. The pool was only forty or fifty yards from the roadside. What I was planning to do was definitely dangerous, but it was also leading edge science.

* * *

I stopped thirty yards from the pool, my teeth chattering like castanets. There was the young woman standing knee deep in the water, wearing a white lab coat. She was so very bright against the inky black water and dark parkland that she seemed to glow with reassuring warmth. Although dressed as a scientist, she was everything that I thought of as beautiful. Intelligence ticked another box for me. Was she a potential soulmate? A white hand beckoned me closer, and the soft voice that called my name was as sultry as a balmy afternoon in summer.

The image was convincing, but not quite convincing enough. I was chilled to the bone and shaking like a badly tuned engine. The thought of putting even a finger into the deadly cold of the water made me feel sick to the point of nausea. Perhaps Raynaud's Syndrome came to my rescue, the condition might even be a defense mechanism, protecting sufferers when the chrysalis within reaches for control.

My revulsion for cold won out over the allure of the vision, and I turned and hurried away. I could not feel a thing when I tried to do up the zipper of my jacket, and pulling my gloves on was like putting them onto another person's hands. Back at the laboratory I had a long, hot shower, and my hands and feet felt like bags of needles as the circulation returned.

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After that, I was sure that an unwanted passenger had been with me for the whole of my life, hardwired into my brain, waiting for the right time to tempt me into cold, cold waters and skirt the edge of death. Unlike Leo, however, I was a very hard target, because I already had what I wanted most: my very own frontier, where I was absolutely alone.

The next day I walked past that pool in the Carlton Gardens in daylight, just to remind myself that my frontier was real, and that I did not need to tell anyone else. Nevertheless, I did want to explore it, but I was totally unqualified. That very day I applied to enroll in a psychology degree, and I was accepted. The following semester I enrolled, and after four years, I got a bachelors degree with honors. After nine years, I could write PhD after my name and had become a scientist in my own right.

I have published nothing about the neurochrysalis phenomena; that would be a career killer. I am the only cooperative example that I have access to, which makes double blind experiments impossible. Not that it matters, because I have had papers in *Nature* and *Science* on other subjects, have won prizes for my work on the role of neurophysiology in multiple personalities, and have made a lot of money from patents. All of that I have done without letting the chrysalis within me free.

Apparently.

Sean McMullen lives in Melbourne, worked as a laboratory technician while an undergraduate, then spent three decades in scientific computing while running a parallel career as a science fiction author. He has had 120 books and stories published and has won over a dozen awards, as well as having Hugo and BSFA award nominations. Sean's History of New Zealand Science Fiction and Fantasy, coauthored with Simon Litten, was published online in July 2020. His daughter is the award-winning SF and horror screenwriter, Catherine S. McMullen. Online, Sean is at <https://seanmcmullen.net.au>.