

A Trip to the Moon

June 18, 2109.

Ben took a sip of iced mint tea, closed the vacuum-flask and slid it back into his backpack. He looked around the buzzing departure hall of Delta Gateway Space Station. He could see on the display flickering on the wall that it was time to embark.

He stood up from the comfortable armchair, stretched his muscles and put on with pride the red jacket with the Red Cross emblem, which he got in high school especially for this trip. He threw his bag onto his back and started down the hallway towards the airlocks, continuously watching the boarding information running on the screen. And with the same dash, he fell onto the luckily spotless floor of the departure hall.

Before he realized what was happening, a burly woman wearing a yellow head scarf helped him up and hanged his backpack on his shoulder.

“Did you hurt yourself, love?” she asked with a smile, and straightened out the creases on his clothes.

“It’s all right, thanks”, he groaned, and pointed with embarrassment at the cause of the accident: his small self-driving suitcase. He was so focused on the passenger information that he fell over his baggage before the follow-on sensors of the suitcase could ascertain where its owner was heading.

Ben waived goodbye to the helpful lady and, with what was left of his dignity shattered by his recent fall, he continued to strut towards the boarding gates. His bag rolled faithfully behind him. The boy was proud to have earned the trip. He couldn't let anything spoil his mood.

Of course, he hadn't been this confident the day before. A trip to the Moon wasn't regarded an extreme adventure, but wasn't that ordinary, either. He was excited to death the night before departure, although he managed to conceal it from his mother. Helena was already very anxious, anyway. She bustled about all day, packing a huge pile of clothes and other things for Ben, until the boy kindly drew her attention to the guide that regulated the volume of personal accessories allowed to be brought into the lunar city of Selene. Luckily, they managed to reduce the size of his baggage to a quarter of the original. Ben assured his mother that it was possible to buy everything in Selene that an Earther would need on the Moon.

Ben arrived at the check-in counters. There were two lines waiting to board Lunavator flight 1028 to Selene. He joined the shorter one.

His nervousness from last night had passed and gave place to a pleasant excitement over the new experiences awaiting him, and over meeting his father. He tossed and tumbled in bed all night, and when he finally did manage to fall asleep, it felt as if his mother had woken him up

immediately. They got to Barcelona Airport quickly in the scarce early morning traffic and were soon saying their goodbyes at the boarding gate to Atlantic Space Elevator Platform.

The trip had been uneventful so far. After an hour and a half of flying, the plane landed on the platform rising above the ocean over the Equator, where passengers could transfer to the Space Elevator ready for departure. The transfer was quick and successful. Passengers were continuously guided through the security, health check and sanitation stations to the large disk-shaped panoramic space elevator cabins.

It was just before ten in the morning when the Space Elevator started its graceful ascent on the thin yet super-strong cable, which stretched between the oceanic platform and Delta Gateway Space Station orbiting the Earth at an altitude of thirty-six thousand kilometers. Ben ordered lunch on the screen built into his seat recline in front of him and as he ate his meatball pasta, he watched the Earth below them shrink and take up the form of a sphere. They docked at the space station around 2 PM, where they made the last transfer to the spaceship heading for the Moon.

“Nice jacket,” a voice shook him up from his thoughts.

A man addressed him, who was standing in the next line. He was in his thirties, with blonde hair combed to the side and a well-groomed beard. From his tight dark suit, Ben judged him to be a businessman or a public official.

“Are you with the health crew?” the man asked, pointing at the emblem on Ben’s coat, which depicted a red cross in a white circle, with the letters ICRC¹.

“Not exactly,” said the boy politely. “I’m starting my summer vacation with camp. I’m a Red Cross youth member, and at school I applied for a place in one of their groups.”

“Mihkel Anier,” the man introduced himself, extending his elbow from the line to the boy.

“Benicio Vela,” the boy returned the introduction politely.

Mihkel raised his eyebrows and motionlessly observed Ben for a moment.

“I thought you couldn’t be a doctor or a nurse, you’re too young.”

“I’ll be 17 soon,” said Ben, straightening himself. He was proud to be almost an adult. What is more, he was travelling alone.

“You must be a good student if you won this scholarship,” the man carried on with the conversation, while stepping forward in the line. They were approaching the gate.

“I’m trying,” the boy answered. “But I was lucky, too, a place unexpectedly freed up in the lunar group, and I got it.”

¹ The ICRC (International Committee of the Red Cross) is a world-wide humanitarian organization founded in 1863. With the establishment of lunar stations accepting civilians, the organization operates under the name Interplanetary Red Cross from the year 2080.

“And why exactly did you choose the Moon?” asked Mihkel.

“Well, yes, you can apply for a camp at every continent on Earth, but my Dad has been working in Selene for the past few months. This way I’ll get a chance to meet him, and we can spare on living expenses, because I’ll be staying in his cabin. Granted, travelling costs to the Moon are higher, but I still couldn’t miss this.”

“And what does your father do on the Moon?”

“He’s a researcher at Biovir. Biotechnology. But the rest is ancient Greek to me.”

Mihkel nodded, but Ben could detect a faint smile in the corner of his mouth. The boy felt he had revealed too much about himself, while he knew nothing of the man. He often had the feeling that he trusted people unduly. He tried to make a good impression, look good, and was flattered by the interest shown in him, but it was always only in hindsight that he thought he might also be exposing himself to people who might abuse his unreasonable openness.

He decided that it was his turn to question the man this time, but they had both arrived at the check-in counter. Ben opened his boarding pass on the *e-skin* display implanted into his wrist and held it against the sensor of the automatic check-in terminal. The system carried out the identification and showed him with arrows where to proceed. He glanced over his shoulder towards Mihkel. He saw the man throw a friendly wave, then they were separated from each other.

As he was walking towards the Lunavator cabin, Ben watched the film running on the side of the boarding bridge, which commemorated the 140th anniversary of the first landing on the Moon. Those contemporary films looked unreal: astronauts locked in narrow metal tubes set out to explore the Moon on a gigantic rocket crammed with explosives.

Nowadays, scheduled flights departed to the Moon from Gateway stations orbiting the Earth on geostationary orbits. The Lunavator space tether system transported passengers and cargo to the surface of the Moon without significant fuel consumption, using the ancient slingshot principle. Rotating stations placed at various orbits caught the scheduled flights on this highway in space and pushed them forward on their course like a swing, with the necessary corrections in heading and speed.

He still had fifteen minutes to boarding. Ben decided to call his mother, Helena, so that she wouldn’t worry. It was early evening in Barcelona, she must have had finished work by now.

He made the call on his *e-skin*.

“Hi, Ben, where are you?” he heard his mother’s greetings in his ear implant at once.

“Mum, were you sitting with your finger on the answer button, waiting for the call?”

“Very funny, son. I was just worried about you. I’m at home already, Grandma Blanca has also come over, we’re making dinner. Wait, let me put you on the speaker.”

Ben greeted his grandmother and told her about his trip so far. By this time, the lobby of the docking arm had filled with passengers for the flight. Fortunately, the voice focusing microphone of his *e-skin* filtered out the background noise, so he didn’t have to shout over the noise.

“Are you not delayed?” Helena asked.

“So far everything’s cool,” Ben answered. “If it goes on like this, I should arrive around midnight.”

“All right, I’ll call Dad, to make sure he’s not buried in his work so much he’d forget to meet you.”

“I gotta go, Mum, boarding has started.”

They said goodbye to each other. Grandma Blanca yelled from the background that she’d wait for her grandson with a huge pan of paella on his return.

As the boy transgressed the gravi-bridge leading to the space cabin, he admitted to himself that it was good to hear the voices from home. It was his second time in space, and no matter how comfortable and organized the trip was, he still felt a little anxiety, which would probably only ease when he sees his father in Selene.

Ben had already admired and photographed the formidable dimensions of the white, capsule-formed Lunavator space cabin with fiberglass coating as it was attached to the wall of Delta Gateway. Stepping through the docking ring, however, he was still amazed at how spacious the oval inner room was, which was divided into four by aisles arranged radially. Comfortable seats awaited the passengers in each quarter, and there was a column with various equipment in the middle, and with an elevator providing access to smaller decks above and below the main deck, and to the crew cabins.

Ben’s ticket was for the main deck, to a window seat. In fact, it was a small cabin rather than a seat, with a small storage rack and a counter on its side. A button-operated dark plexi separated it from the neighboring seat, which provided some privacy for passengers. He put his backpack and jacket into the storage rack, while his suitcase slid under the seat and connected to the charging station. Ben estimated about forty seats in each sector, the majority of which was already occupied by boarding passengers.

He guessed the young adults in front of him were university students, at least the sign “Selene Campus” could be read on the back of their sweatshirts. Behind his back he heard a strange language with snapping sounds, and the screaming of children. He glanced back and saw an African family with a lot of children, who took up the entire row. The parents were fighting an uphill battle to make the children finally sit down.

As Ben turned back, he bumped his nose into a very colorful phenomenon, which filled up his entire field of view.

“Well, love, I’m so glad you’re all right.”

The large woman with the yellow head-scarf, who helped him with the incident with the suitcase, stood in front of him. She looked like a stuffed sofa-cushion in her long dress with small green ornaments. She was trying to free her purse, which got caught in an armrest.

Ben jumped up from his seat, helped the lady take off her purse and lowered the plexi separating the two seats to enable her to settle down more easily.

“May Allah bless your hands,” the woman said in grace, and sat down next to Ben with a big groan.

In the next few minutes, the boy received such a flow of gratitude and blessings that, had his future hanged solely on this, he could have expected at least two hundred years of happiness. In the meantime, he also found out that his neighbor was called Mrs. Zamira and was from Turkey.

The robot assistant went around the sector and prepared the passengers for launch. Ben politely offered his seat by the window to Mrs. Zamira.

“Thank you, love, I’m all set. And I don’t mind not seeing what’s out there. This flying around in space isn’t for me. I’ve hardly ever left Istanbul, and now I’m on such a long journey. Is this your first time away from Earth, too?”

“The second. When I was little, we took a trip to the Moon with my parents, to Diana Lunar City. But I don’t recall anything from that trip.”

The departure warning flashed on the displays. Mrs. Zamira fiddled around in her seat anxiously. She tried to wipe her face with a purple cloth, but could not reach all of it in the grip of the safety belts. After a while, she gave up trying and watched the countdown in silent resignation. Ben felt a little tremor in his stomach, so he decided to continue the dialog to ease the tension in both of them. He liked Mrs. Zamira. She reminded her of Grandma Blanca, albeit she was a thin, fragile woman, but was similarly warm-hearted and kind.

“And why did you endeavor to take such a long trip?” he asked the woman.

“I’m visiting my son, Ahmet. He works at the clinic. They commissioned him to the Moon three years ago, when Bastet lunar base was quarantined due to the Reston virus. Poor boy, he did not have a choice. He was still doing his military service back then and received an order to participate in the medevac team. We haven’t met since then.”

Listening to her story, Ben tried to remember what he learned about the public administration of lunar cities. The first lunar base in human history, the Artemis, was built by the former United States of America, with the leadership of NASA and the involvement of private companies in the space sector.

That place was only visited by tourists by now.

After the establishment of the Euramerican Union, the lunar bases of Diana, Selene and Hecate were built on three strategic regions on the Moon. They had become flourishing, bustling gigantic settlements by now. Bastet operated under the administration of the Islamic Community as the largest trade center on the Moon. Chang-o Lunar City and Tsukuyomi Metropolis belonged to the sphere of interest of the Asian Union. The Latin Belt was only planning to erect its own lunar city, while Africa had already started the construction of Thot City. A vacuum-train network provided connection between them.

“You must have been very worried about him,” Ben said as his thoughts returned to Mrs. Zamira and her long-seen son.

The woman nodded spiritedly.

“Luckily Allah protected my Ahmet and wasn’t sickened by the virus, and they were able to halt the epidemic, too. Then he got a permanent job in Selene and the clinic enrolled him into nurse training. But he works an awful lot and has to study, too, so he doesn’t have enough time to come home. I in the meantime have retired and have a lot of free time, so I’m moving in with him for a few weeks. Finally, I can hug my little darling!”

Mrs. Zamira’s sniffing indicated that now she also wanted to wipe her nose.

In the meantime, the Lunavator flight had departed. The fore rotating arm deployed on Delta Gateway accelerated the space cabin and launched it in the correct track. The only thing passengers felt from departure was that the cabin’s own dynamic gravitational field engaged after the cabin separated from the gravity field of the space station, in order to counterbalance the effects of acceleration. This caused an upset stomach for a few passengers. During the rotating maneuvers the windows were automatically darkened to prevent passengers to become sick at the sight of spinning stellar bodies.

A few minutes later the windows were transparent again, and Ben could admire the majestic view of space littered with sparkling stars. The safety belts were released, and Mrs. Zamira could at last thoroughly wipe her face with her cloth.

The next thirty minutes went by uneventfully. Passengers were conversing silently. Ben was listening to his favorite electric music on his ear implant, then exchanged a few words with Mrs. Zamira about family, school and other general topics.

The Lunavator flight approached the next rotating station. Again, the only thing passengers felt of the acceleration and the change of direction was that, as they were fixed in their seats, they lost their own weight for a few brief moment and the more sensitive ones had an upset stomach. Mrs. Zamira was sweating with the protective shackles of the safety belts in silent resignation.

They set course to the Moon, and the longest and most boring phase of the journey was to begin. Ben decided to have dinner. He was always very keen on hygiene, so he went to the restroom to wash up. He did not want to give viruses and bacteria a chance.

He went along the aisle separating the sectors, and thought he saw a familiar face in the next cabin. He was wearing a VR mask and was immersed in the show of virtual pictures, sounds and smells. Ben recognized him from his blonde hair and his suit – it was Mihkel Anier.

The service rooms for passengers were located along the outer rim of the oval space cabin, at the end of the aisles. One-man booths opened from the restroom lobby, and as all of them indicated to be free, Ben went for the middle one. He had just finished and was about to exit the booth to wash his hands when everything turned red and the soothing female voice of the AI was heard on the loudspeaker.

“Attention! Micrometeor damage on the external hull. Temporary loss of pressure,” the voice of the artificial intelligence informed them. “Passengers are not in danger; however, we kindly request you to return to your seats during the alert. Restrooms will be locked during

repressurization. We kindly request our passengers who are there to wait. Thank you for your patience!”

After the alert, dead silence surrounded the boy. Only the automatic sanitation system of the toilet gave a low hissing sound. There was a fresh smell of mint in the booth. Ben did not experience anything out of the ordinary apart from the emergency lighting.

Of course, he thoroughly read everything there is to know before the trip, so he did not panic – spacecraft were regularly hit by micrometeors. The small capsules placed in the self-repairing external fiberglass hull of spaceships shattered upon structural damage and the fluid that flowed out of the bubbles and solidified filled the cracks immediately. Smaller impacts weren’t even noticed by passengers, but in the event of a loss of pressure, there was an alert on board until the gaps were closed up.

If everything was to go well, the whole thing wouldn’t last longer than five minutes. Of course, he found the situation quite unnerving, speeding along in the hostile, icy darkness of space, separated only by the two-finger-thin external skin of the space cabin, but he figured there wouldn’t be any problem. This was a routine situation. He decided that even if he couldn’t go back to his seat, he’d leave the booth and wash hands in the lobby of the restrooms. As he opened the door and entered the room wrapped in red light, he lost his breath.

A body wrapped in colorful clothes was lying in front of him on the floor.

“Mrs. Zamira!”

The woman was lying on her back, her arms spread apart, her face chalk-white, eyes closed. Her yellow head-scarf slid off her head and revealed her black hair littered with grey curls. Her bag was lying next to her, its contents scattered around.

There was nobody else in the restroom. Ben was on his own, locked together with an unconscious person.

Could she be dead?

The boy felt the mild excitement caused by the security alert give way to icy waves of panic. He knew he had to act.

He kneeled down next to the body with shaking legs, and, as he had learned at first-aid training, put his head next to the woman’s and listened if he could hear her breathe. There was a slight puff of air on the skin of his face, and he saw Mrs. Zamira’s breast rise and sink slightly.

“*She’s alive,*” Ben established. So, he should try to wake her up, then call for help.

He lifted the fainted woman’s heavy legs one by one, and shoved her bag underneath them to support them. He hoped the extra oxygen getting to the brain would bring Mrs. Zamira back to consciousness. He took some cold water from the washbasin and threw it at Mrs. Zamira’s forehead.

The woman’s eyelashes flickered. Ben threw some more water on her face. Mrs. Zamira opened her eyes with a huge sigh.

“What?” she asked in terror. Her face was slowly gaining back its pink color.

“I believe you’ve fainted.”

“Yes, I remember now. I followed you to the restroom, I was afraid I’d get lost on my own. Then they announced that the spaceship had a puncture. In Allah’s name, I was afraid we’d crash!”

Ben smiled in relief to Mrs. Zamira.

“It’s all right, they’re already working on fixing the problem. Did you hit yourself?”

The woman waived her hand.

“I have a cushioned back side. But you could help me get up.”

“Do you feel well enough? I can call the crew,” Ben offered.

“It’s not necessary, my love.”

While Mrs. Zamira, with Ben’s help, pulled herself into a sitting position, then stood up, the emergency lights went out and the room was lit with normal lights again. The AI on board announced that the alert phase had ended and wished a pleasant continuation of the journey.

Ben waited politely for Mrs. Zamira to finish and wash her hands and face. Then he escorted her back into their sector.

When they sat down, Ben offered to have something to eat after this excitement. They ordered two blueberry cheesecakes with coffee and milk, and as they were eating, they had such a pleasant chat that they had forgotten about the recent events.

When the robot flight attendant took the trays, Ben, despite the coffee, felt tired and fell asleep.

He woke up to a slight flutter in his fingers. He turned his arm and read on the display in his wrist the message his dad sent him.

“Hi Ben, I hope you’re having a great trip. I’m already on my way to the spaceport. We’ll see each other soon. Safe landing!”

Ben stretched and looked out of the space cabin window. The Earth had just gotten out of the shadow of the Moon, its bright blue demisphere presented the boy with a stunning view. The clouds of extensive weather fronts whirled over the oceans, land appeared now and then from behind the white veils. Ben did not see the shorelines, so he couldn’t establish which continent it was that he saw.

Most of the passengers were resting silently in their seats. He could only hear Mrs. Zamira’s snuffling and the humming of life-sustaining equipment. It was already late at night according to time on board, and the displays said they would dock at Selene Lunar City space port in forty-five minutes. Shortly the preparation of passengers for arrival began. Ben’s thoughts wandered from the information running on the displays. The excitement about the trip slowly gave way to new doubts. Apart from his dad, he knew nobody else on the Moon. He didn’t know who his teammates would be in Red Cross camp. So far, he did not have a clue who he’d spend the next three weeks with. His father was occupied with work, but honestly, how would it look if an almost adult was constantly followed around by his daddy?

The Lunavator executed the last slingshot-maneuver. The tethering satellite orbiting the Moon caught the spacecraft and slowed it down after a half-turn, then sent it on towards the Moon's surface. The sun-lit space body appeared in the cabin windows. Ben watched the landscape whoosh past under them. Countless craters covered the surface, from a distance it looked like heavy drops of water stirred up dry dust. However, he knew that there was no rain on the Moon, and the smaller holes could in reality be large pits with diameters up to several hundred kilometers, which were the result of meteor hits to the moon's rock crust. His eyes were searching for Selene, but it was not yet to be seen.

Of course, Ben read everything he could about the lunar city before the trip. Selene lay on the northern polar region of the celestial body on the edge of the Peary-crater, which was lit by sunlight most of the time, and temperature was stable around -50 °C. About forty thousand people lived in an eight-story structure partly underground, partly above the Moon's surface. Several lines of defense protected the inhabitants of the city from the meteorites bombarding the Moon. A protective network of solar-powered satellites firing high-energy laser beams orbited the Moon. A transparent, self-repairing protective dome covered Selene, and the city was surrounded by anti-meteor turrets. The chances of a damaging meteor hitting the city behind such protective measures was minimal. If a catastrophe was still imminent, the alerting system directed the inhabitants under ground in advance.

The robot crew went around the cabin and checked the passengers. There was a warning that until they transferred into the gravity field of the lunar city, everybody would feel temporarily lighter, therefore they asked everybody to attach the magnetic shoes under their seats onto their normal shoes to prevent anybody to jump too high from a sudden move and get hurt.

They were approaching the surface. Ben spotted railroad tracks, fuel tanks, automated plants, but still could not discover Selene. Several industrial firms utilized the special lunar environment: the low gravity or the vacuum of space for their production, but many research programs were also under way in the city. Ben's father also participated in such a research program.

Contrary to the landing of a conventional aircraft, the vertical landing of the Lunavator went smoothly and unnoticeably, they could only feel a slight bump and the click of the clasps as the spacecraft connected the surface of the docking tower. The safety belts were released and Ben felt as if his body was floating above the seat due to the different gravity. He glanced at Mrs. Zamira, who tried to look cheerful, but she was hanging onto the armrest so strongly that her fingers turned white.

Ben stood up carefully, but he had to pay attention to how he moved. His body weight was one-fifth of that on Earth, he exerted five times the force with every regular movement. Walking was helped by the magnetic shoes, yet Ben found the movement of passengers ridiculous. "*We look like a flock of drunk penguins,*" he thought as he was watching Mrs. Zamira stagger in front of him.

As he was walking along the passenger bridge, he spotted Mihkel Anier in the next line. As they got next to each other, he watched the impeccable appearance of the man with envy. His hair was carefully combed back, his wrinkle-free jacket fit tight on his athletic body. He was holding a paper bag, which read *Geneva Airport Shopping line*.

Ever since the beginning of high school, Ben paid a lot of attention to show the most perfect appearance possible; often he would vanish in the bathroom for hours, where he tried several hair styles or tried to create new forms for the small hair growing on his face. When he was alone, he tried his tone of voice, or the casually elegant walk in front of the mirror. He also tried to keep his emotions in control and play the fearless superhero to the outer world. This is why Mihkel's highly choreographed walk emitting a natural casualness impressed him.

Mihkel also spotted him. He nodded to him, smiling, then walked away so lightly as if he had practiced walking in magnetic shoes all his life.

Toddling along the passenger bridge, they entered an airlock, where the passengers lined up along a rail. SCoCAI, the Selene Control Center Artificial Intelligence welcomed the arriving passengers and warned them to hold tight onto the rail until further notice and breathe normally. For a few seconds, the lights turned blue and orange-scented sanitizer was sprayed into the room. Gravity adjustment took place after another warning. Ben felt the former feeling of super-light body weight pass and the weight he was used to pressed down on his feet again. Now he understood why they had to stand by the rails. Without support, they would have fallen over due to the change in body weight.

When he exited the lock, he said goodbye to Mrs. Zamira.

"Is your father coming to meet you?" she asked.

"Yes, we're meeting over there," he said, pointing at the exit to the arrivals hall.

"My Ahmet told me he was waiting for me at the ring train station," explained Mrs. Zamira, watching the corridors leading away from the airlock.

Ben looked at the signposts and pointed Mrs. Zamira in the right direction. She was very grateful and asked Allah's blessings for the boy for his many good deeds, then disappeared behind the exit.

Ben started in the direction of the arrivals hall, followed by his suitcase. He passed a scanning gate and an acknowledging message flashed on the display on his wrist – he had officially registered in Selene.

He had arrived in the lunar city.