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A Case of Aphantasia

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A few years ago, I began treating a thirty-five-year-old man whom I will refer to as Theodore. Theodore had a rare and only recently discovered condition known as aphantasia, which left him unable to visualize images in his mind. For example, if Theodore closed his eyes to visualize a sunset, he saw only blackness. About two percent of the population have aphantasia, but many—Theodore included—saw it not as a handicap, but as a quirk of their imagination, perhaps not unlike living with color blindness.

Theodore did confess that it would be nice to picture a childhood memory in his mind's eye, like the face of his deceased grandmother. In fact, he believed that his therapy was often hampered because he could not call to mind images from his past. Theodore suggested that it might be easier to come to terms with his parents' divorce, for instance, if he could actually "see" the day they separated in his mind's eye.

When we first began therapy, Theodore had experienced paranoia over the security of his job as a copywriter for a major corporation. Despite being

a high-performing and seemingly affable employee, he was anxious. A restructuring had taken place—several departments had been merged into one—and some employees had gotten the axe. Theodore feared he might be next.

I asked Theodore if he had ever been terminated from a job. Indeed, an old boss had fired him in a rather traumatizing fashion, and he claimed the event still haunted him to this day. He still feared that authority figures in the workplace didn't have his best interests in mind and he would often interpret directives and constructive feedback as hostile. Such misinterpretations, as I saw them, would often lead to defensive reactions, usually outbursts of anger, which often damaged his work relationships.

Intending to learn more about aphantasia, I threw myself into the scientific literature to learn more about this newly-discovered condition. At the world's first conference on aphantasia in London, I attended a talk by Dr. Evelyn Banks, a psychiatrist from Envision Inc. She discussed a new technology called Mosaic that apparently gave aphantasics the ability to mentally visualize in a therapeutic setting. Dr. Banks was an older woman, in her mid-sixties, and she looked every bit an intellectual with her tortoiseshell glasses and black tailored suit.

Dr. Banks explained that the brains of people with aphantasia did, in fact, produce imagery, but for some reason, they didn't have conscious access to the images. She reminded the audience of psychiatrists that mental images were created in the occipital lobe, the brain's visual center located at

the back of the brain. In normal brains, the images were then transmitted to the prefrontal cortex at the front of the brain, which was responsible for planning, decision-making, and problem-solving. In clinical trials, Dr. Banks and her colleagues had found that transmission of this signal was being interrupted in aphantasics, somewhere between the back and front of the brain. Mosaic didn't work by restoring this connection between the occipital lobe and the prefrontal cortex. Rather, it became the new "receiver" of the imagery, taking the place of the prefrontal cortex.

Thinking that Mosaic seemed to be the solution Theodore had been looking for, I eagerly asked if he would be open to trying the technology. We had built up a good deal of trust in our dozen or so sessions, and he consented without much objection. A few days later, I received a box from Envision. Inside, there was a USB drive containing a ten-minute video that provided instructions on how to use Mosaic with patients who had aphantasia.

In my next session with Theodore, I followed Dr. Banks' directions for using Mosaic to the letter. Adjusting my glasses to get a better look, I placed two silver strips, each about the size of a fingernail, at the top of his neck, just below the hairline. These strips, according to Dr. Banks, would detect brain waves associated with mental images and then transmit the signals through two wires to my computer for Theodore and me to view, as if we were watching television.

For our first test of Mosaic, I asked Theodore to visualize the day of his traumatic termination. He

closed his eyes and tried to produce images in his mind's eye as he narrated his experience of that day. As expected, he reported seeing only blackness and a few spots floating behind his eyelids. To my astonishment, however, I could see everything on my computer screen, witnessing the day he was fired as if it were a film. Absentmindedly stroking my graying beard, I watched Theodore grab his jacket and then anxiously descend a few flights of stairs to an office on the ground floor of the building. He exchanged tense words with a blonde, heavyset woman and was escorted from the building by a security guard.

It was with childlike anticipation that I turned the computer monitor for Theodore to watch the visualization of his memory. To my surprise, he smiled widely. Then he sighed deeply, and his eyes welled with tears. It was a breakthrough—one of many we would have over the course of Theodore's treatment with Mosaic.

In therapy sessions, I am always searching for what the pioneering psychoanalyst Melanie Klein calls the *point of urgency*—an idea that is just about to leap from a patient's unconscious and into conscious awareness. I listen deeply to my patients, searching for and identifying their points of urgency. As gracefully as I can, I introduce the ideas into conversation, so they may be taken up and integrated, no longer split off from their consciousness and bound to cause distress or dysfunction.

Several months into Theodore's course of therapy, I realized that one of his points of urgency revolved around women. Theodore was a handsome man with a lean build, brown hair, and strikingly

blue eyes. He seemed to attract women with ease, but he harbored a strong fear that they would eventually leave him.

When he was six, Theodore's mother divorced his father and left town for a year, leaving Theodore and his younger brother behind. I speculated with him on why his mother had left, and he suggested that, being in her early twenties, she had perhaps felt burdened by the responsibilities of parenthood. For years, Theodore had wondered whether his mother had even loved him. However, he told me it was more realistic that she loved him a great deal, but was tragically unable to express that love in tangible, meaningful ways.

I helped Theodore understand that perhaps his fear of being abandoned by women stemmed from an absence of his mother when he was young and had been driven deeper by the death of his grandmother when he was a teenager. I was pleased that Theodore seemed to find solace in this interpretation.

About a year into working with Theodore, I took an unconventional tactic and reached out to Theodore's mother, Stephanie, intending to learn more about their relationship. During our hour-long phone conversation, Stephanie told me that they had been estranged for no particular reason. They had ultimately reconciled over her disappearance during his childhood, yet they had grown distant over the years anyway. No major event had happened between them. No bad blood. Just distance.

I asked her to elaborate, and Stephanie told me that her son's intelligence intimidated her. Theodore

was smart and driven, and she feared she had nothing to offer him. In the rare cases that she reached out with a text or phone call, she worried that she might be bothering him, somehow pulling him away from his work, which seemed to be his highest priority. The inability to connect with her first-born seemed to cause Stephanie great distress.

With the advent of Mosaic, Theodore and I continued to witness crucial moments from his early years. Together, we watched the day his father told him that his mother was leaving. On the screen, we saw a young Theodore angrily pull at his hair until it stood straight up and then bury his head in his hands and scream.

We seemed to be making progress, until about a year into our sessions using Mosaic. Theodore began to report what I would refer to with colleagues as the “unintended consequences of artificial visual recall”: involuntary images intruding into his conscious awareness.

One day, Theodore was waiting in line at the supermarket when images of his dying grandmother struggling for air in a hospital room rushed into his head, startling him. On another occasion, he experienced a rush of mental images from the time he left his mother’s house to study abroad for six months. After saying goodbye and getting into his car to leave, he had stepped out once more, walked back to where his mother was standing, and given her one last hug.

When the intrusive images began happening with more regularity, our sessions shifted to the management of the mental pictures, which

Theodore reported as increasingly burdensome. In therapy, it became obvious when Theodore's mind was overwhelmed with mental imagery. He might be in the middle of a sentence when he would shut his eyes and grit his teeth. Once, when a particularly intense rush of images took hold, he ripped the silver strips from the base of his scalp in frustration, stood up, and paced the room.

Seeing the obvious distress that Mosaic was causing Theodore, I suggested we discontinue treatment immediately. We were testing the boundaries of Mosaic, and I wondered if we were pushing it—and him—too far. Theodore insisted that we continue, however, telling me it was cathartic to relive these old memories and he'd never felt better, or healthier. I reluctantly agreed to continue using Mosaic, but I told him I would pull the plug if things got more serious. Looking back now, I should have put a stop to the use of Mosaic right there.

Though he didn't explicitly say it, it appeared as if Theodore considered his new visualization abilities a kind of superpower. Mosaic had helped him replace his aphantasia with its opposite state: hyperphantasia, the ability to see images in one's mind as if they were photographs. Theodore likened his hyperphantasic mind to a camera: he could create mental pictures rich with color and nuance, and could move and rotate objects in space, with or without his eyes closed. Theodore reported that he would no longer watch a movie twice. Why should he when he could rewatch it in his mind?

Unfortunately, Theodore's extraordinary new capacity had come at an unexpectedly steep cost.

Over the ensuing days, Theodore grew more distressed as visual images continued to intrude unexpectedly, with greater regularity and more vividness. He lamented that he was now *drowning* in pictures. The microexpression of an acquaintance or colleague could stick in his mind like a splinter, disturbing him weeks after noticing it out of the corner of his eye. He reported that he could rewatch these moments—any moment—as if they were scenes from a film. He could fast forward and rewind a visual memory, pausing on individual frames.

At that point, it was clear that we could go no further with Mosaic. Despite Theodore's resistance to doing so, I unplugged the machine and tucked it away in my office closet. I began our next session with an apology. I explained to Theodore that I was partly to blame for his troubling symptoms. I should have stopped the use of Mosaic much earlier and I was sorry that I had not.

Upset, Theodore argued that there were always tradeoffs with technology. If humans wanted to fly, we had to accept that some planes would go down. The invention of the automobile gave us great freedom, yet hundreds of people died every day in car crashes. I agreed, of course, but I asked him to consider whether the benefits of using Mosaic to address his aphantasia outweighed the costs. He believed they did. I was of the opposite opinion. Regardless, my decision was final, and I was eager to return to more traditional therapy sessions. Unfortunately, I could not have predicted what happened next.

Even though we were no longer using Mosaic, Theodore remained a hyperphantasic. To my dismay, he continued to disconnect from reality during our sessions. In one session, Theodore was narrating a memory when his eyes drifted to the floor. When I asked him where his mind had traveled, he told me he'd just watched his sunglasses drop to the dirt—a memory from when he was a teenager. Not noticing they had fallen, his mother had accidentally stepped on and destroyed them. Though his mother had driven him to a store to buy a new pair, the memory seemed to have upset him a great deal. While Theodore watched the scene play out in the theater of his mind, his eyes welled with tears.

Desperate for solutions and hoping to gain others' perspectives, I published a case study about Theodore in a medical journal. Despite the possible damage it could bring my career, I wrote about the costs Mosaic had presented and explained how my patient's condition continued to deteriorate even without continued use of the technology. I also described my troubling realization that the imagined world was becoming more appealing to Theodore than the real one.

To illustrate, I included a particularly poignant story Theodore had shared with me. During a walk, he had stopped to admire a tall birch tree. Within seconds, however, Theodore's mind had conjured up the image of a much taller, more robust, and more visually striking tree in its place, leaving the real tree an inferior version of the imagined one. Why focus on a real tree, I wrote,

when the imagined tree was more beautiful? The real tree was bent in the middle, ravaged by invasive insects, and dehydrated from a hot summer, but the imagined tree was mightily tall and glowed healthily. The tree in his mind was perfect.

I was relieved, in one session, to hear Theodore explain that he was no longer as vulnerable to the mental health issues that had previously plagued him. Whenever he felt the sting of loneliness, for example, he would create a mental movie of times in college when he had felt a deep sense of companionship with friends. This might have manifested as enjoying meals in the college cafeteria or tossing a rugby ball with teammates. However, when Theodore confessed that the habit could have started because he was meeting up with friends and coworkers less often, I understood that real-life interactions weren't as pleasurable as the idealized past.

Theodore also believed that he was putting his newfound abilities to some positive use at work. If he felt bored at his desk, he told me he would mentally dislocate himself and slip into the imagined world. He once replayed a previous night's dream, in which he had taken the form of a seagull and floated on thermal vents high above the sand dunes of Cape Cod, occasionally spotting a crab and making the exhilarating dive toward earth for a meal.

In what turned out to be our last session together, Theodore was picturing his mother running down the stairs in a bath towel after a bookcase had caught fire in their home. His eyes snapping open, he exploded out of his seat and ran to my closet, going straight for the box that held my

Mosaic machine. To my shock, he lifted the machine from the box and threw it at the wall, shards of plastic and metal flying in all directions.

I stood and walked toward Theodore slowly, holding my hands out to calm him. After a few minutes, Theodore relaxed and apologized, saying he would pay for everything. I assured him that insurance would likely cover the damages and offered to see him the following week. He agreed.

Still breathing heavily, Theodore fixed his hair, straightened his clothes, and left my office with his head lowered. Once he was gone, I retrieved my trashcan and began filling it with broken plastic and metal, circuit boards and colored wires. Part of me was relieved to see the machine smashed to bits; I would never be able to reactivate it, no matter the temptation. With Mosaic officially gone, I looked forward to establishing a new normal with Theodore. To my dismay, I never heard from him after that session. He didn't answer my phone calls or emails.

He simply disappeared.

Several months later, I received a phone call from Dr. Banks, the psychiatrist at Envision Inc. She had read my case study of Theodore and wanted to know how long I had treated him using their technology. Once I'd answered her question, Dr. Banks informed me that Theodore was now in her care at the company and that I could visit him if I wanted. I was not told the reason for the invitation, but I sensed a desperation in her voice, as though she and others had failed to help Theodore and were grasping for an outside perspective. I told her I would be there in twenty minutes.

When I saw Theodore on the third floor of Envision, he was alone in the room, slumped in a chair. His face had grown scruffy, and an orderly informed me that he hadn't showered since he'd been admitted two weeks before. Though he sat in front of a television, Theodore's eyes were fixed on the corner of the room. I rounded the chair to see a string of drool hanging from his lips.

I greeted him but received no response. He appeared to be intensely preoccupied. I used a tissue to wipe the drool from his mouth and left the room to rejoin Dr. Banks in the hallway. She offered the possibility that Theodore had suffered a psychotic break. I hesitated to make any diagnosis at first; we were in uncharted territory. It was obvious that Theodore was lost in mental images. Whether he was reliving a memory or rewatching a movie, whatever he was experiencing had completely disconnected him from his physical environment.

Dr. Banks asked if I had spoken to others about Theodore. I hadn't said anything to anyone since he disappeared, which she seemed glad to hear. She led me to an elevator that took us one floor below ground level. I was invited into what looked like a hospital emergency room, a large open floor with exam rooms along the perimeter. I paused, uneasy, though it took me a moment to realize why. It was completely silent.

Dr. Banks slid open one curtain to reveal a young boy seated at the edge of his bed, staring at the ground in the same way Theodore had been looking at the corner of his room. Dr. Banks snapped her fingers in front of the child, eliciting no reaction.

She was treating about a dozen people like him, she said. No doubt there were more they were not aware of. She and her colleagues privately called these patients “the lost ones.” After treatment with Mosaic, those who previously had been aphantasic had become hyperphantasics: off the charts in their capacity to form static or moving images in their minds. The technology was good, Dr. Banks gloated, but—she added with some uneasiness—they had not anticipated the repercussions of making it *too* good.

The lost ones weren’t at the mercy of their minds. The mental imagery could, at times, be intrusive, but they could usually shut down the images. Instead, the lost ones had *chosen* to stay with their mental movies. Some lost ones, Dr. Banks explained, were wrapped up in memories from childhood. Some were binging on television shows. One man had spent hours mentally engaging in sexual acts with his female boss. Others played out fantasies of revenge: one woman stabbed an unfaithful lover, while one man smashed his car into another’s during a bout of road rage.

Since I only had an average ability to visualize mentally, it had never occurred to me that someone might choose to live inside their head rather than engage with the real world. After some thought, though, I understood that within such a mental space, one could do whatever—be whoever—they wanted. In the real world, we paid taxes and bills and worked jobs for salaries that helped us buy things beyond necessities. In the world of perfect mental creation, one could lose

forty-five pounds, smack an inconsiderate coworker across the face, or transform a traumatic childhood into a harmonious one. If one were so inclined, one could lift off the ground and fly around the city.

However, a person must still eat, drink, sleep, and use the bathroom. When I brought this up, Dr. Banks assured me that if I stuck around the ward long enough, I would see the lost ones speedily visit the toilet or take a few bites of food before retreating to their rooms and back into the haven of their minds.

I left Envision disturbed, but I knew I had to see Theodore again, so I visited him the following day. I wondered if there might be a way to coax him out of the illusory world by reminding him of reality, so I brought an object that might trigger a thought perhaps more appealing than his dreams. When I walked into his room that day, I put a picture of his mother before him.

To my delight, his eyes focused on the image of him as an infant resting happily on his mother's lap. Theodore grinned and set the picture on his knee, but then his eyes fell to the floor and locked into place. I had lost him again.

I asked him to stay with me. To my surprise, he returned to the present and made eye contact with me. He said he had been spending a lot of time with his mother in his mind. He was not reliving experiences like the one in the picture but rather creating new ones with her. They would go on hikes together or sit around the fire in her backyard and share stories.

In real life, his mother was distant and unreachable, but in his mind, he could communicate his ideas and hopes to her. In his mind, she was available and loving. In his mind, she was the mother he had always wanted.

In some ways, that kind of imaginary play could be therapeutic. Such mental imagery was soothing, a form of self-care, but there was too much dysfunction to justify the possible benefits to Theodore's mental health. Like the other lost ones, he left his room only to use the bathroom, eat, or drink, after which he would retire to his room and dislocate from reality again. Not to mention, he was unemployed and in the full-time care of licensed mental-health professionals.

After my second visit with Theodore, I requested that Dr. Banks release Theodore back into my care. Hesitant, she asked me to sign a confidentiality agreement stipulating that I not discuss what I had seen with anyone, under penalty of legal action. After signing the agreement, I left Envision with Theodore.

What I did next undoubtedly overstepped the bounds, perhaps even violated some code of conduct (many of my colleagues have said my license should have been revoked). However, I saw no other way to keep Theodore out of his imagination. I had grown attached to him. I liked him and hated to see him this way.

With Theodore in tow, I drove about three hours north to the White Mountains of New Hampshire and knocked on the door of his mother's house. A stocky woman with brown eyes

answered. Once I'd explained to Stephanie that Theodore was among the lost ones, she seemed desperate to help and invited us in. Accepting the invitation, I walked back to the car and got Theodore. Once we were inside, he made his way to a nearby chair in the living room, reclined, and slipped back into the imagery of his mind.

Stephanie approached her son. She waved a hand in front of his face and was confused when she couldn't get a reaction. Then she became angry and turned to ask me how Theodore could just ignore her like this. Crying, Stephanie grabbed his shoulders, shook him, and to my astonishment, slapped him across the face. In that moment, Theodore began sobbing. But even with tears streaming down his cheeks, he remained absent, fixed in his imagined world. It was heartbreaking to watch.

Stephanie wiped her face with her hands and then knelt in front of Theodore. Gripping his face with both hands, she whispered a plea for him come back. To real life. To her. An internal struggle took place then. Theodore's eyes went in and out of focus. He was with us, then he was gone, and then he was back again. The only explanation I could think of was that his consciousness didn't know where to land. It kept shifting from the mother in his imagination to the mother standing before him in the room. Faster and faster, he switched between them, searching for the love he needed.

I have come to believe that the two realities melded in Theodore's mind that day. He came to believe, in an instant, that the mother of his mind

was the same as the one before him—that the detachment he had experienced from her had come about through no fault of her own nor of his own. That beneath the disappointments, insecurities, and failures of his mother was the loving mother his mind had conjured. The distance between the two mothers vanished, as did the distance he felt toward her.

They became *one*.

It was obvious from Theodore's expression that some battle in his mind had been won. Stephanie rubbed the back of Theodore's neck as he shook his head and stretched his arms up. As if he had been released from a long sleep, Theodore smiled in a way I had never seen in all the time I had known him. He asked his mother if we could all go outside and sit around the firepit in the backyard.

While his mother prepared chicken wings and mozzarella sticks in the kitchen, Theodore used newspapers and matches to start a fire in the pit. When Stephanie returned to the backyard holding a large plate of snacks, she asked Theodore if he wanted a napkin, but he didn't turn his head to acknowledge her. She glanced at me worriedly, no doubt fearing that her son had fallen back into the virtual world.

But the fear didn't last long. With his gaze fixed on the center of the fire, Theodore reached out to accept a napkin from Stephanie and then took the plate and thanked his mother. Biting into a mozzarella stick, he explained that he had pictured this very moment several times since devel-

oping his mind's eye, dreamed of it in great detail.
Yet the crackling fire before him was far better
than any fire he could have imagined.

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