

“We expect it to capture an audience of millions, culminating in several billion online spectators when the first crew lands on Mars.”

-Bas Lansdorp, M.Sc

“We are not objects. That is essential. We are subjects, and whoever among us treats us as objects is acting inhumanly, wrongly, against nature. And with us, nature, the great Object, its tirelessly burning suns, its turning galaxies and planets, its rocks, seas, fish and ferns and fir trees and little furry animals, all have become, also, subjects. As we are part of them, so they are part of us. Bone of our bone, flesh of our flesh. We are their consciousness. If we stop looking, the world goes blind. If we cease to speak and listen, the world goes deaf and dumb. If we stop thinking, there is no thought. If we destroy ourselves, we destroy consciousness.”

-Ursula LeGuin

THE GARDENER, THE VISIONARY, AND THE TRAVELLER

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THE GARDENER, THE VISIONARY, AND THE TRAVELLER



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single little thing.

Bright white light comes from all directions.

#2 and #4 are sitting in a small, cramped room not much larger than a closet. They are wearing white bodysuits, specially fabricated of Nike neo-silk insulating dri-weave and embroidered on their outer layer with a TerraNext logo.

#2 has a short but unkempt beard. His dark brown hair has grown out considerably, though it hasn't been long since its last trim. His face is etched with thin lines and sags just a little. Beneath his eyes the skin looks crepe-thin and bruised.

#4 also hasn't shaved in a long time. His beard grows in patches: his chin and the rear anchors of his jaw; his sideburns barely connect. His moustache comes in with whispers of hair. He strokes it absent-mindedly. He's younger than #2, but not by a lot. They are both pale, thin.

The two men are sitting with a small low table between them, and a chessboard. They're playing idly, and talking. It's unclear what they are saying.

#1 is elsewhere, in a larger, longer room. Here, also, the light is bright white and omni-directional. The ceiling is

arched, and the interior surface is a smooth white material that looks something like plastic. The room, like a Quonset, is long with the ceiling landing low on the walls.

#1 is also wearing a white bodysuit embroidered with the TerraNext logo. Her skin contrasts against the white bodysuit and white room. Her face is bright, though there is a trace of fatigue beneath her eyes. Sweat is glistening on her brow and upper lip. The tendons of her neck tighten as she lifts a white pvc pipe, hefts it above her head and threads it through a set of hanging loops of steel strapping. She screws it into place at one end.

#1 stops a moment, drinks some SMART brand electrolyte and vitamin D enhanced water through a straw from a sealed pouch, and picks up a roll of plasti-sealant tape.

She quickly and precisely wraps the exposed end of the hanging pipe with the tape, picks up the next length, and threads it into place.

Outside, Beta Rover is moving across the landscape at a steady pace. The vehicle is moving forward, swerving off course only to avoid obstacles. The area is smooth and flat, with a few rust-red rocks littering the ground. The wheels of the vehicle kick up a slight cloud of dust. The sky is bright and hazy.

Alpha Rover is moving slowly between the living units. Once a gleaming crisp white against the reddish landscape, it is now worn and weathered, with a permanent film of dust. Its solar panels are coated, and the tread of its wheels is worn down and dirt stained.

The habitat structure is composed of multiple interconnected units, arranged as five arms radiating from a central unit. There are nine small white pods integrated into the habitat, all the same shape and size: round 15 foot diameter units with sloping walls, each like a raindrop truncated at the top and bottom. Two of the units, at the end of their

respective arms, are new and clean white. The others are, like Alpha Rover, covered in a film of red-brown dust.

Integrated into the habitat are three Quonset structures, as large as four round pods together. The sloping walls and roofs are partially buried in reddish soil.

#1 is inside one of these structures, setting up irrigation. #2 and #4 are inside a pod-unit.

Alpha Rover is transporting supplies in metal and plastic crates from a separate small pod 20 yards away from the others. It lifts the crates with a mechanical arm and loads them onto its carrier bed. The vehicle wheels across the dirt and deposits the crates outside the closest pod unit, which features a steel ramp that slopes to a large sealed door.

The rover drives back and forth.

#2 and #4 are seated at their game of chess. #2 is playing the white pieces, #4 is playing the black. The game is close. #4 stands up from the table. He is running a hand over his scalp, through his long and tangled hair. He's become very animated, and starts pacing in the small, cramped space, three quick steps back and forth. He is talking quickly.

#2 just sits there, he's talking as well, calmly. His eyes droop slightly and he frowns as he talks. He starts picking up the chess pieces from the unfinished game and places them in a white plastic box.

#4 exits the small room, stooping to step through a connecting passage to the next pod.

#1 is sweating, lifting the next section of pipe into place. She wipes her brow with a blue bandana.

#4 is in a bright white room. He turns the release mechanism on a small hatch on one wall, and pulls the hatch open. He steps through the opening, feet first. He ducks his head through, and a few moments later the hatch slowly swings closed and latches.

#4 is inside a bulky white pressure suit, attached to a wall. Made of tear-resistant Kevlar and neo-silk composite, it, too, bears the TerraNext logo: a simple red circle with a star-burst at one edge, like the sun rise.

Several other suits hang limply alongside the suit now occupied by #4. The suit releases from the wall, and #4 steps forward. A series of lights illuminate on the hard plastic chest piece, and a faint cool light turns on behind the rounded glass faceplate.

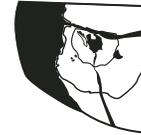
#4 is talking to himself under his breath.

He reaches up a gloved hand and presses a small button on the side of his faceplate. The glass visor shifts from transparent to an opaque mirrored surface. He walks slowly forward in shuffling steps, and approaches a large door on the wall of the pod. He clumsily punches a sequence into the keypad beside the door. There is a pause, and the door slides open.

#4 steps out of the pod and down the ramp to the surface. The door slides closed behind him.

He walks to a small panel on the side of the pod, and presses a button. Alpha Rover unloads its current stack of supply crates, and then turns and rolls quietly to where #4 is standing. He steps over to the rover and climbs on board, settling into the saddle.

The light is very bright, and the reflection off the white suit and mirrored glass of the faceplate is like a bright mountain sun on new snow. The sky is hazy beige, dusty and still. #4 steers Alpha Rover away from the pods, and drives it up towards the crest of the hill behind the structures. He is small in the distance. He stops at the top of the hill, and as the dust settles he steps off of the vehicle.



John Shepard turned off the television with a small, dingy remote.

He sat on his sunken blue couch for a few minutes, staring at the scratched black screen mounted on the wall. A truck drove by on the street below the small apartment, catching the low-lying sun and throwing a spark of light up at the window and ceiling, catching John's eye.

The blinds were hanging halfway open, halfway closed. They were a little crooked and a few of the plastic slats were bent. A few plants sat on the windowsill: Gen-Mod spider plants picked up from the SuperMat.

John picked his pocketcom up off the small end table beside the couch and checked the time: 4:33 in the afternoon. He set it back down amidst a nest of old receipts and coupon mailers. He stood and walked across the brown-carpeted room to the kitchen occupying one corner of the studio apartment. He opened the old white lino refrigerator and retrieved a beer in a can.

He shut the fridge and walked back to the couch.

He checked the time on his pocketcom: 4:36.

He pulled open the tab on his beer can and set it on the end table without taking a sip. The condensation on the outside of the can slowly began to seep into the nest of receipts.

He stared out the window. A few cars passed below, thick brown exhaust spewing out of their tailpipes.

John picked up his beer and drank.

They're always playing chess, but they never seem to get any better at it. Actually, they never really seem to finish a game. I could've done better.

John picked up his pocketcom and touched its bio-response surface, flicking it open to Allynnet and scrolling through his aggregated socialweb feed.

Maybe there's nothing worth doing, anyway.



The National Aeronautics and Space Agency successfully landed the rover vehicle *Curiosity* on the surface of Mars on August 6, 2012. This was a big deal. In archival footage of the event, the operators in the Jet Propulsion Laboratory control room are literally biting their knuckles. They reel off numbers to each other, speaking in code as the landing sequence unfolds. Once that thing touched down the room exploded in relief, happiness and pride in a job well done.

For the journey from Earth to the red planet, *Curiosity* was stowed aboard the Mars Science Laboratory: a space probe. It's this craft that carried out the *Curiosity* landing sequence, dubbed, by the crew back on Earth, "7 Minutes of Terror." Launched on November 26, 2011, with an Atlas V rocket from Cape Canaveral, the Mars Science Laboratory was en route to Mars for an eight-month journey. By contrast, Christopher Columbus' first journey from Spain to the Americas took about ten weeks, with a stopover in the Canary Islands.

Curiosity was named, via a contest, by Clara Ma, a sixth-grader from Kansas.

The primary mission *Curiosity* was to undertake was the search for evidence of Martian life-forms—to determine whether Mars could have, at any point in its past, sustained native life. Additional research goals were aimed at determining the possible role of surface water in shaping the Martian landscape and to study the general climate and geology of the planet. All of these goals were to be precursors for eventual human exploration and settlement.

In pursuit of these more general goals, *Curiosity* and NASA's Mars Exploration Program had several primary scientific objectives:

In pursuit of biological study: to determine the nature and inventory of organic carbon compounds found on the planet, to investigate the compounds we recognize as the chemical building blocks of life (carbon, nitrogen, oxygen, hydrogen, sulfur and phosphorus) and to identify in the geology features that may represent the effects of biological processes.

In pursuit of geological and geochemical research: to investigate and analyze the chemical, isotopic and mineralogical composition of the Martian surface and near-surface geology and to interpret the processes that have formed and modified the planet's rocks and soils.

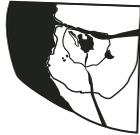
To conduct a study of the planetary processes of Mars: to assess long-timescale evolutionary processes of the Martian atmosphere and to determine the present state, distribution and cycling of water and carbon dioxide within the planetary ecosystem.

And, finally, to characterize the broad spectrum and surface radiation of the planet, including galactic radiation, cosmic radiation, radiation from solar proton events and secondary neutrons, as well as monitoring the radiation levels within the landing craft as it made its final descent, for use in subsequent manned missions to the planet.

Curiosity touched down in the Gale Crater, close to what would eventually be the site of the first human colony. It was a vehicle roughly about the size of a contemporaneous car, with a mass of close to 2,000 lbs, about nine and a half feet long by a little less than nine feet wide and seven feet tall.

The vehicle was powered, initially, by what was then known as a radioisotope thermoelectric generator: an electrical generator that generates power through the radioactive decay of particular materials. Through this process of decay heat is generated, and that heat is converted into electricity through the Seebeck effect using a range of thermocouples (the conversion of temperature differentials into electricity is named for the physicist Thomas Johann Seebeck, who, in 1821, found that a compass needle would be deflected by a closed loop formed by two metals joined in two places, with a temperature difference between the junctions. This temperature difference caused the two metals to react in different ways, causing a current loop and a magnetic field, thus deflecting the compass needle).

It had a heating system to keep the mechanisms warm in the subfreezing temperatures of the planet's surface, and to cool the mechanisms if proved necessary in the warmer periods. It had two on-board computers with radiation hardened memory boards and a miniscule 256 kB of EEPROM, 256 MB DRAM and 2 GB of flash memory. It was connected via satellite uplink to the command center on Earth, and its software could be, and frequently was, modified by sat-link.



John left the house at approximately 12:30 in the afternoon to go to work. The sun was already low on the horizon, the light a steep angled golden glow. The sky was a deep reddish gray, and the air was dry and crackling with static charge. John hopped on the bus at the street corner—an old pre-electric model. It spewed vegetable-oil smoke behind it in a greasy cloud.

John flashed his bus pass to the automated scanner, and proceeded to make his way down the cramped center aisle, sticky with spilled Cokes and Peps2Os. As the bus clattered down the pot-holed street, shocks shot and engine roaring, John stumbled his way to a seat halfway back. He tried not to look at the person he sat next to.

Through the grease-smearred window, John watched the traffic: mostly older pre-electric vehicles coughing out grease clouds. A few electric vehicles sped through the morass, and the occasional luxury hover car zipped by on a cushion of air. The smell of fryer oil was everywhere.

John got off the bus an hour and twenty minutes later at the sprawling edge of what was considered downtown. He

walked the remaining ten blocks to the small sixteen-story office complex where he worked, on a temporary contract, for six hours a week. He spent those hours in isolation in a small grey cubicle on the tenth floor, under flickering fluorescent lights that never turned off. He pulled papers out of one set of file folders, digitally scanned them and labeled them for digital archiving, and then placed them into another set of file folders. There was no end to the papers—every day that John showed up (he came in on Tuesdays and Saturdays, 2:30-5:30pm) there were more papers, and while John wasn't there scanning papers, someone else was. There were several temporary employees, all working six hours a week for nominal pay, all scanning papers from one pile and putting them into another, all hours of the day, seven days a week. John never saw another paper-scanner. He didn't know what happened to the scanned papers, where they were finally stored or whether they went to some other cubicle on some other floor to be shredded by some other rotating force of temporary workers.

John never saw a single other person on the tenth floor. He was, mostly, alone.

At five-thirty on the dot, John ceased his scanning and re-filing of documents and stood up from the desk. He logged out of the computer system, which also served to log and track his time spent working. John left the cubicle and walked through the maze of gray boxes to the elevator, which he took down to the first floor. Walking the ten blocks back to the bus stop to catch the 5:55pm bus to his city-quadrant, he stopped at an automat. He perused the selection of automated food vending machines clustered together in the bright white room. He scanned his debit card in the card reader of a machine and selected a soy-cheese soy-burger. It tumbled out of the dispensation slot, hot and plastic-wrapped.

John walked the remaining couple of blocks to the bus

stop eating his soy-cheese soy-burger, got on the bus—another pre-electric greaser—and rode the hour and twenty minute trip home to his exo-urban apartment complex, not speaking to nor looking at the other riders.

He got off the bus and walked the block to his apartment building. After some struggle, he unlocked the sticky lock of the front door, and entered the frigid lobby. The lobby smelled of cat food. He checked his mail—nothing—and climbed the three flights of stairs up to his floor. He walked the dim hallway to his apartment, unlocked the door and went inside.

He took off his coat and his shoes and threw away the oily soy-cheese soy-burger plastic wrapper in the trash under the kitchen sink.

John sat down on his couch, and turned on his television set. He idly scrolled through his Allynnet updates—very few—and sank into the worn couch cushions.



#1 is still in the greenhouse structure. Towards the rear of the room is the beginning of a hydroponic greenhouse system. There is a series of shelves stacked nearly floor to ceiling, outfitted with long pipes that are cut with a series of holes in the top. In these holes is a bit of growth substrate holding the seedlings of plants in place as their roots reach downward into the nutrient bath that flows through the piping system. Above each shelf of seedlings is black irrigation tubing, set to provide a light misting of water on a regular timed schedule. At this distance, it's difficult to see what the plants are, or how many are growing in the several banks of shelving.

#1 is standing at a worktable in the foreground. She is still wearing her white TerraNext body suit, the nano-weave fabric specially designed to maintain an optimum body temperature. She is standing at the worktable, facing away in an almost three-quarter profile. She appears to be preparing liquid solutions: there are various containers of plant nutrients open on the table, and she is making careful notations on a series of charts splayed out in front of her.

The living pod where #2 and #4 were playing chess is empty. The white plastic box is sitting on the small low white plastic table. The lights are all still on and bright white—there are no shadows in the room.

#2 is lying on his bunk in sleeping pod B, which he shares with #3. #2 appears to be asleep, lying atop the white fleece blanket, still wearing his white body suit. His hands are folded up behind his head, and he is lying on his back, fully stretched out. #3's bunk, on the other side of the small round sleeping pod, is tautly made up. The white fleece blanket is tucked tight around the thin mattress and the white covered pillow is placed with utmost precision at the head of the bed. There is very little floor space, though neither man has enough possessions to create any amount of clutter. There is a small, framed photograph beside #3's bed, of a woman and a small child.

Outside the living pods, Alpha Rover is engaged in routine automated actions: autoloading and carrying white plastic crates across the habitation site from an isolated supply pod to the cluster of living pods. Alpha Rover is depositing at the base of the metal ramp in an organized, orderly fashion, according to some unseen criteria. The crates are unmarked, save a deep red TerraNext logo, and sit in two piles, approximately three units high.

#4 is in the fabrication bay—a long Quonset-style building. He is standing at a low worktable in the center of the room. Stacked against one wall are several white crates, similar to those being ferried across the plain by Alpha Rover. #4 is dressed in his white bodysuit. His light colored hair is unkempt, and sticks out from his head in a greasy, dust coated flurry.

#4 is bent over the low aluminum and plastic table. He has a pencil in his hand, and is examining a map of the Martian surface. #4 is tracing circles of various diameters onto the map with the aid of a small compass, and he makes

notes next to each one with the small wooden pencil.

At one end of the room is a bank of monitors and computer hardware. Several of the monitors display color image feeds from the various cameras located on site, including a display featuring #4 as he bends over his worktable and the bank of monitors. Though the screens are some distance away, it is clear that one display features the back and forth movement of Alpha Rover, and one a view of Eco-Compartment A—the greenhouse in which #1 is working.

#4 occasionally glances at the monitors.

Beta Rover is moving with a steady pace across the landscape. It drives in a straight trajectory, only swerving off course to avoid large rocks in its path. It is currently climbing a shallow sloped hill, and the rover sends rocks tumbling behind it. As the rover crests the top of the hill it pauses and scans the horizon with a rotating camera.

From the crest of the hill, the horizon stretches out in a series of long, slow undulations, in the distance, partially obscured by the dusty haze that clings in the air, is the faint trace in the rocky plain of an ancient, long faded watercourse. The air is perfectly still, and the only visible movement comes from the small stones dislodged by the tread of the rover as they roll down the slope of the hill. The rover camera pans side-to-side, pans back, and stops, pointing at a thirty degree angle to the vehicle's current trajectory.

The rover sets off, turning itself in the direction of the camera. It aligns itself with this new trajectory as it heads down the hill, driving across the rock-strewn landscape kicking up dust.

#2 is sleeping on his bunk, not moving but for the slow rise and fall of his chest and stomach. #3's bunk is tautly made up.

#4 steps away from his map open on the low plastic and aluminum table. He walks several paces and stares at the

bank of monitors. He seems to be watching the feed from the stationary camera mounted atop Beta Rover, dust clouds and a landscape steadily scrolling past. He steps over to one of several thin keyboards on the tabletop in front of the monitors. He enters a few quick keystrokes and the Beta Rover stationary feed changes.

The monitor now displays a view of the landscape scrolling quickly by, but the front portion of the body of Beta Rover, visible a moment earlier, is no longer in the frame. The camera pans as the landscape scrolls past. Occasionally it stops and holds rotation position, while still moving forward, and fixes on a point in the distance. The camera briefly zooms in, displays a set of flashing numbers as the onboard AI analyzes the view, and zooms back out to resume panning.

#4 returns to the map on the table. He picks up the map and crosses the length of the long Quonset, and exits out of the front glass door and through the heavy chamber door into the next pod.

#1 is in Eco-Compartment A. She is carrying semi-opaque white plastic jugs from the worktable to a set of shelves against one wall. She arranges the jugs, each nearly full of liquid solution, on one shelf. Below are other jugs containing a darker solution and a stack of white crates on the floor next to the shelving unit, pushed against the wall. As #1 crosses the room back to the worktable, #4 enters through the glass doors at the front end of the compartment.

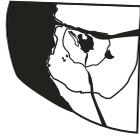
#4 is carrying the map. He is speaking, animatedly, as he walks. He crosses the room and lays the map out on #1's worktable, pushing aside her notes to make room. He keeps talking, pointing out spots on the map that he has marked.

#1 listens, and replies. She walks over to the worktable and stands with her arms folded across her chest. She peers over #4's shoulder at the map. Her eyebrows dip and narrow.

#4 looks up from the map and at #1. He speaks.

#1 replies, and bends down to look more closely at the gridded map of the Martian surface.

She shakes her head, slowly, from one side to another.



John woke up in the late morning, and groggily heaved himself up from his thin mattress. Without smoothing the sheets or tucking in the fleece blankets, John lifted the bed and folded it into the wall.

Flicking on the light, John shuffled out of the small alcove that served as both apartment entryway and bedroom, and into the bathroom. He urinated into the sani-clean waterless toilet, then washed his hands and splashed hot water onto his face, rinsing his rheumy eyes. John dried off with an old thread-worn hyper-wicking microfiber towel, and shuffled out of the bathroom.

He crossed the studio, slid his feet into a pair of thin fleece slippers and padded over to the kitchen area. He opened a small foil package containing a Kona-Koffee disk, placed the disk in the filter chamber of his Koffee-Mate and filled its reservoir with water. He flipped the small red switch.

While his Koffee hydrated, John crossed the apartment to peer out the grease-smoked windows down to the street below.

His apartment was on the fourth floor—the original

building was two stories but sometime in the last forty years, as population density climbed, the building owners had an additional four stories retrofitted onto the existing building. The base of the building was originally built sometime in the early 1900s—it was a brick structure that once, in its early days, must have been a type of luxurious living for young professionals moving into the city. It was low and long, a sort of flying-V shape wrapping itself around a courtyard.

There was an old photograph of the building, from sometime in the 1900s, hanging in the lobby. It was blown up, about 16 inches wide, and fading. There were several young people sitting in the courtyard: young women in loose fitting flower-patterned dresses, and men with long hair in plaid shirts and pants that flared at the bottom, surrounded by green grass and rosebushes exploding with color.

The additional four stories, built inexpensively of particleboard and plastic, sat atop the original building like an oversized man in a child's chair. The hulking cubical structure was cantilevered over the now-concrete courtyard, precariously perched atop the original building.

It was late morning, and it was warm outside with a light damp mist hanging in the air, bouncing off of particles of grease smoke. The pot-holed asphalt street was empty, and the grey concrete sidewalk was empty, and there was very little wind.

The Koffee-Mate emitted a quick, high-pitched beep. John turned from the window and padded across the room. He reached up into the cupboard above the kitchen counter and retrieved a white ceramic mug. It was plain, and heavy—the kind one might find at a 20th century diner. John poured himself a cup of Koffee, and added a few teaspoons worth of powdered cream from the plastic container on the counter.

John stood in the kitchen in his underwear and slippers, blowing a stream of air across the top of the steaming Koffee.

Staring at the lino-seal floor, he took a sip. He swallowed, and took another.

There was the rattle of a truck passing by on the street below. The muted sounds of a media broadcast bled through the kitchen wall from the neighboring unit.

John took another sip of his Koffee.

John looked up from the floor, turned, and padded out of the kitchen corner. He walked over to the set of shelves beside his wallscreen, where his personal digital media cloud-sync sat. He flipped up the small screen, and selected the icon for his music player app. The screen went white, and displayed a list of names—bands and musicians. John quickly scrolled through, and selected Glenn Gould. The sound of piano quietly filled the room, the sound tinny as it drifted out of the small speakers built into the digital media cloud-sync.

John sat down on the sagging couch. He picked up his pocketcom from where it sat on the end table. He touched its bio-response surface, and flicked through the icons, scrolling to his Allynnet aggregated socialweb feed.

There were no new notifications. John sipped his Koffee.



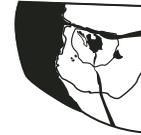
The rover *Curiosity* was originally equipped with several redundant telecommunications mechanisms including an X band transmitter and receiver, broadcasting at a frequency between 7.0 and 11.2 gigahertz for direct communication with Earth and a UHF Electra-Lite software-defined radio for communicating with satellites orbiting around Mars. At the outset of its mission, it was far faster for the rover to communicate by relaying communications through the orbiting satellites than to communicate directly with Earth—the orbiters had significantly more power and larger, more complex antennae. However, following the first landing party's establishment of base camp Alpha-1 and the erection of the first telecom digital uplink station on the Mars surface, communication between *Curiosity* and Earth became a secondary priority. *Curiosity* simply relayed its communications to base camp Alpha-1 and pioneers there established triage for which communications they deemed necessary to pass up the chain of command.

When first embarking on its solitary mission, communication between the rover *Curiosity* and Earth was significantly delayed, with an average transmission time

of fourteen minutes and six seconds required for the full transmission of signals. This initial system allowed for the rover to communicate directly with earth at a data rate of thirty-two kilobytes a second, and with the satellite relays at rates between 256 kilobytes per second and 2 megabytes per second. However, due to poor positioning, each orbiter was only able to communicate with the rover for about eight minutes per day—hence the need for more advanced communications systems and proper triage.

Despite the vehicle's advanced design, the rover *Curiosity* was not built for speed. The rover rode on six wheels with a diameter of twenty inches each, in a rocker-bogie suspension—the suspension system introduced with the Mars *Pathfinder* rover, and composed of a combination of rocker links on either side of the suspension system and bogie links with a drive wheel at each end. This system, without springs or stub angles, allowed the rover to climb over obstacles up to twice the wheel's diameter while still keeping all six wheels in contact with the ground. Each wheel was equipped with cleats and was independently actuated and geared. Each front and rear wheel could be independently steered, allowing for long arcing turns as well as tight, in-place maneuvering.

The rover was able to climb a slope with an angle of up to twelve and one half degrees. Though on-board sensors were designed to prevent the rover from attempting anything beyond a thirty-degree tilt, the rover was built to withstand a tilt of up to fifty degrees in any direction without toppling or flipping over. Despite all of this, the rover was able to move at a maximum speed of only 660 feet per day, and only made it two and one half miles from its landing site by the end of its first, primary, two year mission. By the time the first housing pods were erected by automated machines in 2020, *Curiosity* was only fifteen miles from its initial landing site, happily analyzing soil samples at the base of Mount Sharp.



John Shepard woke up.

He heaved himself up out of his too-soft bed, tossing his thin blankets aside. As he stood up and slipped on his worn fleece slippers, he heaved his mattress up and folded the bed frame into the wall. John shuffled into the bathroom, and bent over the bathroom sink, turning on the cold water. He drank out of the faucet, taking large, gulping swallows.

John stood upright and turned off the tap. He lowered the waistband of his sweat-wicking poly-fiber boxer briefs, and urinated into the water-less sani-clean toilet.

After relieving himself and tucking himself back into his shorts, John washed his hands in the plastic sink, splashed some warm water on his face and dried off with his hyper-wicking microfiber towel. He paused, and looked up from the towel at his face reflected in the small bathroom mirror.

He stared for a moment, at himself.

His eyes were heavy-lidded, and his skin was sallow. His hair was a deep reddish brown, short, but not too short. He hadn't had it cut in a long time—he usually just did it

himself with some old beard clippers, but it had been several months and it hung in limp strands over his ears. He hadn't shaved in several days, and though he didn't quite have a full beard, his chin and cheeks were thick with hair. Dark patches were prominently visible under his eyes.

John looked away from the mirror and turned on the hot water in the plastic sink.

I don't have to go downtown today, John thought. *I don't have to go downtown today, I should make today different.*

He picked up his razor from the small glass shelf above the sink, and wet it in the hot water. It was a seven-bladed self-lubricating Energizer-Gillette hand razor, the Energizer-Gillette Conduit II, with a white and neon yellow ergonomically designed handle.

John brought the razor to his cheek, and slid it down in broad strokes, rinsing it between passes. He tilted his chin up, looking in the mirror, and shaved his neck, his other cheek, his upper lip.

John rinsed the razor and the bits of trimmed whisker off of his face, and dried himself again with his hyper-wicking microfiber towel.

John padded out of the bathroom in his old fleece slippers and boxer briefs and into his tiny kitchen. He had left one of his windows cracked open for cool air in the night, and the sound of the street was roaring inside, along with dust and greasy exhaust fumes. John hurried over and closed the window.

He looked outside for a moment—the sky was unusually clear, and almost blue.

John turned and opened the kitchen cupboard. He retrieved a small foil Kona-Koffee Koffee disk packet and a chipped white ceramic mug. He set the mug down and opened the foil packet and tossed the hard brown disk into the filter chamber of the Kona-Koffee Koffee Mate. He filled

its reservoir with water from the tap and flipped the machine on.

While the Koffee rehydrated, John made himself a slice of toast, slathered with Smucker's-GE Neo-berry Toast Spread, squeezed from a plastic tube. The Koffee-Mate beeped. John poured himself a mug and tempered it with a few teaspoons of powdered creamer.

John ate his breakfast standing up, staring out the window at the sky.

I should make today different.

An hour and thirteen minutes later John was on board the bus he usually rode to work, ExoTrans Route 738. Fifty minutes later the bus crossed into downtown—the three and four story apartment buildings and tri-level office parks of the exo-urban areas gave way to ten, 30, and then seventy-floor office towers, a looming forest of glass and concrete. Here everything was grey, and the streets were choked with greasy bio-fuel exhaust fumes.

Another twenty-five minutes and the bus was passing John's usual workday stop. Another forty-five minutes after that the grease-burning vehicle was rattling out the far side of the urban zone, back into exo-urban territory and the glimmer of sky. A few stops later, John exited the bus Route 738 at the West-NorthWest Bus Transfer Mall 29-8. There, he boarded a second bus, ExoTrans Route 639-0. His monthly pass wasn't valid on this line, and he scanned his income card as he boarded the vehicle.

As the bus headed further and further out from the urban center, the passenger load lightened. By the time the bus was crawling along the narrow, potholed streets of the city's fringe districts, John found himself one of only four or five passengers. This was an area of the city he had not seen before—the houses were low, single family units on tiny cramped lots. Most of the yards were twenty-five or

so square feet, and piled with refuse and broken furniture. Smoke spewed from the sidewall chimneys: exhaust from the internal bio-fuel heating units. It wasn't cold during the day, but some evenings grew cool and the heating units were so difficult to start up, most simply let them burn all day and all night.

The bus stopped at a street corner.

"Final stop Route 639-0," an automated voice intoned over the bus speaker system. "All passengers must disembark. Next inbound bus due in thirty-four minutes."

John was the only remaining passenger. He stood and walked down the aisle, and stepped off the bus onto the sidewalk. The sky was beginning to cloud over. John wasn't sure where he was, but had gone as far as the bus system would take him. The sidewalk was broken and crumbling, and as the bus drove away it rattled and shook on the uneven road. There was no bus stop—no bench or covered seats—only a small sign bolted to a metal pole that had fallen over, its base rusted through some time ago.

A few blocks to the west, the small dilapidated houses suddenly stopped, backing up to a dense wood—a thick forest of fir and pine, and more trees and vegetation than John had seen in a long time. The air felt wet and cold. He walked toward the wood.



In early 2013, several months after *Curiosity* landed safely on the red dust bowl surface of Mars, the TerraNext Corporation issued a press release regarding the imminent open search for applicants to man their first human-led mission to the red planet.

The company was looking for four ideal participants to undertake an historic journey to the planet and begin preparations for further settlers. The first four would be volunteering for a one-way flight, the outcome of which was far from certain. In their posted applicant criteria, the company was both hyper-specific and deliberately vague, leaving room for a wide range of applicants to feel qualified to apply. The early shortlists included scientists, schoolteachers, artists and musicians, geologists, botanists, physicists and poets, ex-military survivalists and former Afghani gunrunners, mechanics, robotics engineers and one college professor whose published works included a three-thousand page philosophical treatise on the role of LSD in understanding and psychically manipulating quantum states.

Applicants were to be at least eighteen years of age at

the time of the search, and physically healthy: free of any disease, addiction or psychiatric disorder, with a blood pressure not exceeding 140/90 at rest, and between 157 and 190 centimeters tall.

Among the basic personality traits the company was looking for were intelligence, creativity and physical and mental health. Applicants were to be self-reliable, self-reflective and, ideally, driven by a sense of purpose greater than themselves: a sense of fate, of destiny.

Additionally, TerraNext identified five key characteristics of their ideal astronaut: resiliency, adaptability, curiosity, ability to trust and creativity or resourcefulness.

The TerraNext Corporation broke these five traits down into sub-traits, further defining the characteristics of their ideal settler. According to TerraNext, “Resiliency” was demonstrated by persistent thought processes, perseverance and high productivity in the face of adversity, an ability to recognize the connection between one’s internal and external self, an indomitable spirit and the ability to act at one’s highest capacity when the world around one seems to be falling apart.

The applicant who demonstrated “adaptability” would know her limitations and how or when to extend them. She would be tolerant of and open to new ideas and approaches and would be able to draw upon the unique individual cultural backgrounds of her crew. She would adapt herself to new situations and individuals, without losing her sense of identity.

“Curiosity” was defined simply: one who asks questions in order to understand, not necessarily looking for direct answers, and one who views sharing knowledge as a reciprocal exchange, rather than a showcase of one’s abilities.

The applicant who demonstrated a strong “ability to trust” would find himself able to easily trust not only in his

own ability but in that of others as well. He would find that his trust is not given blindly, however, but is earned, and informed by past experience and personal reflection.

The “creative or resourceful” astronaut-to-be would demonstrate flexibility in problem solving: she would not be constrained by her teachings, but would seek novel solutions when necessary. She would recognize humor as a creative resource, to be tactfully deployed as an emerging contextual response. She would possess a spirit of playfulness, and demonstrate an awareness of the many and varied forms of creativity. She would think, as they say, “outside of the box.”

The corporation began taking applicants in late 2013 via an online application form. Applicants were required to submit general information, as well as a letter of motivation, a resume and a one minute video in which the applicant was asked to articulate why he or she should be among the first humans to set foot on Mars. The company, in a bid for maximum transparency to its world-wide audience, made the applicants’ letters and videos available for viewing by the public through internet-based video players. It was the company, however, and their panel of reviewers, who decided which applicants would advance to the second round of review.

Those applicants who were admitted to the second round of reviews were to undergo thorough and intensive physical exams by their physicians, and present the TerraNext Corporation with statements of good health from their doctors. The corporation then assembled a review committee for designated world regions, who met with each applicant in their respective region for an interview. This was an opportunity for the TerraNext Corporation to get a sense of each applicant’s personality and interpersonal skills, as well as assess the applicant’s dedication to the mission. The

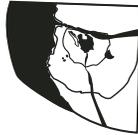
regional selection committees and TerraNext experts determined who would move onto the third round of selection.

The third round was dubbed the “national selection” round, implying that there was to be one candidate from each applicant nation—this was not the case. This round was formatted as a reality television contest, something akin to the “Survivor,” “Top Chef” or “The Bachelor” television programs that were immensely popular around the globe in the early part of the century. In each participant country or region approximately thirty applicants participated in challenges designed to demonstrate their aptitude within the five characteristics outlined by TerraNext, and their ability to survive—mentally and physically—the harsh and isolating voyage to and subsequent settling of the red planet.

These activities took a range of forms, including high altitude distance running, elaborate and over-built obstacle courses staged in sub-freezing temperatures, chess matches and puzzle games, including one stage set that was remarkably like something from an old adventurer movie, something akin to *Tomb Raider* or *Young Indiana*. They had to beat challenges like constructing a bridge out of popsicle sticks, or designing a robot to accomplish mundane tasks. No one person was able to conquer every challenge, but it quickly became apparent where contestant’s strengths lie. It wasn’t, in the end, so much about winning everything, though the more points you had the better you were likely to do, but it was also about how one rose to the challenge, or how well one handled defeat. Sportsmanship and camaraderie played a key role.

One contestant, a former professional soccer player from Brazil, didn’t win a single challenge himself—he did, however, assist almost every single one of his competitors in one challenge or another: he shared his water in the high desert

crossing, he sacrificed his own time in the rock climbing challenge to aid a competitor who slipped and was dangling by her rope over the face of the cliff. When it came time for the public to vote on their favorite astronauts-in-training, he lost, but the judges pulled him into the next round of the competition anyway.



It had started raining while John stood at the street corner: it hadn't rained in months, and the sky went from blue to deep purple gray in just a few minutes.

John had to wait for the next bus back into the city center, and so while he waited he walked the couple blocks to the edge of the development. There was a chain-link fence and behind nothing but trees: tall pines and Bay and Manzanita, the ground covered with bright ferns and mossy fallen limbs. John could hear birds in the distance, filtering out of the darkness. It smelled like earth—like deep and rich soil.

There was a break in the fence just a few yards away. Someone, or something, had torn or cut a hole in the chain-link, opened up a passageway into the forest. Close by there was what looked like a path or a trail leading into the dark. It was overgrown and barely there, more like a pause in the undergrowth than anything else. John looked off into those woods, standing in the rain.

He had to turn back to catch the bus.

Now he was sitting, dripping wet, on a hard plastic bus seat. The rain hadn't let up, and the bus was careening

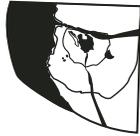
through the wet streets like a speedboat, the potholes throwing the bus up and down like the wake of the sea.

John casually checked his pocketcom. He brought his Allynnet server up on its holographic and began flipping through the channels—personal network, voice messaging, Imagefaddr—he had a voice memo from his mom, but he didn't want to listen to that now. No other notifications, no other pokes.

He slid open a new browsing window with the swipe of a finger. He whispered to his pocketcom: "Search Forest Sector, visitor permissions."

The device chimed quietly and a scrolling sphere of text appeared, hovering just in front of the screen. The sphere scrolled through a series of links to local government websites: Parks, Recreation and Neighborhood Maintenance; Watershed and Housing; Transportation and Sub-Infrastructures. The only information John could find after clicking through all of the sites was an outdated, pre-hologram page listing "Park Hours" for the area now known as the Forest Sector: 6 am to Sunset, everyday.

John looked out the window at the raindrops splashing against the glass. Tomorrow was Saturday. John had to work, but he could take the bus out to the edge again Sunday. He could bring a lunch, and see if he could get into the forest.



The city began its life as something of an upstart mining operation, sited at the confluence of two rivers. The site was a geological boon, boasting soils rich in clay and various ores and mineral deposits. The mining operation removed large swaths of earth, filtering it and extracting those elements that could be turned around, refined, and sold at even meager profits. The filtered clay soils were re-scattered, altering the landscape and, largely, leveling it. The rivers allowed for easy transportation of goods, and provided much of the energy and water required for the filtration and extraction processes. Over time, that city grew, evolving from an industrial mining operation to a shipping and commerce center and later developing as a hub for specialized fields in arts and culture, primarily advertising and propaganda. As the population went through an enormous boom in this phase of the city's life, the municipal boundaries grew exponentially in nearly all directions, butting up against the river to the north, a three-mile wide deluge of water.

As it currently stands, the city and its associated sprawl occupies approximately one-thousand, nine-hundred

square miles of land, much of this made up of feeder communities and derelict suburban sprawl: homes and streets badly in need of repair, swallowed by the dust and wind. Stretching from the inland city-center all the way to the western coast, the city is commonly described as three tiers related to development and population density: the metropolitan area, describing the outermost boundary, the municipality, and the downtown district. The metropolitan area is bounded to the west by a toxically salinated stretch of ocean and a muddy, bone strewn coastline. To the south, the sprawl eventually gives way to empty grasslands, where a few scattered oxygen and water farmers try to eke out a living away from the centers of trade.

To the east, the city's sprawl continues to grow, albeit slowly. The construction at the edge of the territory is reaching slow fingers of streets and cyclone fences out into the desert: a red-rock strewn hard pan of compacted clay and stone, with a blazing relentless sun.

The second-level zone of the city is defined as the municipality: the intermediary between the densely layered glass and steel of the downtown districts and the dust clad sprawl of the outer territory. This zone is approximately eight hundred square miles, and is made up of those workers commuting into the city center, taking long bus or train rides to work each day and living in multi-level apartment buildings and stacked housing. Most residents of the municipality have worked through the mandated eighth-level education, and many have continued through the optional levels ten or thirteen. Within the municipality nearly any service or good is available, and many residents live and work their whole lives without ever venturing into the downtown districts. There are restaurants with flashing retro neon signs and LED banners. There are fabrication shops and industrial districts and zones that specialize in illicit goods and services: a barely black market of drugs, alcohol and

prostitution. There are small parks with synthetic fields and climbing structures for children. There are people, millions of people, trying to find something worth living for.

At the southeast edge of the municipality is a lone mountain peak, a solitary cinder-cone reaching fifteen thousand feet above sea level. Its peak, despite the heat below, remains frosted year-round.

Despite the density and the neon, the city is a desert: sprawled out and flat, dry and cracking. It rarely rains. When it does, the water comes in an unanticipated deluge, falling faster than the concrete-sheathed earth can drink it up. Water collects in the trash clogged gutters, flooding streets in the poorer, low-lying edges of the municipality.

If left alone, abandoned to the elements, the city would likely fade to dust. The wind-shields, eventually, would fall, leaving the city and outlying exo-urban sectors unprotected. The winds would scrape across the streets, pummeling the architecture with sand and grit. When the rains came, unregulated, the water would find its way into the soil, through cracks and fissures forming in the concrete sheath. Eventually, perhaps, the water table beneath the urban core would replenish. With water would come plant life, and the last skeletal remains of downtown skyscrapers would serve as oversized trellises, clothed in ivy and morning glory.

At the core of the city is downtown: a set of tightly linked overlapping districts occupying approximately three hundred square miles of land, and reaching nearly a mile skyward. Downtown, for the right price, you could find anything you could imagine.

There, in that core of the municipality, buildings soar: pinnacles of glass and carbon refracting the light in a wicked spray across the neighboring districts. A hundred stories tall, spires break through the clouds and, by some

feat of engineering, are able to stand unaffected by the winds that buffet their top floors. Downtown, everything shines, everything reflects. LED signage in mutating hues, flashing strobes of light and color. The streets are hard and smooth, every surface with a reflective polish. Pools of sunlight bounce down the canyon of glass to land warmly on the sidewalk. Automats stand on every corner, their flood of fluorescent white light seeping out onto the street even at midday.

The car traffic congeals about the city center. Towncars and luxury sedans with downtown-only permits ferry visiting executives from one building to another; commuter sedans shuttling upper management in from the megalot developments in the Western hills; out-dated exhaust-spewing station wagons and pickup trucks coming in from the outer edges of the municipality and beyond, beds and trunks filled with scrap metal or boxes of possessions ready for sale at the auction halls; old-model buses trailing clouds of burning vegetable oil; miniature electricians bustling through traffic and motorbike messengers carrying parcels across town, zipping through and across lanes as if no one else existed. The downtown districts were flooded with cars, choked with cars, all day and all night.

Sandwiched between the western edge of downtown and the inner edge of the municipality ring, is a somewhat anomalous district: a stretch of land riding the crest of a chain of low-lying hills. Landed estates—vast acreages and large mega-homes where the wealthiest elder executives and bureaucrats reside—occupy this area, dubbed the green zone.

North of this swath is the Forest Sector: a small area that, for unknown reasons, avoided development. This piece of hilly, densely forested real estate was bequeathed to the city as parkland and for a time served as a recreational area for

the inhabitants of the region. Now it is largely forgotten and serves, in the eyes of the wealthy denizens of the green zone, as a buffer between them and the municipality residents to the north.

This is the Forest Sector outside of which John found himself, standing in the rain.



The fourth round of the TerraNext Corporation's astronaut selection process was a live broadcast media event also serving as a trial run of the Mars direct live feed. The corporation sent international teams of between four and six applicants to mock Mars outposts to conduct simulations in severe Earth-based locales.

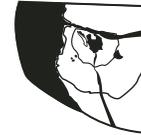
Several outposts were constructed to accommodate the various teams of applicants. Two were constructed in the U.S., in the desert of southern Utah near the San Rafael Swell. A third was established on Devon Island in Canada's high arctic, at the edge of the Hughton Impact Crater in the polar desert. A fourth simulated base was established in Iceland on the volcanic rift Krafla, and a fifth in the Lake Frome Plains east of Arkaroola, Australia.

The finalists, distributed into teams based on a proprietary algorithm determining compatibility, represented a range of professions: geologists, evolutionary biologists, paleontologists, botanists, physicists, artists, poets, photographers, one corporate chief executive officer, one professional footballer, designers, journalists and doctors.

During the fourth round trials, the teams lived for ten weeks at a time on site. They carried out experiments on local geology, established greenhouses and followed proper protocol at all times. They never stepped out of the facilities without donning their Mars surface suits—if they did, they were declared dead of exposure and taken out of contention. There were no warnings, or second chances.

They breathed only recycled air for ten weeks at a time. They ate only a TerraNext proprietary powdered nutritional slurry or what they grew in their meager greenhouses. Those teams without a botanist were, to some degree, at a disadvantage because of this, but someone quickly stepped in to try to get something—anything—growing.

While in simulation, the team only saw each other, and communication with the outside world was minimal. On several teams romances began, peaked and crashed within those ten weeks, often crippling the team's chance for a positive outcome. The best teams functioned with a sense of sisterly or brotherly camaraderie.



John slept late the following morning, after a night of fitful sleep interrupted by rumbling traffic and loud neighbors. He got out of bed around noon, leaving himself just over half an hour to brew his Kona-Koffee Koffee Mate Koffee, shower and dress for work. With his Koffee in a disposable travel mug, John headed out of his apartment just in time to catch the 1:04 inbound 738 bus.

An hour and twenty minutes later John was off the bus and on the elevator of his office building. He got off the elevator on the tenth floor and, as usual, saw no signs of any other employees among the maze of cubicles. He made his way to his desk, where a monumental pile of documents sat waiting to be scanned. The papers were spilling out of their file folders. It looked as if the previous shift worker hadn't made it in to work.

John sat down, and tossed his disposable travel mug into the small black plastic trash incinerator beneath the desk. He stretched his shoulders, rocked his neck back and forth once or twice, and prepared himself for work, logging in to the desk computer.

John began collating the loose documents, straightening the pile of papers into something more orderly. He placed the first document sheet into the scanner, fed it through the rapid-scan, labeled the digital document on the touch-screen interface and filed the digital file away in its proper file folder according to the set of code numbers printed on the upper right corner of the paper document. He placed the paper document in an empty set of file folders, where it would await pickup and disposal by some unseen hands.

John stretched his right arm out in front of himself and across his body, attempting to alleviate a pain in his right shoulder.

John scanned the second document sheet, labeled it, and placed it in the disposal folders. He did the same with the third, fourth, fifth and sixth documents.

John yawned a small yawn, and looked up at the ceiling. The fluorescent lights were flickering, dimly. The grey, spongy, porous ceiling tiles were flaking dust and fibers.

John looked back at his screen, and scanned, labeled and re-filed the seventh, eighth, ninth and tenth documents. He leaned back in his chair. John scanned and labeled the eleventh, twelfth, thirteenth, fourteenth, fifteenth, sixteenth, seventeenth, eighteenth, nineteenth, twentieth and twenty-first documents.

John looked up at the ceiling. As he stared up at the grey tiles and flickering lights, the image of that densely forested hillside came to mind. Forest Sector: the ferns a deep green, somehow dripping with water and mist, the soil a rich brown and vine covered, trees taller than any he'd ever seen, and the deep, deep darkness that was, for some reason, inexplicably inviting.

John opened up his pocketcom, calling up on the holographic projection screen his Allynnet socialweb feeds. Nothing really was going on, no new notifications. Someone

he used to know in academics had posted some video of her infant son lying in his crib, rolling around. His old neighbor had a new high score in *IronIcarusBlastBot*.

John shut down his pocketcom, and stood up from his desk. His computer emitted a short, high-pitched beep and John paused, looking down at his computer screen. The digital time clock automatically stopped ticking off seconds, aware through some invisible sensors that John had stood up from his duties.

He turned away from his desk, and walked slowly out of his cubicle. He walked through the maze of desks and temporary walls, peering in at other stacks of papers, other computers, other waste incinerators. The fluorescent lights, everywhere, were flickering, dim and dusty. Everything was grey: a grey carpet, grey temporary walls and grey ceiling tiles. Grey desks and grey computers and grey chairs. Grey papers in grey stacks, grey light.

John walked the entire length of floor, and back again. There was no one else there. In one corner of the cavernous room a ceiling tile had collapsed, fallen to the floor and broken in a fibrous mass. There was a hole in the ceiling where it had been, black, and wires dangled out loosely.

John walked back to his desk, stared for a moment at the computer screen and the time clock flashing expectantly, urging his return to his seat and duties. John turned away, and walked briskly to the elevator, pressing the button for the lobby.

As the elevator doors closed, John suddenly recalled stories his Grandfather had told him as a child. He was an engineer, or something, John recalled. He was a small man, wiry and thin, but with a well developed and out of place belly like a round balloon. His ears stuck out a little from his balding head, and his nose was often red.

He kept small foil wrapped chocolates in a glass bowl on

the living room table.

His grandfather had told him stories from his own childhood, when he and his father and his brothers would spend their summers camping out by the shore of some lake whose name was lost to memory. They'd sleep outside, in a small fabric tent that sheltered them from the elements: from the rain and the biting insects. They cooked fresh-caught fish over an open fire, and roasted sausages on sticks.

They rose and set with the sun, and bathed in the icy waters of the lake.

The elevator chimed, the doors opened, and John exited onto the first floor.

As John walked across the expansive grey-carpeted lobby of the building, he took out his pocketcom.

"Find an outdoors supply store—somewhere where I can buy a tent or something," John said.

"Outdoor Supply Store: not found," answered the pocketcom's lightly modulated feminine voice.

"Anything similar? Maybe a camping store, or a fishing store?"

"Camping Store: not found."

"What about a store where they sell old used things? Things from estate sales or salvage?"

"Emeril's Antique Goods and Collectibles: 35462 North 367th St. Would you like to coordinate a driving route from your current location?"

"No, no. Find me the quickest route via ExoTrans," John answered, as he walked through the automatic glass doors, exiting the lobby and stepping out onto the sidewalk. The doors closed behind him with a barely audible hiss.

"ExoTrans Route 738 to North 138th St and Kirk St. Transfer to Route 45 to North 190th St and Clarke St. Transfer to Route 487 to North 280th St and Harstad St.

Transfer to Route 8 to North 368th St and Gibson."

"Perfect—save route."

John walked the ten blocks to the bus stop quickly, weaving through the light afternoon foot traffic. The sky was overcast, unusually deep and heavy clouds a low ceiling over the city. John walked past the glass doors of buildings nearly identical to his own place of employment, each with its own grey lobby with grey concrete pillars and dusty grey potted air-filtering eco-plants. He dodged traffic as he crossed the streets, ignoring the walk signals and stepping briskly between sleek black sedans and grease spewing pickers.

He got to the bus stop just as the doors slid open with a barely audible whoosh. John stepped on board and flashed his bus pass to the automated scanner. He walked carefully down the center aisle—the bus was full of passengers. No empty seat remained, and the standing room was scarce.

John pushed through the crowd of people and made himself some room to stand. The floor was sticky, and there was a damp, wet smell lingering in the air. The bus lurched forward and John leaned his weight into a support pole. He took out his pocketcom and removed the wireless sound-enveloper. He fit the small device over his left ear, and activated the cloud sync on the pocketcom.

He scrolled through the corporate sponsored music feeds available, each bound to a media outlet or developer, and featuring only that brands musicians or audio-video content. John scrolled through quickly, and settled on the state sponsored feed.

The sound of piano enveloped him: Glenn Gould playing Brahms's Intermezzo in E-flat Minor, Op 118 No. 6, according to the pocketcom. The notes were spacious, urgent and restrained even as they built to a flurry. John selected Gould's name on the holoform projection, so that the feed would play only recordings by the pianist.

Cloud cover dimmed the daylight. Through the grease streaked windows stoplights and LED signs were visible but blurred, garish smears of light and color. Nearly everyone on the bus, sitting or standing, was looking down at their own holoscreen, surrounded by their own sound envelope. The bus rattled forward, stopping every ten blocks or so, and people got on and got off. Outside the bus people moving up and down the sidewalk on either side of the street, the concrete smashed and broken. They were getting towards the outskirts of downtown, now, and the road was rougher.

The bus ride out to the antiques store took all afternoon. John made his transfers, riding and walking through neighborhoods he had never seen—not many people had been to every neighborhood. If any had, by they time they'd seen them all some districts would have faded away while new ones surfaced.

John passed through one thirty-block stretch of road lined with bustling shops with signs in some foreign neon script and vendors dressed in LED-lined black robes. He rode through commercial sub-districts and neighborhoods of stacked cargo-containers turned apartments, through streets of restaurants hung with garlands of light. He walked several blocks past a fenced-in industrial plant, with clouds of smoke spewing into the air, and through streets with butcher shops and fruit stands selling spit roasted ducks and strangely shaped melons with the sheen of plastic. Each bus was less crowded than the one before.

He continued listening to Glenn Gould, playing piano with a mathematical precision, his voice, barely audible in the background of certain recordings, adding a rough and human harmony. It seemed an unlikely candidate for dispersal over the state sponsored feed, but, as the recordings were old and not associated with any contemporary marketing campaign, it would never be heard otherwise. Despite its state-sponsored home, this was not state music—this

was human, something fractured and barely hanging on.

The last bus was sparsely populated. John was able to sit down in a seat toward the front. Around him, as the bus drove, passengers were discussing treatment clinics—what some will let you get away with that others will not, what's allowed, what isn't. John could just barely hear them through the sound envelope. Several passengers traded small white envelopes between them. John tried not to watch, and looked out the window as the bus rolled past empty lots.

Here was a parking lot, full of tents and people, milling around small smoldering fires in metal canisters.

Here was a warehouse half knocked down.

Here was a large canning plant, steam billowing out across the sidewalk and the street.

Here was an auto garage, a lot stacked full of flattened cars, and a dog on the sidewalk barking.

The bus stopped at North 368th St. and Gibson, and John stepped off the vehicle. The sun had broken through the cloud cover. There was very little around: some empty overgrown lots, some shops that looked long since closed and shuttered. John could still hear the dog barking in the distance.

He oriented himself, and began walking toward North 367th Street, a block over. As he walked down 367th, counting down the address numbers, John passed a few more shops and stores that remained open. A barbershop, a bodega, a small, dusty electronic accessory store, a restaurant with a sign written in some stylized script that John didn't recognize.

John found the address he was looking for, 35462: a small storefront with a hand painted sign that read "Emeril's Antique Goods & Colectables," sandwiched between a mechanics garage and a small old fashioned automat with stools at the counter and a glass case full of meats and

cheeses, a woman hunched behind the register screen reading something printed on grey paper.

The storefront was dirty, the white paint flaking and weatherworn, dirt and debris splashed up along the façade. The windows, on either side of the door, were dusty and coated with a film of bio-exhaust grease, and behind them the displays of goods and merchandise looked drained of color. Old computers—silver boxes emblazoned with an apple icon—stood proudly on display, along with racks of old media-file displays and diskettes, digital cameras with built-in flashes, and paper bound books piled up in disorganized heaps.

The wooden door creaked as John pushed it open and stepped into the cramped shop. Strange goods were stacked atop one another and crammed into shelves from floor to ceiling. The store smelled like dust, like dry earth. Books, magazines with aging brittle paper, old toys: superheroes and fantastic beasts rendered in plastic waged epic wars across the uppermost shelves. John was immediately overwhelmed by the quantity of things—things he vaguely recognized from his own childhood, and things he'd never seen before except, maybe, in old movies watched via cloud sync. Glassware painted with palm trees and women in grass skirts; a silver teapot with a bird on the spout; vinyl records in cardboard sleeves; large plastic bottles of Mountain Dew Chrome and something called a “Lean Mean Fat-Reducing Grilling Machine.”

John closed the door behind him and made his way deeper into the clutter. The air was very still, but John could hear what sounded like a fan, and muffled voices. The light was dim and yellow hued; from the rear of the shop there emanated a faint blue glow. John made his way towards it, and as he pushed past the cramped aisle between shelves, stepping around a rack of faded nylon jerseys emblazoned with the logos of nearly-forgotten sports teams, he found

the sales counter. A man in a faded plaid shirt hunched on a small stool, watching some movie on an antique LCD flatscreen television. The man barely looked up from the blue glow as John approached—on the bulky screen some sort of spacecraft spun slowly against a backdrop of stars.

The man was small and wiry. His shirt was tucked into crisp blue denim pants and he wore a sweat-stained ball cap pulled down over his graying hair. His face bore the trace of time, creased and drawn, but still sat well on his bones.

John cleared his throat. When the man didn't acknowledge him, he ventured a timid “Hello?”

“This is one of the greats,” the man said.

John glanced over to the film—the spacecraft still spun against the background of stars.

“Kubrick—one of the greats, though not without his—” the man coughed. “Faults.”

John nodded. “I was hoping you could help me find something. I'm looking for, I don't know exactly, camping supplies—a tent?”

“Right, right. It takes some kind of greatness,” the man said. “Wouldn't you say?”

“Sorry—what?”

“To imagine—to imagine another world: another people, another time, another space, so completely—other stars, even.” The man kept his eyes glued to the film. He brought his hand up to his face, slightly pinching his chin between his thumb and the arc of his fore finger. “I don't know if I could do it.”

He lifted his eyes to meet John's. “You think you could do it? Imagine another world, completely?”

“No,” said John. “No, I—I don't think I could. I think—I could imagine part of it, bits and pieces maybe. A person, some mountains or—really, I'm hoping you can help me

with a tent.”

“Not quite enough, one person or some hills,” the old man said, bringing his eyes back to the spinning spacecraft.

“Can anyone though—a whole world?” John shook his head. “I don’t think so, there are too many moving parts.”

“Hmm,” the man nodded. “Well then, I probably have a tent here somewhere, though there’s no saying what kind of condition. Let me take a look.”

He stood slowly up from his stool, straightening his crooked back with considerable effort. He walked around from behind the counter, and John noticed the man wasn’t wearing any shoes. His feet looked young, soft. He wound his way among the shelves, retrieved a small stepladder, and set it into position. Rummaging through the upper shelves against the far wall of the store, the man pulled down an orange nylon bag, and tossed it down to John with a shout of “Catch!”

John caught it, but only just.

Stepping down from the ladder, the man asked, “Is that all you need—the tent? You’re going camping you said? You might need some other things if you want to do it right: a small stove, a sleeping bag, a coat hanger.”

“Coat hanger?” asked John.

“Wire coat hanger. You un-bend it, straighten it out—toast marshmallows. I got those too: marshmallows.”

The man shuffled back towards the sales counter, stopping here and there along the way to retrieve other miscellaneous merchandise.

“I’ll take whatever you think I’ll need. I’ve never done this before and I’m going in a little blind.”

“No, not many have done it before, these days.”

The man piled the goods up on the counter: a metal box that folded open to reveal a double-burner stove-top, two

cans of propane fuel, a box of wooden matches, a half-dozen brittle white candles, a blue nylon sleeping bag rolled into a bundle and tied with twine, some wire coat hangers and the tent in its orange sack.

“Oh, and can’t forget,” said the man, as he pulled a bag of Kraft Jet-Puffed Marshmallows out from beneath the counter. The bag was half empty, closed tightly with a wire twist tie. “I’ll throw those in for free, seeing as I’ve already helped myself to a few. The ones they make now—they just aren’t so good.”

The man brushed some dust off the tent, and started punching the items into his old computer-bound cash register system.

“Eight-forty-seven and fifty,” the man announced after completing his calculations.

John handed him his iCard and the man slid it through a card-reader attached with duct tape to the side of the register. The machine spit out a thin paper receipt, and the man slid it across the counter along with a ballpoint pen.

“You’ll need to sign the paper,” the man said.

John signed his name at the bottom of the receipt, and the man put his dusty goods into a large plastic bag emblazoned with a logo from some supermarket chain called Leon’s Grocers.

“Thanks,” said John, and he started toward the front of the store. As he opened the door and stepped out into the overcast blue-tinged light, the man called after him.

“Try it sometime, imagining.”

John looked back, but he couldn’t see the man, or the counter, through the maze of shelves and racks. The blue light of the television still flickered faintly against the back wall.



#1, #2 and #4 are sitting around a small white plastic table in the fabrication shop. Everything here is made of white plastic and black glass. The light is bright white, cold, just like you would imagine.

They sit at the small round table, leaning over a large map illustrating the topography and geography of the region they are embedded in. #2 looks drawn and sallow. His eyes are heavy-lidded, and his cheeks hang loose and slightly yellow. His brown hair is matted as if he hasn't run his hands through it in days, twisted from sleep. His beard is full and greasy, and his hand shakes around the pencil he holds.

#4 is pointing out an area on the map, tracing a circle around it with an outstretched finger. He is briskly animated, speaking rapidly. His movements are jerky and erratic. He looks to #1 for some acknowledgment. No one seems to know what to do.

#1 stands and crosses her arms over her chest. Her dark hair is pulled back and tied, and her skin has a slight glisten. She nods, slightly, as #4 speaks, but she seems unsure how

to proceed. She places both hands on the map and leans over it. She speaks, says something and #2, who has been looking down absently at the map, snaps his eyes to her. She points to a spot in the area #4 had encircled with his finger.

#1 steps away from the table, and walks out of view. She returns a moment later with a spiral-bound paper calendar. She makes a series of marks on a series of days with a pencil, and shakes her head. She quickly writes, in the margins of the calendar, a series of numbers.

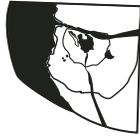
$$75 \times 2 = 150 \text{ L/hr}$$

$$3455 \text{ L} / 150 = 23.3 \text{ hours}$$

She shakes her head, and throws up her hands. She turns to #2, and says something.

#2 looks up, and raises two fingers.

#4 stands, staring down at the map, willing something more to happen.



John woke early the next morning, and left the house just as the sun was breaking over the city sprawl to the East. He caught the six-forty ExoTrans Route 738 through downtown, lugging with him a small, faded black backpack stuffed with food, water, stove fuel and other supplies. He carried the tent under his arm, along with the sleeping bag and camp stove. Shuffling down the lurching bus aisle, he heaved his supplies into an empty seat. As he sat down, he nodded a small nod to the woman across the aisle. She stared at him with a volatile mixture of confusion and annoyance.

John settled in for a long ride, retrieving his pocketcom and wireless sound-enveloper and wrapping himself in a cocoon of precise and rhythmic piano. The light outside the bus glinted gold off the windows of the passing cars and storefronts, but overhead to the southwest clouds hung grey and dust-laden.

The bus rattled through downtown, and after a few hours John dragged his supplies off the bus at the West-NorthWest Bus Transfer Mall 29-8 to board the 639-0 bus out to the forest sector. He swiped his credit-debit and again dragged

his belongings down the aisle to an empty seat. The floor was sticky with spilled soda and the remains of a fallen, trod upon, morning doughnut.

Fifty minutes later John disembarked from the bus at the end of the route, and began walking towards the fenced off area of trees and fern. The sidewalk was cracked and broken, dandelions bursting out of the gaps. A small brown dog chained in the yard of a house barked as John walked past.

He found the hole in the chain link fence that surrounded the forest sector and disobeyed the faded, cracked and graffitied “No Trespassing” signs hung at regular intervals along the fence. John ducked down and fought his way through the small hole in the chain link. With his backpack slung heavy on his shoulders, and the sleeping bag and tent under one arm and the stove in the other, John started walking into the shade of the tree canopy.

The grass at the edge of the sector, between the trees and the fence, was knee high and damp; it swayed and bobbed in the breeze. Small yellow and violet flowers were perched at the ends of some of the grass stalks, and the air smelled of water and earth. John noticed a small bird—black with red patches above its wings—sitting and watching him. He trudged up the shallow embankment. At the top the grass gave way to fuller trees and ferns, and John found himself on a small, thin pathway winding into the forest.

The path took John over the small rise and briefly wound downhill again. John could hear the sound of running water, and before long he could see a small creek between the trunks of the trees. John followed the small dirt path down to the water’s edge, where it turned and followed the creek upstream deeper into the forest sector. Over the water small flies were circling in a light cloud, and John could hear quiet croaking sounds coming from somewhere nearby, just audible over the sound of rushing water. The air had a crisp smell to it, cold and sharp, slightly electric. Bright green

ferns of the sort one only saw in the lobbies of office buildings sprawled out across the banks of the creek, trailing their fingers in the cool water as it rushed past.

John continued up the trail. The trees towered overhead, and the light below was dark and dappled with green as it filtered through the canopy. The tree trunks and fallen logs were covered with thick green moss like a spongy, downy fur. Here and there John spied mushrooms popping up out of the soil, rising up out of blankets of fallen leaf matter and pine needles.

After some time following the trail and shuffling his gear from arm to arm, John turned off the path. He headed away from the creek, climbing a small rise through the trees toward a patch of sunlight. The small hill flattened out, and John found himself in a small clearing in the trees just large enough to accommodate the tent and a small fire. John tossed his gear down, removed his backpack, and set to work clearing the small stones and pinecones from a patch of ground.

He untied the orange vinyl sack that housed the tent and dumped out a tangle of telescoping poles and bundled fabric. The tent was a burgundy and grey color, and as he unrolled it he shook out stale, dusty mouse feces and long-dead moths. He laid the unrolled tent out on the ground, and assembled the elastic bound poles. He set them aside and sat down on the ground, rummaging through the tent's sack and remaining pieces: another large rolled nylon fabric piece, a series of stakes.

"No directions, apparently," John said to himself. "Okay then."

Printed on the outside of the sack was a simple line graphic of the assembled tent: a dome-like structure with an angular extra covering.

John examined the tent, and found two fabric channels

running across the top, crossing in the middle. At each corner, and along the sides, were heavy canvas loops; the loops at the corners also had, he noticed, a metal pin. He had three assembled poles, one with rubberized ends and a little shorter than the others.

John slid the two longer poles through the sleeves at the roof of the tent, crossing them in the middle. He fit the ends of each pole on one side of the tent over the pins, fitting them inside the metal end caps. Bending the poles, and forcing them to lift the fabric of the tent, he was able to tuck the far ends into their pins as well.

John stepped back and admired his tent for a moment before unzipping the mesh door and stooping inside. The floor was dusty, and there were several places where the gray woven plastic had been patched and glued, sealing up holes that had formed from wear, cigarette burns or errant stones. Otherwise, it seemed to be in good condition, and clean. John could look up through the mesh ceiling at the sky above and the trees moving in the wind.

John stepped back out of the tent and zipped it closed. He shook out the other piece of nylon fabric, and, after a brief inspection, found two small canvas pockets. Looking at the picture on the tent sack, John tossed the nylon fabric over the top of the tent, and hooked its corner ropes into the canvas loops at the base of the tent at each corner. He tucked the remaining pole into the canvas pockets on the nylon cover, giving it a slightly arched structure where it hung over the doorway. Lacking a hammer, John found a small rock nearby, and proceeded to carefully knock a small metal stake into each loop around the base of the tent, securing it in place.

Satisfied, John moved his small backpack and sleeping bag into the tent. He unrolled his sleeping bag, and unpacked the food and supplies from his backpack.

John found a pair of large stones nearby. About the same

size as each other, John could arrange them in such a way that they formed a level pair of supports for the camp stove. He set the stove on top, and opened the rusty latch. He folded open the sides and secured them in place, and screwed a propane canister onto the stove fuel hose. Lighting a match and holding it close to one of the burners, he opened the fuel valve and turned on the burner. The gas caught flame right away.

John turned off the stove and the gas line, satisfied that it worked, and closed it up.

He stepped away from the stove and sat back against the trunk of an oak tree.

The tree canopy was swaying in the breeze. He could hear the light rustle of the wind, and the faint ripple of the creek. There were a few birds in the trees nearby, singing to themselves, or their lovers, or their enemies.

The rushing noise of the city was gone—snarling traffic and honking horns—but he could hear the faint whining of gnats in the air, and the occasional crack of a squirrel breaking into an acorn.

How do you even begin to imagine a world? The soil, the rocks, the core of the world? The mechanisms that drive heat and plate movement? The plants, the chemical reactions that produce oxygen, and maintain the balance of the atmosphere?

The bark of the oak was rough against John's back. He imagined he could feel the tree straining to reach the sun through the upper canopy, shrouded by taller pine and fir. Small knots in the trunk bit into his muscles. Dust hung in the shafts of sunlight piercing the treetops.

The knots of the oak moved slightly as the tree strained upward. The tree stretched its fibers, relaxed and stretched again. John thought he felt, underneath him, a slight shifting of the soil. The roots of the tree twisted slowly, turned and

moved in new angles, searching for firmer grip. The roots curled in a slow dance with the movement of earthworms and nematodes: small living things burrowing through the deep earth, dodging roots and other, larger, burrowing things.

In the shafts of light the hanging dust swirled. John felt a gust of wind from a bird high above beating its wings. The heat of the sun broke through the leafy rooftop, and there was a high-pitched creaking as the leafy plants around him turned their stems to face the light. The air hissed as the plants opened and closed their stomata, breathing.

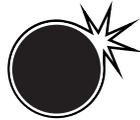
In the distance, near the creek, a small frog opened its mouth, lashed out its tongue and snagged a hovering damselfly with a whipcrack. The frog drew it back and crushed the insect in its mouth.

The air particles vibrated, colliding against each other. John felt a slight tingle as they bounced off his skin.

There was a scent of soil all around him, the smell of churning, decaying organic matter and the perfume of the nearby trillium flowers, as ants streamed up and down their stalks.

John closed his eyes for a moment. Blood pounded in his ears. He opened his eyes and stood, shaking his head. Some extended period of time must have passed, John noticed, as the sun was low in the sky, and soon would dip behind the next rise.

John retrieved the small cooking pot he had brought with him, and walked down to the stream to fill it with water. He returned, lit the rusting camp stove, and set the pot to boil.



NASA's rover, *Curiosity*, wasn't designed with the equipment necessary to search for life: it could not, for instance, sift through a soil sample dug out of a lake bed and search for microscopic fossils of ancient, long dead bacteria. It could, however, collect up to seventy-four soil samples, house each in a separate quartz vial and subject that sample to a battery of tests: shoot it with lasers, heat it to the point of combustion or liquefaction, chill it, run it through a centrifuge, or test for magnetism and chemical make up. It could, for instance, detect whether the soil contained the organic compounds necessary for life, or those that signified the possibility that the soil sample was composed, perhaps, of matter formed through the decomposition of living things.

Shortly after landing on the cold, dusty surface of the planet, *Curiosity* found itself on the ancient shoreline of Yellowknife Bay. The rocks present in the basin of Yellowknife Bay are nearly three and half billion years old: as old as the oldest terrestrial fossils. The ancient lake hypothesized to have filled the basin of which Yellowknife Bay was a part was, in all likelihood, a freshwater body, fed by several streams that flowed down the edges of Gale

Crater. The lakebed is formed of primarily a fine-grained, silty mudstone, rich in clay. Clay often forms in low-energy deposition environments, such as large bodies of water, and terrestrial clay deposits are mostly composed of phyllosilicate minerals containing various amounts of water trapped within the mineral structure. Such deposits are typically formed over long periods of time by the gradual chemical weathering of silicate-bearing rocks. Through low concentrations of carbonic acid and other highly diluted solvents, the rock is eventually broken down. Clay fields can form in place as residual soil deposits, but are most often accumulated through sedimentary deposition.

There, at Yellowknife bay, the rover found evidence of the planet's waterlogged history. Where was once the water's edge, the rover found highly stratified layers of rock evidencing mineral veins and concretions: small spherical concentrations of minerals suggesting the precipitation of minerals out of water. As the rover continued its tests, it found evidence of subsurface liquid, primarily in the form of water bound into the crystalline structure of hydrated minerals.

Six miles to the east of Yellowknife Bay, still in the base of the Gale Crater, stands Aeolis Mons, otherwise known as Mount Sharp: a three-and-a-half mile tall mountain peak with no marked evidence of folding, faulting, or plate tectonics. It is, relative to terrestrial geology, an anomaly: nothing like it exists on Earth. Rising 18,000 feet above the crater floor, the peak is higher than the southern crater rim, and how the peak may have formed remains unclear. It is likely that, after the creation of the impact crater, the crater was filled, over millennia, by sediments that were later eroded by the planet's relentless winds, leaving the peak in place.

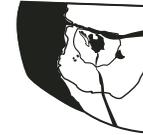
It cannot be ruled out, though, that the peak was deliberately built there, in the center of the circular Gale Crater.

After spending time trolling the shoreline of the lake, *Curiosity* set out towards the mountain. Several months later, the rover was climbing through the layers of geologic deposits: red crystalline hematite towards the base, through layers of clay and sulfates. It was around this time that things began to derail in quite unexpected ways.

Curiosity had been drilling for samples in an upper clay layer for several days, and testing them for organic compounds. Suddenly, while conducting a slow drill sample, the clay-rich rock cracked and crumbled under the drill arm of the rover. The rover had broken through into a small subterranean chamber. As the rock fell away, a tangled knot of writhing worms tumbled out of the chamber into the open air. The worms flowed out of the hole relentlessly: thousands of knotted nematodes, while the NASA operators, watching the rover's actions via the vehicle's satellite camera, stared, frozen and agape.

Under the radiation of the sun, un-tempered by the thin atmosphere of the planet, the worms quickly burned and desiccated, and were borne aloft and away, ashes on the Martian wind. The writhing flood slowed little by little, and the NASA ground crew, shocked, didn't know what to do. They stared, blankly. No one said a word.

This was nothing they had ever imagined.



John made himself a simple dinner of vacu-seal Boil-It! beans and sausage product, and spent the twilight hours struggling to light and maintain his first campfire.

He burned several marshmallows to a cinder before figuring out an efficient toasting method.

With the moon high in the sky, John brushed his teeth with a small battery-powered travel toothbrush. He crawled into his tent and sleeping bag, and went to sleep.

The next morning he packed up his things and made his way back to the bus stop, catching the bus inbound to town. He arrived home late in the afternoon.

John had to go to work the next day. As usual, he saw no one else in the office building, but he did his scanning duties diligently. No one seemed to notice that he had walked out on his last shift. Whoever had come after him had simply started where he had left off, and it seemed no one would ever take note of the fact that he had spent only a few minutes actively at his desk. He decided not to press his luck and spent the whole of his shift scanning documents, transferring data from one form to another. While doing so, he

thought back on the forest sector. He could recall, if he shut his eyes and concentrated, that feeling of vibration against his skin: the molecules of air gyrating around him. It was like a light shroud of electricity.

He went to his next shift, and his next. He woke, he showered, he dressed. He ate and went to work. He left work, and went home. He ate; he fell asleep.

Everyday he thought about the forest.

He returned several times, for longer stays. He'd leave the city early on a Wednesday morning equipped with several days worth of provisions crammed into his small backpack, and not return until Friday evening. He was beginning to get skilled at setting up and striking camp; his tent went up in a matter of minutes, and he was learning how to build a warm and long-lasting campfire. Some nights John would set up camp at his initial campsite. With increasing frequency, though, he would hike further and further into the forest, past the site of his first campsite to more remote locations within the sector.

Each afternoon in the forest, John would sit back against a tree and listen to the world around him. He would take it in through every sense: sight, sound, smell, the feel of bark against his back, the taste of fresh stream water.

He would lean back, shut his eyes, and follow the old man's advice.

He'd try to imagine another world.

He could never get further than dirt, rocks, and a cloudless, thin sky.

John continued to show up at work on Tuesdays and Saturdays, and would spend those nights at his apartment in the city. After his shift, he'd stop at the auto-mat or the Super Grocer for supplies, and the next morning head back to the forest sector.

He largely stopped using his pocketcom, only checking his dwindling Allynnet updates once or twice in a week.

After several weeks of visiting the Forest Sector John chanced upon a clearing in the trees that opened up to a broad meadow: a spot roughly three miles into the sector, and just a short ways off of the winding creek-side path. While on his way deeper into the forest, John heard an unfamiliar birdsong, and turned off the path to see if he could spot the singer. After a short uphill hike, the tree canopy suddenly opened up around him, and he stood in a ring of tall pine and oak. The circle of trees opened at one side to a grassy expanse. Sunlight flooded the opening in the trees. Tall green grasses and wildflowers bobbed in the meadow breeze. He could hear the hum of small flies and honey bees.

John set up camp here, at the edge of the meadow. He hauled larger stones from the edge of the creek up the hillside for a fire-ring, and decided, almost unconsciously, that this was where he would camp from now on.



#1 is back in the greenhouse. She's mixing fluids, pouring them from one large plastic container to another. There are beads of sweat forming on her brow, and on the tip of her nose. She pays them no heed, just continues measuring, pouring and mixing.

#2 is asleep on his bunk. His soft-soled shoes are still on. His face appears thin and pale, darker under his eyes. He looks as if he were collapsing in upon himself, imploding. His eyes are closed, and his chest rises and falls with some irregularity.

#4 is sitting at the comm-center in the fabrication shop. He is staring at a bank of monitors, his eyes twitching over streams of data appearing as oscillating graphs and lists of numbers. A dial is rising and falling. Before him, on the largest screen, is a sweeping view of the planet's surface. He is watching the live video feed from Beta Rover.

Dust is kicking up around the rover as it rolls over the red terrain under a yellow sky. Small rocks fly by, kicked up by the rover's belted wheels. As it rolls forward, the camera pans back and forth, occasionally zooming in on some distant object or shadow before panning back to a front-ward

view.

#4 punches in some data on the numpad, and the rover abruptly stops. #4 slides out a control-stick apparatus from the bank of monitors, and grips it firmly. He pushes it forward, and the rover responds. #4 steers the rover around and to the left, tilting and pushing the control stick. He straightens out, and heads toward a bank of shadow at the foot of a small, crag-ridden rise. After several minutes of hard driving, the rover pulls close enough to see that there's nothing in the shadows aside from rocks and wind swept debris.

Without warning, a red light begins flashing at the top corner of the video feed. The camera view is obscured by windblown dust, blotted out in a reddish-brown haze.

#4 slowly pushes the rover forward, until it sits in the shadow of the Martian rocks, sheltered from the wind. From its place in the shadow of the rock, #4 watches the wind swirling around the rover. The blowing dust is so thick it could be a swirling, eddying river.

Outside, the dust storm hits the research base. Measured at upwards of sixty miles an hour, the wind sends supply crates toppling from their stacks and sliding across the hard-packed ground. Alpha Rover, previously engaged in routine sorting and repairs, stops and withdraws its mechanical arms, folding them against its body. It lowers itself on its chassis, and unfolds a series of titanium alloy plating over its body, encasing itself in a hard shell against the wind. The supply pods are buffeted with sand, dust and pebbles.

#1 looks up from her measurements. #4 looks up from the video feed.

#2 suddenly wakes, and sits up on his bunk. He looks up at the wall of his sleeping pod.

One could imagine the noise was something horrific.

Everyone closes his or her eyes.



John left the downtown office building after his Saturday shift as quickly as he could. He had decided he wouldn't be going back to the forest sector until after his scheduled Tuesday work period—he'd spent almost no time at his apartment over the past two months. He had a stack of bills to pay sitting on his couch-side table: payments past due for his pocketcom data flow service, along with his apartment rent and utilities.

Plus, he figured he'd use the time to stock up on supplies for his time in the forest: food, Koffee powder and sanitary provisions. Walking toward his bus stop, he paused at the corner automat for something to eat.

The automat was gleaming white: a small room, open to the street by a roll-up steel door, all bright and fluorescent lit. There were several automated food-service machines permanently installed inside. To make a purchase, one scanned an approved debit-credit card, microchip, or automat pre-paid service card, made a selection from the hundred of available items, and waited for the machine to spit

the item out its service slot, steaming hot in an eco-plastic wrapper. The automat closed down for a one-hour period in the very early morning, an hour or two before sunrise. During this time, the steel roll door descended, hydro-seals were closed, and the whole room was hosed down and sterilized by an automated high-heat cleaning system.

John stood in front of the automated food vendors, scanning the pictorial menus for something to eat. He settled on a soy-cheese soy-burger but then, at the last minute, changed his order to No-Foul Brand Chicken-product Stir Fry with Spicy Sauce. He retrieved his order from the service slot.

He turned around to leave and was confronted by a small, hunched over man.

The man was dressed in blue denim overalls and a worn, dusty looking yellow and black flannel shirt.

He twitched his thick moustache.

"You're gonna eat that?"

"Yeah. Yeah, I am," said John. "What—you're the guy from the antique store. What are you doing here?"

"You probably shouldn't eat that, you know. It's all corn sugars and polymer-product—not really anything worth eating." The man, though speaking to John, seemed to be looking straight through him, his eyes fixed vacantly somewhere around John's chest.

"This is what's here," John said.

"Hmm—yes, that's true: it is what's here," said the man. "How's the camping going?" He lifted his gaze to meet John's.

"Good. I've been out there a lot—it took some getting used to, and the tent was a little tricky to figure out at first

but—yeah, it’s good. I feel different.”

“Yup,” said the man, nodding.

“I found a pretty nice spot,” said John. “A small clearing in the trees—grasses, sunlight—I set up a good firepit. Oh, you know, speaking of sugars: where do you get those marshmallows? I could use some more.”

“Oh, yeah,” said the man. “I have a stockpile at the shop: been saving them for a long time. You should come by again. I could let you in on some other things, too.” The man stroked his moustache.

“Other things?”

“Just come by—things that I think you’ll enjoy. Nothing too special.”

John nodded. “I’ll come by tomorrow, I’m not heading back to the forest until a bit later in the week.”

“I know. Come by tomorrow, then,” said the man.

He turned around, and started back out into the flow of sidewalk traffic.

The man paused, and looked back at John. “You try imagining?”

“Yeah,” John said. His voice cracked a little. “Yeah, I have, but I don’t ever get very far. When I try, though—it’s as if I can hear and smell and feel everything around me, like extreme synesthesia. It’s like, I don’t know—it’s like something—it’s like electricity or something, like a static in the air.”

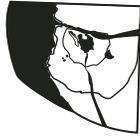
The man nodded slightly, and stroked his moustache: “Mmhmm.”

“I don’t get very far. Just dirt, rocks, maybe some sky? There are so many moving parts, I really—I’m still not sure if it’s possible.”

“Mmhmm.” The man walked out onto the street. “Just

practice, that’s all. See you tomorrow.”

John forked a bite of his No-Foul Brand Chicken-product Stir Fry with Spicy Sauce into his mouth, the spongy faux meat breaking apart as he chewed. The sauce was too sweet—sweeter than he remembered. He looked around the bright white room, and tossed the rest of the dish into the trash incinerator.



The following day John rose early, ate a simple breakfast of neo-eggs and fortified toast, and hopped the bus out to the old man's antique shop. The bus clattered over the city blocks. The sky overhead was the color of dull worn steel, and a light mist fell.

The winding, circuitous route to Emeril's Antiques made its way through the varied neighborhoods of the city, the bus largely insulated from the smells and sounds of alien cultures. The bus was carrying few passengers—it was early in the morning, and most of the commute traffic was headed the other direction: into the heart of the city, rather than into the outlying areas. John made his transfers, and stepped off the final bus a couple hours after having left his apartment.

The neighborhood was quiet as John walked the few blocks to the antique shop. There was very little activity on the streets, save for a distant sound of machinery: a metal on metal grinding sound that carried from a few streets over.

Emeril's was dark when he arrived. John tried to open

the white, peeling-paint door, but it was locked.

John knocked on the wood three times, a sharp, loud rap.

He stepped over to the window, cupped his hands around his eyes and leaned against the glass. The glass was smeared with road dust and grime, and John could hardly see beyond its surface. He leaned back, and rubbed a spot on the window clean with his shirtsleeve.

He peered inside again. There wasn't much to see: the lights were out, and everything appeared just as it had the last time he had been there.

John stepped back on the sidewalk. The shop's hand-painted sign, hanging over the door on a steel rod, swung lightly in the warm breeze, creaking. A clear bio-film bag, catching the wind, skittered down the empty, potholed street.

The door of the neighboring storefront creaked open, and a robust woman in a stained white apron stepped out onto the sidewalk. She propped the door open with a wooden wedge, and stood a small wooden A-frame sign on the sidewalk. The sign featured a small cartoonish painting of a couple of eggs frying in a skillet. After a moment John followed the woman inside.

The automat was age-worn: there were tiles missing from the floor, and a few of the overhead old-style fluorescents had long ago burnt out. The woman was struggling to raise the dusty, plastic-slat blinds hanging over the windows.

"Take a seat wherever you can find one," she said, her teeth clenched on an old plastic e-cigarette, its blue LED softly lighting up her deeply lined features.

John glanced around—he was the only other person in the automat; every seat was empty. He sat down on the closest counter stool, the red vinyl upholstery torn and patched with dusty orange Seal-It! tape. On the counter,

at regular intervals, were old-fashioned plastic salt and pepper shakers, sugar jars with aluminum lids, and paper packets of New-Crème. The countertop was mottled white linoleum made to look a little like stone, with an aluminum rail trimming the edge.

The woman gave up her struggle with the blinds, leaving them halfway raised and slightly crooked, and walked around behind the U-shaped counter. She pulled a heavy white mug from a shelf and filled it with hot, dark Koffee. She slid it in front of John, and slapped down a piece of paper listing the food options.

A few large flies buzzed around the ceiling, tracing routine arcs through the air.

The woman stood behind the counter, leaning back against the sink with her arms folded, and waited for John to finish looking over the menu.

The offerings consisted of a number of variations on a theme: two eggs with bacon and toast; two eggs with ham and toast; two eggs with sausage and toast; two eggs with ham and sausage; two eggs with toast and skillet potatoes, two eggs with sausage and bacon and toast; two eggs with a short stack; two eggs with a short stack and bacon; two eggs with French toast and sausage, and on and on. Below, there were listed a number of “sides”: bacon, sausage, ham, oatmeal, biscuit, toast, fruit.

“That’s just breakfast,” the woman said, her voice rough. “I could do some lunch things if you’d rather, but most of the prep’s not done yet—might take a little longer.”

“Oh, no—I’ll just have—I’ll just have two eggs and Bakon,” said John.

“Toast?”

“Oh, yeah, sure.”

“What kind?”

John furrowed his brow.

“Wheat, white, rye, sour, potato, English muffin...”

“Uh—white?”

“How you want your eggs?”

“Oh, just regular.”

The woman stuck out her lower lip a little, turned her mouth down at the corners, and nodded. She turned around and walked toward the back of the room, toward the stove-top, ovens and griddle. There was a glass case filled with large wrapped pieces of cured meats, and large cheeses in a range of yellows and whites, most solid, but a few pocked with holes and craters.

At the end of the counter was a glass counter-top case with a few baked pies turning slowly around on mechanized shelves. The woman was obscured behind the counter, her back turned, but John could hear the sizzle of the griddle, and could smell the smoky scent of cooking Bakon.

John quietly sipped his Koffee. It was hot, and strong. He tore open a packet of New-Crème and poured its powdery content into his mug. The Koffee was slightly bitter, but much stronger and more flavorful than what he usually made at home. John drank from his heavy mug.

The walls of the diner were papered with faded floral wallpaper, small roses and daisies intertwining. Here and there on the walls were photographs in wooden frames. The pictures were old, some in black and white and some in faded color. Many of the photographs were simply taped down onto the frame’s backing board, clear tape yellowing with age. Most of the pictures were of people—people standing and posing for the photo alone or in pairs, and a couple larger groups—and there were a few photos of what appeared to be the exterior of the automat itself, though the surroundings looked very different. In one faded black

and white image the street in front of the brick building was lined with sleek curved automobiles, with rounded noses and fins at the rear, and the sidewalk was shaded by large, leafy trees. There was a large sign with the old Coca-Cola script up above the left-side window.

Outside, a shiny black sedan drove by.

The cook set a large white plate in front of John. She picked up his mug and refilled it from the pot kept warm on a hotplate.

The plate was large, and oval shaped. A pile of crispy seared hashed potatoes was to one side, with two glistening strips of meat and two round whites with yellow centers, and thick, buttered white-bread toast.

John stared down at his plate. He picked up his fork, and poked at his eggs.

The cook, looking down at John, asked, “You need anything else?”

“No, no, I don’t think so.” John poked his bacon. “This is Bakon?”

“Yep, that sure is bacon. Not what you expected?”

“What is this?” John lifted the edge of his egg white up with his fork, and peered underneath.

“That, son, is an egg, over-easy. Regular, as you put it.”

“Oh—I’ve never seen neo-egg like this.”

“Nooo.” She drew out the word. “Not neo-egg. That’s an egg. From a chicken.”

John looked up at her.

“I don’t use that neo-this neo-that shit, if I can help it. Eggs from chickens that I keep out back, get the meats from friends of mine that live outside the city. My wife and I bake the breads on Tuesdays and Sundays—that there is a fresh loaf just baked yesterday.”

John looked back down at his plate.

“So, that’s not Bakon with a ‘k’,” said the cook. “That’s bacon with a ‘c’, from a pig. The sidecut, dry cured in salt and maple-wood smoked.”

“I don’t think I’ve ever even seen real bacon.” John picked up a piece and took a bite. He looked up at the cook while he chewed, and smiled. “Whoa.” He took another bite.

John picked up his fork and knife and sliced through the soft yolk of the egg, spilling thick liquid yolk out onto the plate. He forked half the egg into his mouth, chewed, swallowed, and grinned. He wiped his mouth with a paper napkin.

“I think that’s the best egg I’ve ever eaten,” John said.

“I’d wager that’s the only egg you’ve ever eaten,” said the cook, her arms folded across her chest, but smiling. She turned and walked back toward the griddle.

John sprinkled salt and pepper over his plate, and set to work on his meal. He shoveled egg, bacon and potato into his mouth as if he’d never eaten a meal before in his life. He sopped up the last of the egg yolk with the thick, buttery toast.

Satisfied, he set his knife and fork down on the plate with a clatter, and stretched back on his stool. The cook walked over.

“All set?”

“Yeah, that should do it,” said John. “Hey, when does the old man at the antiques store usually get in?” He took a last swig of his Koffee.

“Oh, usually he’s there first thing—I’d be surprised if he didn’t have the place opened up yet. He’s been there long as I can remember, and I don’t think there’s been a day—excepting Sunday, of course—that he hasn’t been there bright

and early.” The cook picked up John’s plate and mug in one hand, and swooped them around and into a waiting sink filled with soapy water.

“That’ll be \$62,” said the cook.

John pulled out his iCard and handed it to the cook. The cook walked back around to the rear of the automat, where she ran the card through an old-fashioned card reader—something similar to what the old man at the antique store had used. As the machine went through its outmoded process it hummed and shrieked, and finally spat out a small slip of paper. The cook brought the paper back to John, who signed it with scarcely a glance.

“You all are a little different out here, aren’t you?” John said, slipping his debit credit back into its eco-plastique sleeve.

“You could say that.” The woman produced a white bar towel, and as John stood she wiped down the countertop. “You take care—hope to see you again.”

“Likewise,” replied John, stepping out of the automat.

The door to the antique shop was propped open and a whistled tune drifted out to the street from inside. John stepped through the threshold into the dim, cool interior.

“Good morning!” John heard the old man calling from the rear of the store. “I have something for you!”

John made his way through the winding shelves and old coats hung on rolling racks. The wooden floor creaked slightly under his weight. As he approached the rear counter, the old man emerged from the back room, wearing, again, a plaid flannel shirt and looking as if he’d just woken from a long and deep sleep.

“Here you are!” The old man thrust a handful of small

paper envelopes at John. “Go on, then—take them!”

John took the envelopes, and looked through them. Each was labeled with a hand written scrawl and sealed shut.

“Tomato. Broccoli. Radish. Sweet corn. Kale. Bush beans.” John read aloud, and looked up at the man. “What is this? Hydro-veg?”

“No, no, no, no.” The man grinned, wide and tooth-bearing. “Seeds!”

“What?”

“Seeds! Seeds, John!”

“Why are you giving me these? This is contraband.”

“Oh, to hell with that.” The man’s grin quickly twisted into a frown. “Everyone should have seeds. To lock them all up in some deep freezer in the middle of nowhere is ridiculous. You can’t stop natural propagation. Nature finds a way, as they say.” He smiled again, a small and dark smile.

“I don’t want them.” John held the envelopes out to the old man.

“No, no,” the man said. “You must take them! You said it yourself: you have a sunny place, water, light, clean air! Plant them, reap them!”

“You want me to plant illegal seeds in the forest sector? The non-issue eggs and meat next door is one thing, but gardening in city limits—I don’t think so.”

“Oh, no one will know,” the old man scoffed. “It’s just some harmless vegetables. You’ll be able to feed yourself for almost nothing, just for labor. It’s the forest sector—very few people ever set foot in there—and you’re well enough off the trail. Just give it a shot, trust me.”

“This is crazy.” John shook his head.

“Those eggs are better, right? The bacon? Nothing beats

fresh, real.”

“I can’t grow your seeds. I’ve never grown anything before, the closest I’ve tried was some Gen-Mods, but those are basically plastic, and a Bio-Synth Growing Air Filtrator that broke down in a couple weeks.”

“Just try,” the old man pleaded. He wiped his hand over his moustache. “Just try.”

John shook his head and looked down, away from the man. He stuffed the envelopes into the pocket of his pants.

The old man walked from behind the counter out into the shop. He shuffled over to a far shelf of books, and pulled down a thick, green hardbound volume. He walked back over to John, blowing dust off the book cover. He held the book out to John, who took it reluctantly.

“This should help answer any questions that come up,” the man said.

John held the book up to catch some light on the spine.

How to Grow Vegetables and Fruits by the Organic Method, by J.I. Rodale.

“Alright,” John said. “Do you have something I can wrap this up in, at least? I don’t want to attract attention.”

“Of course, of course,” the old man replied. He shuffled back behind the counter, and reached below to produce a brown paper bag. “You’re far too concerned about the judgments of strangers, but it’s just as well.” He took the book from John, wrapped it up snugly and taped the bag closed. “Thank you, John,” he said, handing the now wrapped book back. “I do think that you’ll like it.”

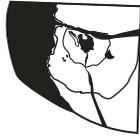
John nodded a small nod. “I also need some more fuel for my stove, some matches and some more of those marshmallows if you have any.”

“Of course!” The old man brightened up. He stepped

from behind the counter, and quickly gathered up the necessary supplies. He placed them all in a large eco-film bag, and handed it to John. “Take this round on me, for your troubles,” the man said.

“No—are you sure?”

“Certainly. Just come back soon and tell me how things are proceeding. And keep up on the imagining.” The old man winked.



John went in to work the following day. He put in his few hours of digital scanning with diligence. He did this without joy, or any sense of accomplishment. It was simply a task: something laid out before him that stood in the way of everything else he felt he should be doing.

Scan, label, file. Scan, label, file. Scan, label, file.

At the far end of the building a bank of fluorescent lights suddenly flickered out without warning, leaving a large corner of the office floor under a blanket of darkness.

Scan, label, file. Scan, label, file. Scan, label, file.

John stood up from his computer console at precisely 5:30 pm and headed out of the office building, riding the elevator down the ten floors to the ground below. He walked through the lobby, past the large pillars surrounded by bio-synth air filtration greenery, over the grey industrial carpet and out the heavy glass doors.

John had with him the necessary supplies for a few days out in the forest sector: food, water-purification tablets, matches and fuel, along with the envelopes of seeds and the

book the old man had given him. He had taken to leaving the tent out in the forest, set up and draped over with a tarp and a few fallen pine boughs. He figured there were so few people out in the forest sector, if anyone at all, that the shelter would be safe if left alone for a couple of days at a time.

John caught the bus from downtown, making his way to his campsite just before dark. He sat at the edge of the meadow and watched the sky slowly darken, a spray of violet and rosy-orange tinting the clouds as the sun let out its final yawn of light.

John busied himself with building a small fire, just large enough to create a bubble of warmth against the cooling night, to cook, and to provide a bit of light. After a simple meal of Re-Hydro-Taters and Soy-O-Sausagey Patties, John sat on a large granitic rock beside his fire with the book he'd received from the old man. He heard a light rain beginning to fall in the meadow, but the trees provided enough cover to keep John dry beside the fire.

How to Grow Vegetables and Fruits by the Organic Method, John read, by *J.I. Rodale and Staff*. The book was fairly substantial, almost a thousand pages if John included the index in his count. It was hard-backed, covered in a light grayish green canvas, the text on the front all capitalized, with a printing of the author's signature. Above the title there was a small illustration of a five-petaled flower with curving, sinuous leaves. There was a faintly visible water stain on the front cover, a trace of dark-grey leaving a line at the water's creeping high mark.

The book was in remarkably good condition for something so old. The binding was sound, with just some light wear on the bottom and top edge from being pulled in and out of bookshelves. The paper of the pages was slightly yellowed; there was some dark dust staining the bottom corners of the pages.

John scanned the chapter headings: *Planning the Vegetable Garden, Starting with the Soil, Fertilizing, Seeding, Mulches, Harvest*. John flipped the page, and began to read to himself from the book's foreword:

Today, more Americans than ever before want to grow their own fruits and vegetables. The objective is more wholesome, fresh, chemical-free, luscious-tasting foods.

People are tired of mealy, weeks-old, warehouse-ripened produce with a tainting of insecticide or weed killer. They want quality foods for themselves and their family. Yet about the only way to insure this is to grow them yourself. This keen interest in growing fruits and vegetables at home is the reason for the publication of this book.

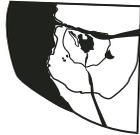
Whenever any space is available, no matter how small, we believe that every family should have a vegetable garden. It is the best investment in recreation, wholesome food and health that a family can make. Many believe that man is by nature a gardener. Working in a garden is healing to both body and spirit. There are both challenges and rewards in the proper preparation of the soil, designing the garden, selecting the seeds and seedlings and establishing them in the garden soil, maintaining conditions favorable to the growth of the plants, dealing intelligently with insects and diseases, harvesting and using the vegetables in ways that provide the body with vitamins and minerals essential to health.

John paused his reading to drop a small log onto the fire, and to stir the coals with a long, fire-hardened stick. He watch the glowing orange sparks float skyward. The light rain had stopped, and from where he sat John could see out

onto the meadow, and the open sky past the tree cover. The clouds had broken up, and bright white stars, like sparks, glinted out of a deep inky blue-black night. A few heavy clouds lingered, rolling across the sky and catching a hint of moonlight from the moon overhead.

John turned back to the book. He continued reading through the foreword, and flipping through the region-based planting charts, garden plans, acidity recommendations and fertilizer recipes. He read through recommendations for building compost, cultivating earthworms, and priming soil—all activities from a world lost to the intervening decades.

The night drifted on. John continued to read, and feed the fire, until fatigue and tired eyes drove him to sleep.



John rose early the next morning, stepping naked out of his tent as the mist was just burning off of the meadow. John walked out from under the tree cover to the edge of the grass and wildflowers, and sat down on a good-sized rounded chunk of stone. Small sparrows greeted the morning with song as they danced through the trees behind him. He was hungry, but willed himself to sit and perform what was becoming a Forest-Sector morning ritual.

John closed his eyes and rested his hands on his bent knees. He took several deep breaths, drawing the crisp morning air in through his nostrils and deep into his lungs, pulling his diaphragm down into his belly. He exhaled slowly, letting a quiet stream of air escape through his lips.

He repeated this several times, trying to control his breathing as much as possible, forcing his mind to focus and concentrate on his body at rest. He could feel his senses growing sharper, like that first day in the Forest-Sector. He felt time slowing around him: he could feel the air vibrating against his bare skin, the sunlight creeping over him and penetrating—warmth carried by blood cells running

through capillaries near the surface of his skin, captured and carried deep into his body. He could feel the radiation penetrating his skin cells and reacting, synthesizing into Vitamin D3 and being whisked away into his bloodstream. He could hear the grass growing, a high-pitched vibration as it reached upwards towards the light, swayed by the almost non-existent breeze. John could feel the ground moving beneath his bare feet, the slow movement of the orb as it spun on its axis, the shifting of tectonic plates and the steady, noisy churning of the soil as insects and worms worked through it: eating, excreting, and copulating below the surface.

Every air molecule, every mineral molecule of the soil and the stone on which he sat, was spinning, vibrating, colliding with one another and with his own naked body. He felt the air stir his hair just slightly.

He breathed: in, slowly, and out, slowly.

He focused his thoughts: he imagined.

John imagined a landscape, building it up out of nothing: he imagined, first, a fine reddish-brown soil. He imagined each grain of sand: small, crystalline. He imagined a rock: he compressed the sand in his mind, settled it in a vast deposit and imagined the pressure of time. He imagined an internal heat below the ground, melting soil and sand into a molten slurry. He imagined a creeping fissure in the ground, molten rock spewing forth and cooling as it spread. He imagined a wind, eroding that rock. He imagined time passing, the landscape building, climbing: he imagined a mountain rising up from the center of the plane of his vision, a vast and broad peak rising up from flatness. He imagined a ring of mountains in the distance, a line of craggy forms. He imagined a scattering of rocks, of pebbles. He imagined a stream of water flowing past him, rolling down from the distant hills and pooling at the base of the imposing peak.

For the first time, John imagined life: he pictured it in

his mind, slowly allowing it to take shape. Earthworms: first small, tiny things, pinkish-purple and writhing. He imagined them eating the soil, digesting what they could. He imagined their tiny mouths working like vacuums. He imagined the path of the minerals through the worm's body: he imagined the grains of mineral as they were coated with mucus and traveled through the pharynx. He imagined the mineral passing through the esophagus into the crop and gizzard. He imagined the gizzard grinding the minerals, breaking them apart. He imagined them passing into the intestine of the worm, the enzymes flowing into the worm's gut, breaking apart the minerals into their component molecules. He imagined the worm's blood whisking those molecules away: vitamins, proteins, locked up in rock. He imagined the worm discharging of the waste molecules, excreting them as digestion finished. He imagined the worms growing, copulating, and birthing new worms.

In his mind, a vast population was growing beneath the sandy rock surface he had imagined. The surface water evaporated, disappeared into the air and into the soil below—it was more than he could control.

The worms were everywhere. Thick, deep purple, and writhing in a tangled knot of bodies, all intertwined and feeding and excreting atop one another.

John opened his eyes. The red landscape vanished.

He sat for a moment, trying to collect himself. His body was warmed from the sun, and he sat still, staring out over the meadow.

The bees had come out, and were hopping from flower to flower. There were butterflies here and there, and dragonflies zipping through the air.

The birds were still singing.



The winds kept up for nearly twenty hours, and the living and storage pods are all partially buried under drifts of terra-cotta sand. The plastic crates are scattered across the hard-packed plain, and Alpha Rover is scooting slowly back and forth between two seemingly arbitrary points—pacing, unsure what to do or where to go.

Usually, there are protocols, but no one saw this storm coming.

#1 emerges from the airlock, wearing her full surface-exposure safety suit. She steps slowly out onto the clay soil and walks toward Alpha Rover, intercepting its back-and-forth path. The vehicle stops, sensing the obstruction. #1 approaches the rover, reaches around to its side and opens a hinged cover. She flips a large switch and the blinking yellow light atop the vehicle turns off.

#1 pulls a small metal box from her backpack, and flips a small screen up from the box revealing a keyboard beneath. She pulls a cord out from the side of the box and plugs it into a slot next to the rover's switch. A stream of numbers and symbols appears on the screen, and #1 scrolls through

the information swiftly. She keys in a few short sequences of letters and numbers, unplugs the cord and flips the switch on the rover.

The light on top of the vehicle flashes red three times. The light turns green, and remains on.

#1 flips closed the plastic cover, snapping it into place, and steps away from the rover. She slides the metal box into her backpack.

Alpha Rover raises a camera arm vertically from beneath its metal casing. The camera lifts up—a shining sphere atop a long titanium-alloy arm. After a moment, the arm lowers, retracting and collapsing into the body of the rover. Alpha Rover jolts forward, stops, and then begins moving at a steady pace.

#1 walks back towards airlock door.

Alpha Rover drives toward a crate, tossed askew by the wind. The rover extends forklift-like arms, and lifts the plastic crate up out of the low drift of sand. The vehicle carries the crate across the basin, and deposits it beside the supply pods.

#1 walks past and around the airlock, approaching the exterior wall of the attached fabrication compartment. She unlatches and opens a small hatch on the side of the building, and withdraws a small implement. She extends the handle, and unfolds a hard plastic shovel blade from the end. Snapping the blade and handle into place, she walks toward the rear of the compartment, where the red sand has accumulated in a deep drift. She begins shoveling the red sand off of the compartment, and heaping the sand in a growing pile to her right.

Once the first pod is largely uncovered, #1 pauses. She stands for a moment, looking around. #1 reopens the hatch on the side of the supply pod, and retrieves another implement. After closing the hatch, she again extends the handle

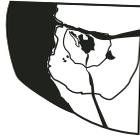
of the tool, and then unfolds a wide, short-bristled broom head from the other end.

As she snaps the pieces into place, the airlock door opens, and #4 steps out onto the surface of the planet. He walks across the hard ground in his containment suit, and retrieves the broom from #1. Broom in hand, he begins sweeping the remaining sand off of the building, as #1 walks to the next pod and begins shoveling again.

#2 is inside, lying on his bunk in the sleeping pod he shares with #3. He is staring at the empty bunk on the other side of the cramped pod, and at the framed photograph there beside the bed. He is extremely thin, and gaunt. There's a grey hue to his skin, his hair is greasy, and his beard is thin and tangled.

His eyes are shifting and appear unable to focus. Suddenly, he seizes up in a violent spasm, coughing. After a moment, he relaxes, wipes his mouth and chin with his hands and lies back again. His eyes dart about the ceiling.

Outside, #1 and #4 continue their labor, as Alpha Rover restacks the fallen supply crates.



John spent the bulk of the day working at the edge of the meadow, pulling up long grasses and wildflowers in an effort to clear a small plot of soil. By the time the sun dropped behind the trees on the edge of the clearing, John had a fair-sized plot of bare soil exposed, roughly ten feet by fifteen feet.

The soil was thick and rich brown — a dark and loose loamy soil that smelled of dampness and green things. He had sent beetles scuttling away deeper into the meadow as he cleared the ground, and saw earthworms dive further into the soil as he yanked the roots of the grasses out from their deep holds.

With the light fading, John walked the short distance from his campsite back down the hillside and across the trail, to the creek that rushed past just below. He dipped his hands in the rushing water. They were sore and dry, slightly cracked and blistered from his day's labor. As his hands cooled in the water he scrubbed the dirt and grass stains from his palms and fingers. His hands emerged still tinted green, but they were cleaner, at least, than they had been.

John stood and shook the water off, watching the stream wind its way through the trees and out of sight.

Something caught John's ear, a quiet sound behind him and to his left. He turned around, looking upstream, and then started back up the bank. The trail curled around the rise, and disappeared quickly behind underbrush and trees, but John could see a faint movement. The slight sound grew louder: it was almost nothing, just the faint sound of feet padding on packed dirt and the almost silent rustle of cloth against cloth.

John waited, watching, and a few minutes later a person came into view around the bend in the trail. She was shorter than John, and dressed casually in dark pants and a bright yellow nano-fleece pullover sweater. She didn't notice John at first. He watched as she approached him, her eyes lost in the treetops.

John coughed, and the young woman jumped, gasped and stopped abruptly, swinging her gaze down to find John.

"Oh," she said.

"Sorry," said John, holding his hands up in front of him. "I didn't mean to startle you."

"No, no, it's alright," she said. "I'm not sure I was expecting to see anyone out here right now. I can be a bit jumpy."

"I didn't think anyone else ever came out here."

"It's quiet out here, easy to think." She smiled slightly. Her complexion was a deep olive, with bright chartreuse eyes and chin-length black hair. "I don't get out here very often though, it's a bit of a trek—well, you must know that."

"Yeah, it is." John nodded a small nod.

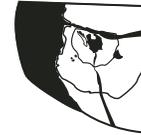
"Definitely." She paused, glancing up the hill towards John's camp and then to the treetops again, before returning her gaze to meet John's. "Are you going down? I think the daylight is starting to fade."

“No, not quite,” said John. “Just going up for a short bit—I, uh, I live pretty close by.”

“Well, have a good hike!” She began down the trail again, as John stepped aside to let her pass. “Maybe our paths will cross again sometime!”

“Thanks, you too—have a good walk down.” He watched her round the next bend down the trail—she waved as she did so—and then started up the trail, hiking a couple hundred yards before doubling back and returning to his campsite.

The light was fading and out above the meadow the stars were peeking through the clouds. John set to building himself a small fire, and prepared a simple meal. He ate, and watched the fire burn down to embers before crawling into his tent for a heavy sleep.



John spent his days in the forest tending his struggling garden. He had tilled the soil, digging it up and turning it over repeatedly with a small shovel. He churned what grasses and roots that remained in the plot back into the soil.

John edged the garden with stones he dragged up from the creek bed, and carefully sowed seeds of radish, tomato and bush beans in tidy sections of his plot, demarcated with twine tied around short sharpened branches stuck in the earth. John hauled out to his campsite a pair of five-gallon plastic reservoirs and attached plastic tubing where their outflow faucets had been, rigging up a simple drip irrigation system. John filled the reservoirs with water from the creek, carrying the water gallon by gallon up the hill.

John cared for his small garden plot nearly every day, only neglecting it when he had to commute back into the city to attend to his job downtown. While there, sitting in his small tenth floor cubicle under flickering grey fluorescents, John thought almost exclusively of the forest and his small garden. John scanned and restacked the documents at his workstation. He worked slowly, barely making it through

half his target quantity.

In his mind's eye he walked the furrowed rows of soil, nesting small seeds between fine grains of pumice and mulch. He watched the water flow out of his perforated drip tube, dampening the soil and spreading by capillary action deep into the furrow, pulled between grains and surrounding each seed in a cool dampness. He pictured, in his mind, the seed drinking up the moisture, swelling. He watched the germination, and the small tendril of white feeling its way out of the seed casing, probing for light, searching for water and nutrients. He could see the seed turning, the sprout reaching upward through the thin soil.

Five-thirty came, and John logged out of his workstation and left the building, taking a bus directly out to the forest.

John watched his first seedlings sprout and curl themselves up out of the soil, and begin to develop into small plants. He thinned the seedlings according to the advice he gleaned from Rondale's book, though he left most of his crops alone as he had seeded them well spaced, and the seedlings popping up through the soil were growing vigorously. He pulled up some of the small radish sprouts, however, to allow enough space so that the roots could grow without becoming entangled.

Several weeks passed in this pattern, with John gardening and practicing imagining, only venturing back into the city for work and to restock on supplies at the auto-vendor grocer. He stopped by his apartment infrequently, sometimes forgetting for several weeks at a time. His belongings were all still there, waiting for him, but he had no real need for them.

At his campsite, he cooked by campfire, and relied less and less on the propane camp stove. He cleared out a second potential garden plot and prepared the soil by mulching in burnt dried grasses and leaves, readying the plot for a second planting once his first crop began to approach maturity.

It was on a Thursday morning that John ran into the young woman for a second time.

Following his dawn meditation and a light breakfast, John made his way to the creek. There he rinsed his dirty dishes in the quick moving water, splashed the sleep from his eyes and the sweat from beneath his arms. Following his routine, John filled a gallon-bucket with water, turned from the creek and made his way up the bank.

He wound his way through fern and granite boulders and stepped out of the brush onto the trail, arms laden with the water bucket and dishes, shirtless and his face dripping wet.

"Hi!"

John startled, spilling some water, and looked up the path in the direction of the voice. The young woman stood in the center of the trail, hands clasped behind her back, watching him. She raised a hand and waved.

"Hi," John said, setting down the water bucket.

"You're out here early!"

"The same could be said of you," answered John.

"Yeah, well—I don't have much going on today, and wanted to get a good hike in before it got too late. That last time I saw you I almost didn't make it to the last bus, I had to chase it down." She laughed.

John nodded, and shrugged.

"I like to get a few miles into the forest—like, at a certain point—you can never really get outside of pocketcom reception, but sometimes it feels like you are," she said.

"Yeah," answered John. "I guess you want to be on your way then." John picked up his bucket and started off the path toward his campsite.

"Wait! Where are you going? What's the bucket for?"

John stopped. He turned and looked at her.

“Sorry,” she said. “It’s not really any of my business what you’re doing.”

“So,” said John, “enjoy your hike then.”

“Yeah, thanks—wait,” she took a few steps forward and held out her hand. “Valentina.”

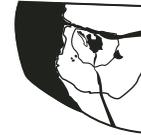
John nodded and set down the bucket. He took her hand in his own, and gave it a quick shake. “John.”

Valentina smiled, her green eyes lighting up. “Nice to meet you John. Until next time then.”

He let go of her hand, and picked up the bucket of water. “Alright, next time.”

John turned and started up the hill toward his camp. A few moments later, as he was halfway up the hill, he heard Valentina start back up the trail, heading deeper into the Forest Sector. By the time he reached the top of the rise, and could look out through the edge of the trees and across the meadow, her footsteps had receded deep into the trees.

He set the water bucket down at the edge of the meadow, near the garden plot. He stood there for a time, not really thinking, not imagining. He stared out across the high grasses, moving in the breeze. Insects darted here and there in the sunlight, and a red bird called out a dolorous song.



Tuesday morning, John woke up with the sun. He carefully tended to his garden plot, letting water flow through the irrigation system until the reservoir was nearly dry. He refilled the tank and prepared himself a simple breakfast of vacu-sealed soylinks over a small cookfire. He rinsed himself off in the creek, got dressed, stashed his belongings in his tent, doused the fire and set off down the trail.

He walked towards the edge of the Forest Sector. As he went, he watched the light filtering through the leafy canopy, catching the dust and pollen hanging in the air. He stepped lightly over the hard packed dirt, and when he stepped out from under the tree canopy to make his way through the tall grass and ferns that grew between the trees and the perimeter fence, he made an effort not to break a single stalk.

He found the hole in the fence easily, and slipped through.

He walked the few hundred yards to the street corner where the fallen bus-stop sign lay rusting on the broken sidewalk. He watched the sun creeping up over the horizon, rising over the distant pinnacles of skyscrapers and high-rise apartment buildings, red and bloodshot by the haze of

exhaust.

The 639-0 arrived shortly, pulling up and stopping just long enough for John to step aboard. John scanned his pass and the bus doors slammed shut behind him. As the bus pulled away, John made his way down the center aisle. There was no one else aboard, yet, and John sat down in a forward facing window seat near the center of the vehicle.

The bus made its way towards downtown, stopping infrequently to pick up additional passengers: an old man with a creaking wheeled basket full of scraps of wire and other metals; a woman in a brilliant pink fur coat that brushed against her ankles. The woman sat down in a center-facing side-seat, draped one leg over the other, and fixed her gaze straight ahead, her eyes glazed over by the flickering of Optic-Lens Viewers as her thumb flitted over the pocketcom holo-surface she held in her palm.

John turned his gaze back out the window, and watching the remainder of the drive into the city. He disembarked at the West-Northwest Bus Transfer Mall 29-8, where he used his iCard to purchase a small bag of Froot dehydrated fruit chews, and boarded ExoTrans route 738.

He took the 738 through the outlying fringes of the city, winding through residential neighborhoods of large, glass-walled homes stacked one atop another, and sectors of sprawling, disorganized apartment complexes built of grey concrete and cracking plaster. The residential sectors eventually gave way to mixed commercial, and then to the heart of the city and the canopy of glass and steel of the office-filled skyscrapers.

John stepped off the bus at his stop, and walked the remaining distance to the office building that housed his grey cubicle and stacks of papers. He made his way through the lobby, his footsteps padding softly against the grey sound-muffling industrial carpet. He took the elevator up to the tenth floor, and wound his way through the maze of

cubicles to his workstation. John logged in to his computer, and sat down to work.

He spent the next couple hours scanning documents, digitally archiving them, and placing the scanned documents into a second file for later retrieval by his unseen coworker. He performed his task almost entirely automatically, one step at a time. As he scanned, filed and stacked, his mind was focused elsewhere.

John imagined separating from his body, peeling out of it like a dividing cell. His consciousness drifted upwards, his physical body remaining below as he floated toward the ceiling. He watched for a few moments as his body performed its rote actions: scan, file, stack. He floated up and out of the office building, passing through the upper six floors and out through the ceiling and roof.

He flew back to the Forest-Sector, passing quickly over buildings, roads, through billowing plumes of exhaust smoke and pocketcom data-clouds. In an instant his consciousness was back in the forest, while his body remained behind. In his floating, disembodied state he watched the young plants of his garden as they continued their growth, reaching roots ever deeper into the soil bed, and lifting their stalks toward the sun. He watched as their leaves soaked up the sunlight, their pores opening and closing, breathing. He tasted the dirt and water as they drank, and he felt the satisfying heat of light on bare leaf.

Then, abruptly, he snapped back: his consciousness whipped across the city, through the office building and into his body. John jolted in his seat, squeezed his eyes closed and grabbed his head with his hands. He stood up from the computer and walked back through the maze of cubicles to the elevator. He rode the elevator down the ten floors, and stepped out as the doors opened. He ran across the huge carpeted space of the building lobby, dashing past the marble columns and potted air-filtering plants.

The glass doors slid open and John stepped out of the climate controlled building into the warmth of the early evening in the city. He stood for a moment before stepping into the flow of pedestrians: a steady stream of foot traffic headed in all directions.

“John!” A voice called out, and John paused. People continued to move around him, like water around a stone in a stream.

“John!”

John turned around, scanning the moving stream of people. He saw a person moving toward him, and locked eyes with Valentina.

She stepped out of the river of people, and stood in front of him. The pedestrian traffic continued its flow, John and the young woman now forming a single obstruction.

“Hi!” She smiled at him.

“Hi. What are you doing here?”

“I just saw you and thought I’d say hello.”

“Yeah, but—what are you doing downtown?”

Valentina shrugged. “What’s anyone doing downtown? What are you doing here?”

“I work here,” answered John. “A couple times a week.”

“Yeah, I know—hey, do you want to go get a drink or something?”

John furrowed his brow. “I—I can’t really—”

“On me?”

“That’s nice but people like us—like me—we don’t get to do things like that.”

Valentina smiled. “Sure we do, sometimes, if the circumstances are right. Come on. Your errands can wait.”

She turned and started down the street, deeper into downtown. John watched her for several paces and then

started after her, walking quickly to catch up. The streets were clogged with traffic: low-slung black passenger vehicles with corporate ID tags idling alongside rusting pre-conversion bio-fuel pickups spewing greasy smoke.

Valentina crossed the street, dodging through the slow-moving traffic with hardly a glance. John hurried after her, waving apologetically as he stumbled in front of irritable drivers. She led him through several blocks of the glass-walled downtown streets, stopping at a tapered sky-scraping tower with a glass and Plasti-Stone Marbled facade. As Valentina approached, with John tailing behind, an elderly man in a gleaming silver-grey suit and white gloves opened the immense glass door, holding it as they entered.

Valentina led the way across a deep lobby, the sound of their footsteps on the Plasti-Stone Travartex floor swallowed up suddenly without the hint of an echo. The space stretched hundreds of meters in each direction, and was, aside from John and Valentina, completely empty of people or ornamentation.

In the distance, John could hear the sound of moving, flowing water: fountains hidden somewhere in the deep wings of the lobby space, out of sight from their current path. The ceiling was domed and a vast ultra-high-def image of a deep, violently blue sky complete with billowing white clouds and a blazing sun drifted across the curved surface, flooding the lobby with an approximation of daylight. The Travartex floor was a pattern of swirling color: reds, yellows and blues bleeding and churning together in an animated interchange.

Valentina and John approached the center of the room, where a large glass elevator shaft shot up and through the simulated skyscape. A young man, also in a shimmering silver-grey suit, sat at a large white Plasti-Stone Ivorex desk, in front of the elevator shaft. He glanced up from his com-tab for a moment as Valentina approached, but paid

no mind as they walked past the desk and stepped into a waiting passenger elevator car.

The glass elevator doors glided closed as they stepped inside, and Valentina made a quick selection on the ho-lo-screen wall panel beside the door. She stepped back as the car rose slowly through the glass shaft. As they rose through the ceiling skyscape the elevator was flooded with a bright white light, opaque outside the elevator doors. John had a faint sense of acceleration, and suddenly the elevator stopped, the doors transitioned back to transparent and slid open.

Valentina, followed by John, stepped out of the elevator into a dimly lit bar room with a low copper-tile ceiling. The walls were clad with a dark, deep brown wood wainscoting on their lower third, and a series of rich, violet fabrics and dark wood paneling above. At the rear of the room was an ornately paneled wood bar.

They each took a seat at the bar, sliding up onto a pair of leather upholstered bar stools. The other patrons, of which there were only a few, paid them no mind, sinking into the shadows of their plush booths.

The bartender, wearing a silver-grey vest over a crisp white shirt and tie, nodded curtly at the two as they sat down.

“Highland Park 18, please,” said Valentina, holding up two fingers.

The bartender nodded. He retrieved two tulip shaped glasses and an amber-hued bottle from a shelf behind the bar and poured two generous portions. He placed a small glass pitcher of water on the bar atop a small wooden coaster, along with the two glasses of scotch.

Valentina lifted her glass and held it up to John. “Cheers,”

John took his glass, lifted it and clinked its edge against Valentina’s. She kept her eyes fixed to his as they drank.

The alcohol caught in John’s throat, and he coughed as he set the glass down. He picked a small cloth napkin up from a stack on the bar top and dabbed at the corners of his eyes.

“Excuse me,” he said.

“You’re excused.” Valentina swirled the scotch in her glass. She took another sip. “Good, right? It smells, they say, like honey.”

“Who would know?” John held his glass up to his nose. He took another sip, and this time he was prepared for the burn of the alcohol. “That’s good though, tastes a little like a campfire.”

“Now *that’s* something that would be lost on most people,” Valentina said, with a smile. “So, what are you doing out there, anyway?”

“In the forest sector?”

“Yeah.”

“I stay out there most of the time,” John said, his gaze fixed on the bar top.

“What do you mean you stay out there? Like, you live there?”

“Yeah, in a sense.” John turned to face her and set down his glass. “I have a place in the city, too, and the job here, but—I’ve been staying out there most of the time. Like you said before: it’s quiet.”

“Oh.”

“I don’t know. Like you said, it’s easier to think out there. There’s less noise. It’s like there’s less noise in the air, not just audio noise.” He paused. “Like, electric noise, mental noise.”

She nodded, looking at him.

“Awhile back I just—I was at work, feeling sort of listless

and my mind was wandering. I had gone out to the edge of the forest sector a couple days before, and looked out at the forest and the air, everything was—it was just different. So, I was at work and I started thinking about my grandfather. He used to tell these stories about going with his father to some lakeshore, and sleeping outside in a tent and catching fish. It seems almost impossible now.”

“But that’s what you’re doing, right? I mean, not catching fish.”

“Yeah. I found a little place way out towards the edge districts of the city that has all this old stuff. I was able to get a tent and some other things I need.”

“Emeril’s.”

John looked at her. “You know it?”

She nodded. She spoke with hesitation. “It belonged to my dad, and his dad, and his dad: Emeril.”

“The old man, that’s your dad?”

Valentina shook her head. “No, no. My dad passed a few years ago.” She gazed into her glass, and raised it to her lips.

“Oh. Sorry.”

“It’s ok, it was a long time coming. Philip is just a—” She paused. “A friend. He helps look after the shop for me.”

“It’s your shop.”

“Yeah, basically.” She looked up at him.

John took a swallow from his glass. “So, it’s your shop. You knew I came in there, and you knew I was camping out in the forest sector. You followed me out there?”

“Yeah, basically.”

“What? Why? You pretended you were surprised to see me. Just a minute ago you asked what I was doing out there.”

“Sorry?” She smiled a small, sheepish smile.

“Sorry?”

“Yes, I’m sorry. Look: I know it seems weird. I didn’t want it to seem weird, but of course it is.” She shook her head slightly. “I don’t know, maybe it’ll make sense at some point. Philip told me about you after you came in and I was curious. We don’t get a lot of customers out there.”

“Right.”

“Okay?”

John looked at her. “Yeah, sure.”

The two sat for a few moments. John scanned the shelves behind the bar, reading the heavy-set script of bottle labels arranged, it seemed, by style and age. The bartender stood at the far end of the bar polishing glasses. He rubbed a large, round glass with a dry white cloth for several minutes, held it up to the light by its thin stem, squinted, and resumed rubbing the surface.

There was the low murmur of other patrons in conversation, their voices and bodies deeply padded. There was low, faintly audible music wafting out of unseen speakers; John recognized the tune as Brahm’s *Intermezzo in E-flat Minor*, though it wasn’t Gould’s piano. The melody was carried by a deep and resonant stringed instrument, possibly cello though it could have, just as easily, been a digital synthesizer.

“I’ve never been in a place like this before,” John said, quietly. “It’s a little—it’s nice but it seems a little odd.”

“Heavily nostalgic, to be sure,” Valentina answered. “Very heavily, all the dark wood and velvet, but it’s dark and quiet and has one of the best scotch selections in the city. Plus, they know me.” She swallowed the last of her drink. “Otherwise, as you said, people like us, the marginally employed and the owners of ancient-goods stores, don’t get to come to places like this.”

“Does it keep you supported? The shop, I mean.”

“Not really. The property is bought and paid for, of course. It has been for a long time. I let the couple that owns the diner next door use some of the space at the rear of the lot, behind the shop, for some planting and they keep me pretty well in fresh vegetables.” She caught John’s eye. “I know you won’t mention that to anyone.”

John smiled.

“So,” she continued. “Not really, but I manage to scrape by. I do a lot of odd jobs for trade and—I have a lot of friends.”

John nodded, and drank down the last of his scotch. He poured himself a glass of water from the small glass pitcher.

“Do you know this music?” John pointed up at the ceiling.

Valentina, looking at him, shook her head.

“I’m pretty sure it’s Brahms. I don’t know who’s playing it. A few months ago I was listening to a lot of Glenn Gould—a number of Brahms pieces that he played, recorded in, I don’t know, but he died in the 1980s. He was sort of a prodigy, I guess, able to play the piano really young. He was also a little weird, and in a lot of the recordings you can hear him humming or singing along to the piano. A lot of people criticized him for that, but—it adds something, I think. Anyway, this isn’t Gould, but I think it’s a Brahms composition.”

Valentina caught the bartender’s eye, held up two fingers. The bartender nodded, dispensed two fresh pours of scotch, and placed them gently on the bar. He whisked the used glasses away, and replaced the half empty water pitcher.

“How’s the garden?”

John glanced at her. “It seems to be going well. I was a little hesitant about it.”

“I know. Phillip almost had to force those seeds on you.”

“Yeah.” John glanced around. “I’m not sure I really want

to talk about it.”

“Don’t worry,” Valentina squeezed his arm gently. “Trust me. Even if someone here overhears us, no one is going to care, or say anything to anyone.”

The bartender had resumed polishing glasses at the far end of the bar.

“I still don’t really know why I agreed to do it—he just—he made me feel like I was supposed to do it, or like I *should* do it. Like it was too important not to do.” John took a sip from his scotch. “That book, though—it’s a little dense.”

“Yeah, I know. Phillip loves that book. I think it’s helpful to a point, but most of the information isn’t really applicable unless you’re engaged with growing on a larger scale. Plus, the climate and planting charts and timetables are out-dated. It’s a good guide but mostly it comes down to luck—to trial and error.”

“I’ve thinned the seedlings some,” said John, “and they’re definitely growing. Like I said, it still makes me uneasy, but it’s also satisfying in a very sort of root way. I feel like my life is—it’s changed a lot in the past few months. I don’t know quite what sparked it but it’s like a—like I was pulled in a new direction by some foreign force.”

Valentina nodded. “Sometimes that’s just the right thing at the right time.”

She took a large swallow of her scotch. “Can we do this again?”

John swirled his scotch in its glass, watching the amber fluid eddy. “Yeah, we can.” He took a swallow from his glass. “I think you might be the only person I’ve really had a conversation with, aside from Phillip, in a long time.”

“You should do it more often, have conversations. You’re good at it.”

“Oh yeah?” John looked at her, skeptical.

“Well,” she smiled. “You might be a little out of practice, but yeah.”

They each raised their glasses, clinked the rims together and downed the last of their scotch.

“Cheers to good conversation, or, at least, a conversation,” Valentina joked, putting her glass down.

“Cheers,” John said, and nodded.

Valentina waved to the bartender, handing him a transparent acrylic iCard when he approached. He quickly scanned the card, handing it back to her with a small smile and a nod.

“Thank you, Will,” Valentina said as she rose from her stool.

“Anytime,” the bartender said.

John stood and they walked slowly out of the bar, back towards the elevator. They stood, quietly, as they waited for the elevator to arrive and the glass doors to open.

They stepped inside, and started down to the ground floor. The light that flooded the elevator car was a shock after the dark, shadowed barroom.

“Thank you,” John said.

Valentina looked up at him. “Thank you,” she said.

The light dimmed and the elevator doors turned transparent as the car descended into the building lobby. The roof overhead was a deep, dark night sky, washed with the pin-prick star lights of the galaxy. They walked slowly across the cavernous lobby, their footsteps hard on synthetic stone. Valentina waved to the young man at the lobby desk. Overhead, a projection of the Earth’s moon, half illuminated, conducted a slow march across the nightscape.

The sun had set outside. A sleek black sedan was parked in front of the building, and a man in a black suit with a double satin collar opened the back door.

“He’ll take you back to your apartment,” Valentina said.

John looked at her, started to say something but Valentina stopped him.

“I have a lot of friends,” she said.

John nodded, walked over and stepped into the sedan. The man closed the car door behind him.

As the vehicle pulled away from the curb, John watched out the darkened window as Valentina turned and walked back inside the building. The car joined the evening traffic.

“Where would you like to go, sir?” The driver glanced at John in his rear mirror.

“North 212th and Gibson,” John said. “Thank you.”

“No problem. Traffic shouldn’t be too bad, but it’ll likely be forty-five minutes or so.”

“Sounds good.”

“If you like, you’ll find audio controls in the center console, there. Best make yourself comfortable.”

“Thank you,” John said. He leaned back and let the soft seat wrap itself around him. His head felt foggy, and the taste of smoke lingered in his throat.

John closed his eyes, and the car glided over the rough and pitted city streets as if it were floating on air.



#1 and #4 are in Eco-Compartment A. They are seated at a small table.

#1 has tied her hair back, and stray wisps are sticking to the sweat on her forehead. Her eyes look fatigued, with deep purplish circles below her lids. She leans forward onto the table, her elbows taking the weight of her upper body. Her head is cradled in her hands. She lightly massages her temples.

#4 hasn't shaved, and his thin beard has filled out. His hair and beard are greasy, unwashed. His eyes, too, appear sunken and tired. One arm is stretched out across the table and he leans against his right elbow, his chin in his hand. He absently tugs on his beard with his fingers. His jaw and lips move slightly, as if he were chewing on something.

#2 is in his sleeping pod. He's lying in bed, the blankets pulled tight around him. He is shivering violently, his eyes closed. His face is wan and sallow, a yellowish grey hue. His hair has grown long and lanky, and is wet with sweat. He convulses, and coughs.

#1 and #4 are talking. They don't look at each other, but

their eyes focus instead on some interior space. The light is bright and white.

They talk, and one or the other occasionally nods or shakes his or her head.

Behind them, the racks of Eco-Compartment A's hydroponic system are visible. Grey water from the base's system is run through a primary filter, an algae bed, and then through the root channels of the growing plants. The plants are growing vigorously, the rich green of their foliage in marked contrast to the bright white of the rooms and the monochrome red soil of the exterior landscape.

#1 stands, says something, and leaves Eco-Compartment A. #4 remains seated.

#1 moves into the supply and pantry pod attached to Eco-Compartment A. She retrieves a clear plastic saline sack, tubing and several small packages from a compartment.

She makes her way through the central server-support pod, through her own sleeping pod and into the pod where #2 is tossing in his sleep. She hangs the saline bag by a hook and rivet on the wall above the bed. She opens one package and unfolds a large wet cloth. She wipes down #2's forehead and face, folds the towel, and lays it across his forehead. She opens the plastic wrapping surrounding the tubing, and attaches one end to the saline pouch. She partially unwraps another package, attaches the other end of the tube to the IV needle in the package. She uses the flow pump to fill the line and needle with saline, forcing out the air.

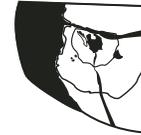
She unwraps a small alcohol wipe, and pulls #2's arm out from beneath the blankets. He stirs a little in his sleep, but not much. She wipes the crook of his elbow with the alcohol, and gently eases the needle into the vein. She tapes it in place, and sets the bag to release a slow, but steady, drip into #2's system. She sits there, on the edge of his bed, and stares at the empty bunk across the room.

#4 stands up from the table in Eco-Compartment A. He walks towards the rear of the room and the racks of vegetation. He stops at the racks, and leans forward into the greens. He closes his eyes, and inhales. He stands upright, runs his hands through the leaves and plucks a thick heavy kale leaf off of its stalk. He folds it, opens his mouth, and takes it in one bite. He chews, his eyes close.

Outside, Alpha Rover is engaged in routine maintenance of the exterior of the compartments and supply docks.

Beta Rover is far from the settlement, rolling steadily on autopilot across the desert, initiating periodic life-sign scans. Since the wind storm, it's been tracing a grid, recalibrating itself to the new topography formed by the sweeping sands, and slowly, methodically, making it's way back towards the settlement.

#4 walks towards the entryway to Eco-Compartment A. He stands before the small, thickly paned window built into the side of the compartment. The clear plastic is tinted with semi-transparent lead-shielding, cutting down on radiation exposure. #4 stands, looking out the window. He watches the rover move across the crater bed. The sky is a hazy reddish grey.



John returned to the Forest Sector as soon as he could, taking with him fresh supplies from town. Over the following weeks, his trips into the city became increasingly infrequent and brief: matters of utility and function rather than desire.

He spent his days tending his garden and preparing the next plot of soil. He watered his plants, and watched as the tomato and bush beans began to blossom. He spent long hours in the early afternoon seated at the edge of his garden plot, breathing in the heavy aroma of damp soil and sun warmed tomato leaves. He watched as the plants drank and absorbed the sunlight, and he could feel the green breath entering and exiting their fibrous flesh.

He constructed simple support cages for the tomato vines and bush beans to lean against, to help support their weight as they reached upward for the light. He carefully tended the kale and radish, as their leaves thickened and their roots grew heavy and ample.

The corn rows were beginning to tower over the meadow grasses, and ears were beginning to take shape in the crook

of the leaves and stalk, long white silk gleaming in the sun.

Honeybees and pollinating flies visited the garden plot, paying call to the tomato and bean blossoms, sipping from beads of water caught in the folds of the kale leaf.

Early one afternoon, after spending the morning pulling weeds and refilling the water cisterns, John sat down, naked, at the edge of the meadow beside the garden plot. He sat cross-legged, his back rigid and upright. He stretched his arms out in front of him and placed his palms on his knees. With his eyes closed, he inhaled.

He breathed in the smell of green and damp soil. He could feel the sun on his face, warming his body. He breathed deep.

He allowed himself to fall inward, his consciousness forming an interiority and an exteriority simultaneously.

The blood coursed through his body, grabbing molecules of oxygen from the tiny alveoli of his lungs. His skin reacted to the sun, converting its radiation into vitamin and pigment. He felt the warmth of the sun on his flesh, and could see, in his mind's eye, the path of the sunlight and radiation as it streamed through the atmosphere, refracted and reflected, careening off of water vapor in the air, off of leaf and skin: absorption, reflection, refraction.

The plants stretched upward, grass and tree and garden alike. The air moved around him, eddying and churning as it flowed around leaf and stem, body.

He went deeper.

He felt the edge of his body abutting the edge of not-his-body. His skin cells pushed against and stretched over the mineral molecules of the soil, the cells of the insect walking over his ankle, the single-celled organisms growing and dividing at the soil's surface. His cells vibrated against the molecules of oxygen, carbon-dioxide, nitrogen, argon and water vapor. Within the cells of his skin surface, he felt

the hydrogen and oxygen atoms of liquid water vibrating against carbon, hydrogen and oxygen atoms of carbohydrate molecules. The hydrogen, oxygen, carbon, nitrogen and sulfur of the keratin proteins stretched and pulled as his body made microscopic adjustments in position. All of this was pushing against the outer lipid membrane of hydrogen, carbon, oxygen, phosphorus and nitrogen atoms.

Deep within each of his cells, John could feel, and see, the chains of nucleic acid—hydrogen, carbon, oxygen, nitrogen and phosphorus atoms—his DNA—cytosine, guanine, thymine and adenine—held together by the sugar deoxyribose, that coded his existence.

The edges faded away. Oxygen, carbon, hydrogen, nitrogen, phosphorus—his body was nearly undifferentiated from the carbon laced ground beneath him, or the nitrogen and oxygen heavy air above and around. Molecules careened off of molecules, atoms careened off of atoms, breaking apart and re-adhering. He felt his consciousness—a set of electrical impulses carried through his body and mind by ionic differentials in sodium, potassium, chloride and calcium molecular concentrations—spreading out, moving over new molecular combinations and collisions.

His mind spread out in all directions, articulated in the atomic data underlying every molecule in the soil, air, plants, animals. Everything was the same structure, repeated at different scales, in slightly different arrangements. His consciousness spread fractally, latching on to the information encoded in every cell, in every molecule, in every atom. His body dissolved.

He was limitless.

His consciousness moved, atom by atom, like light. He moved upward out of the atmosphere, downward through the earth's core. He moved into inner space, deep space, a sphere of consciousness trickling through, and carried by, interstellar dust and trace gases in the vacuum of the solar

system. He latched onto magnetic fields, carried around and through the moon's argon, helium and potassium atoms. He was cut loose, untethered, unembodied.

He could see and feel everything: every atom, molecule, cell and structure on earth and extending out into space. He could read the data, streams of encoded information, composing Everything living and non-living within his scope. He was everywhere at once, and feeling everything at once: the root drives of the insect to feed and procreate, the plant striving for the sun, the fear and sadness of earth's human population, the electrical impulses flickering through satellites and space stations in orbit, the loneliness and wonder of every life.

John gasped.

His body shook: a spasm grasped every muscle as his fibers locked. His head flew back, his eyes opened.

Like a stretched rubber band snapping back into place, his consciousness retracted. A wave of force slammed into his body and mind.

John jolted upright, and fell.



John opened his eyes. Everything was blurry, and dark. He closed his eyes, opened them again.

Slowly things came into focus. It was night. There was a small fire burning in the fire pit.

John tried to sit up, a bolt of pain shot through his head. He closed his eyes, and lay down again. He wiped a thread of saliva from his chin.

He was lying on a blanket. There was a pillow under his head and another blanket on top of him. He was close enough to the fire to feel some warmth, but far enough that it was dark when he shut his eyes.

He heard some shuffling. Small footsteps.

“Here—you should drink this.”

John looked up. Valentina was crouched beside him, holding a mug.

“It's water. Please,” she said.

John lifted himself up on an elbow, his head pulsing with a sharp daggering pain. He took the mug, and drank.

“You were collapsed at the edge of the meadow. You’re a lot heavier than you look, you know.”

Her voice retreated.



John opened his eyes again. It was still dark. The small fire was nearly out, just small cat’s tongue flames and glowing embers.

He sat up.

Valentina was lying beside him on the ground under a heavy wool blanket.

He rubbed his eyes, his face. He stared at the small fire, and moved to place a log from the short stack of firewood into the embers.

Valentina stirred as he shifted his weight to prod at the dying fire with the log. He placed the wood in the fire, and blew into the coals until flames licked the dry wood.

He glanced down at Valentina, and her eyes were open, watching him.

“Sorry, I didn’t mean to wake you,” John said.

She smiled. “It’s ok.”

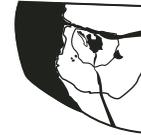
He stared back at the fire, watching the wood carbonize, turn to ash.

“You should sleep, John.”

“I feel like I’ve been away for weeks.”

“I know. We can talk about it in the morning.”

John lay down and pulled the wool blanket over himself. His body remained taut as Valentina nestled against him. He lay with his eyes open, staring upward at the treetops, dark against the night sky, listening to the snapping of the fire.



When John woke again it was morning.

Sunlight was peeking over the eastern treetops and a dewy mist hung over the meadow and garden. Valentina was awake and stirring the fire.

As John sat up, Valentina turned and retrieved a mug from the improvised camp kitchen shelf. She poured something warm and fragrant from the kettle heating on the stove and handed it over to John.

“Tea,” she said.

“Thank you.” John took the mug in both hands, and blew across the surface of the steaming tea. He took a tentative sip.

A warmth spread through his mouth, his face, down his throat and into his body, tingling outward through his arms and legs.

Valentina sat down beside him on the blanket. “You were passed out at the edge of the meadow. I had to carry you over to the fire.” She looked at him. “Well, drag, really.”

“What happened?”

“I don’t know. I was hoping you could tell me what happened. I didn’t see you pass out, just found you there.”

“I don’t really remember. I was meditating, I think. I could feel everything.”

Valentina looked at him, and drank her tea.

“Everything,” John said. “Light, sound. I could feel the atoms of my body moving independently.” He paused. “Then, I don’t know, a pain, and then waking up.”

“Has this ever happened before?”

“No, not that I know of.” John drank from his mug.

They watched the fire burn: a slow crackling of flame on wood. John stiffened as Valentina leaned her body weight into him.

“I think we should go into the city,” she said, her eyes locked on the fire.

John turned and looked at her. “Why?”

“You just fainted, John. Because you were meditating.”

“I’m ok now. I don’t need to see a doctor.”

“I wasn’t thinking about a doctor.” Valentina looked at him, their eyes locked. “There is someone I think you should talk to though. A friend.”

“What sort of friend?”

“Philip. From the store?”

John turned his gaze back to the fire.

“He can help,” Valentina said. “He knows what you’re dealing with. He’ll understand what’s happening to you.”

“I wasn’t aware that anything was happening to me.”

“Of course something’s happening to you. You passed out John, from meditating! Meditation is supposed to be relaxing.”

“I’m fine, really. Nothing happened.”

“Look, I know something is happening because Philip knows something is happening. Please, trust me on this.”

John turned and looked at her. His blood cells were passively absorbing the heat of the fire as they moved through capillaries at the surface of his skin, carrying that warmth deep into his body. The caffeine of the tea was being pulled out of his digestive tract, carried by blood cells throughout the body and interacting with the chemical synapses of his nervous system. Subconsciously John sensed the movement of small chickadees as they flew from branch to low hanging branch in the trees that edged the meadow, and could hear the tomatoes ripening.

“Fine,” said John. “I’ll go.”

“Good. Philip will be glad to see you.”

They stood. Valentina folded up the blankets and stowed them in the plastic storage trunk while John spread the last of the wood and embers of the fire. He placed a heavy metal screen over the fire pit.

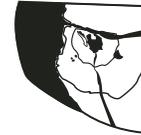
They made their way out of the Forest Sector by way of the winding creek-side path, and came out of the trees as the sun was inching towards midday. As they made their way down the embankment and through the hole in the fence, a man stepped out of a gleaming black sedan parked at the corner. The car was out of place here, far from the city center, and stood out among the dilapidated houses and yards pocked with dry grass and small burrow holes. There was a slight breeze, and laundry drying in the nearby yards swayed on the line.

The man stepped to the rear door, opened it and waited for Valentina and John to step inside. As they did so, he closed the door behind them. John recognized the car, and the driver, as the same who drove him home from the bar some weeks prior.

The interior of the vehicle was dark. The tinted windows

let in little light, and the interior overhead light was dim. There was a cool blue glow emanating from beneath the seats and the side console. The driver climbed into his seat without a word and started the vehicle. Valentina pushed some buttons on the console, and a warm air started coursing through the cab of the vehicle. John felt himself growing drowsy as he watched the outskirts of the city skimming past the darkened windows.

Valentina, sitting beside him, reclined against his body. He closed his eyes.



They were gliding into the city center, the low-slung homes and weed-strewn lots giving way to towering walls of glass and metal, the sky above latticed with arching bridges. Valentina retrieved a cold glass bottle of water from a compartment in the sidewall of the vehicle. The bottle let out a hiss as she unscrewed the cap.

She offered John the bottle and he drank deeply, feeling the cold water flood his body.

“I can still feel—” John paused. “Too much.”

“I know,” Valentina said.

“It’s like everything is vibrating, but so fast you can’t really see it, just feel it. Everything is a little sharp. I have some awareness of every part of my body, every cell, like each one is shouting in some strange language. At this point, though, it’s just my body—before it was everywhere.”

Valentina nodded.

The car sped through traffic, swinging smoothly around slower vehicles like a cloud. John didn’t recognize where they were, exactly, but could tell they were heading towards

the dense core of the city center. As they drove, they seemed to be getting closer to where John worked.

“Where are we going?” he asked.

“To see Philip. He keeps a place downtown—remember where we got that drink?”

“Yeah, of course. We’re close then.”

“We are.”

John drank his water and sat back in the soft cushioned seat. Soon, the car began slowing, moving out of the commuting lanes into the local traffic. Through the tinted windows John could see people shouting out of their windows, honking horns, sirens flashing, but inside the vehicle it was silent.

They pulled up to the curb. The driver stepped out of the vehicle and stepped around to the passenger side. He opened the door, and Valentina stepped out, followed by John. The driver shut the door behind them and stepped back into the vehicle, gliding back into traffic.

John recognized the building: the glass and Plasti-stone Marblax façade. They stepped through the heavy doors and Valentina led them across the lobby. She waved briefly at the young man sitting at the lobby desk, and stepped into a waiting elevator. Valentina made a selection on the holoscreen beside the glass doors, and the elevator slid into motion, rising steadily, filled with bright white light.

After a moment the elevator slowed, and the light faded. The glass doors slid open, and John and Valentina stepped out into a small foyer. Thick overlapping woven rugs in rich red and brown hues covered the floor, extending down a long hall. The walls were a pale, honey colored wood, and warm-toned sconces bathed the room in light. The ceiling was draped in thin, wafting white fabric, and a scant haze of perfumed smoke hung in the air. Valentina started down the hall, and John followed behind. A quiet, slow music

emanated from somewhere: a Bartok concerto.

At the end of the hallway, Valentina stopped at a white door. She keyed in a sequence on the holopad and the door slid open. She stepped inside, and John followed her into a brightly lit room. Thick carpets covered the floors here as well, though in lighter shades of cream and honey. The walls were of the same pale wood, and thin white fabric hung in drapes down the wall and sashes across the ceiling.

The room was expansive, perhaps once a grand ballroom or conference chamber. In the middle of the room a small group of people sat in a scattered circle, grouped in twos or threes around the perimeter. Seated on small rounded pillows, they faced the center of the circle, and as John approached he could see that their eyes were closed. If they hadn’t been seated upright, John would have guessed them all asleep.

“Come, sit down.” It was a familiar voice. John looked to a small man seated on a low raised platform at the northernmost point of the circle. “Please,” the man said.

The man had his eyes closed.

John recognized him as the man from the antique store, out of context here in this room draped with diaphanous fabric and incense. The man—Philip, as Valentina referred to him—was seated cross-legged on a cushion, dressed as he commonly was at the shop: simple denim pants, suspenders and a plaid flannel shirt.

Valentina took John’s hand, and nodded to him. She led them across the room to the edge of the circle, where they could sit facing Philip. Valentina sat on a small cushion, and gestured to John at the one beside her.

John sat and awkwardly crossed his legs on the small cushion. He looked around at the faces of the other men and women in the room. There were about twelve others, old and young and middle aged, all seated with their eyes closed,

cross-legged, with their hands resting on their knees. They were all breathing, John noticed, in time: synchronized.

John glanced at Valentina. She had closed her eyes and sat in the same position, her breath falling in time with the others.

“Good to see you’re well, John,” said Philip.

John looked at the small, weathered old man. Phillip’s eyes were still closed, his eyelids like soft and heavy curtains. His moustache stirred slightly with his breath.

“We’ve been waiting for you to join us.” As he spoke, Philip’s mouth barely seemed to move. “Inevitable, but also impossible. You’ve been waiting, too.”

“Who—”

“Don’t ask questions you already know the answer to. My name is Philip; I helped you step outside. The others are friends. You’ll know them too, soon.”

The room breathed together, inhaled, and exhaled.

“You’ve been imagining, I hear. I knew you would find it suits you: you’re quite adept. You’ve travelled far even without guidance, or discipline. There are so many moving parts, as you know. But, you maybe are not fully aware.”

“Aware of what?” asked John.

“Of the distances you’ve travelled, of the shaping.”

John was silent.

Philip opened his eyes, uncrossed his legs, and stood. He wasn’t wearing shoes. He crossed the circle to John and placed a hand on his shoulder. He looked down and gave a subtle, almost nonexistent, nod. John stood. The rest of the people in the room remained motionless aside from their breathing, synchronized. A long inhale, and long exhale.

Philip led John across the room to the far side. They stopped at the far wall and Philip lifted aside a bolt of cloth,

revealing a holopad and the outline of a door. Philip swiped the holopad and the door slid open. John followed him into the next room.

The small chamber was outfitted much the same as the other rooms, with thick overlapping rugs and flowing bolts of fabric. Here, though, were only two cushions in the center of the room, about three feet apart.

“Sit, please.” Philip gestured to the cushions.

John sat, and Philip sat down across from him.

“What am I doing here?” asked John.

“Indeed,” said Philip. “That is the question.” He paused, ran his thumb and index finger over his thick grey moustache.

Philip breathed heavily. “You came into the shop. We spoke. I sensed something then: a desire. You were unhappy. When I saw you again, you were changed, and I knew there was something in you.”

The old man coughed.

“How do we get from one place to another?” Philip asked. He looked at John, waiting.

“Depends,” said John, warily. “We walk, I guess. Or drive.”

“It does depend. It depends on where we want to go,” said Philip. “You’re right. We walk. We drive. We fly in a craft. We rocket through space. Sometimes, we dig.”

John nodded.

“We are all fragmented, all of us. We begin as a single person in a single body, and over time we shatter: a piece breaks off here, there. We become many people inside a single body. Out there, camping, you’ve been able to know yourself again: something you had lost. You’re able to feel yourself. You’ve become aware of your mind, your body. You’ve started to become whole again.”

“Yes,” said John.

“And with that awareness of self—an awareness cultivated just as you cultivate your garden—you’ve begun to become aware of the world outside of the self: of plants, insects, the cycles that run through and around us all.”

John nodded.

“You’ve been able to reach out, outside of the self, and touch the world.”

“I feel my own cells as if each were a separate mind,” said John. “I can feel the atoms of the dirt, of the air, moving.”

“You’re particularly sensitive, it seems,” said Philip. “More so than I anticipated. You have an innate awareness; I could feel you, yesterday, reaching out: expanding. Your consciousness expanded and touched my own, touched everyone, most likely. When you rushed back into yourself, I felt that too. You have ambition, but no control; it must have caused some psychic pain, that return. I sent Valentina to retrieve you.”

“How did you know? How are you watching me?”

“John, you told me; you know what I mean. You can feel it. You can feel everything: the birds, the insects, the dirt, the air, the people. You can feel other minds, other bodies. Imagining is not simply make-believe, John; these things you sense are real. I can feel you reaching out; I listen. There are invisible threads running between us, between everything. When we allow ourselves to imagine, to tune in, to stop and let the mind and body relax and expand outwards, we can sense it. We can see these invisible threads; we can move them. We merge together across the web. Without cultivating imagination there remains space between us; we remain broken and fragmented. There are means by which we can erase that space: we can imagine ourselves one with the universe, with space and with time. We can allow ourselves to feel what others feel, see what others see, move

with others.”

John remained silent. He breathed slowly. His brow furrowed.

“At least, that’s what we’re working towards,” said Philip. “All of us, here. We’re working with our imagination. We’re working towards unification, the building of one mind. Not one of us has achieved what you’ve been able to. I’ve been imagining for forty years, at least, and I, even—” Philip shook his head slightly, looking down at his lap. “You have something we do not.”

“And what, you want that thing? I don’t understand what’s happening to me; how am I supposed to give you anything?”

“No, no. You misunderstand. I don’t want to take anything from you, quite the contrary. I want to help you. I want to help you master your imagination; to learn it and allow it to take you deeper. And, hopefully, I can learn from you as well. Hopefully we all can.

“Do you remember,” Philip continued, “when you came into the shop: I was there, watching an old film?”

“Yeah, something with some sort of spacecraft spinning around.”

“Right: Kubrick. At the beginning of the film, the story follows a group of apes—proto-humans. There are two groups, and they war over a pool of water: a life source. At a certain point, a strange object appears: a large black object that arrives from nowhere, utterly empty of signifiers. Shortly after coming into contact with this enigmatic object, the proto-human picks up a fallen bone and wields it: a weapon. The film jumps forward into a future of space-travel, and the object appears repeatedly throughout. Some viewers have read the arrival of the object as symbolizing an expansion of consciousness, an expansion of the capabilities of the human mind.

“We’re at the threshold: if we can imagine it, it can be so—a world of expanded minds. We are learning to see the invisible threads: networks of energy truly connect us all—not simply Allynnet and our pocketcom servers, something real. Truly connected in our minds, our souls, unmediated by electronic prosthetics. We are ourselves imagining our expansion. We’re imagining our very humanity, our animal drives. We’re cultivating a cognizance of the world around us and its cycles of growth and death. By revealing our embodied selves, we ourselves are expanding. As a people, a culture, a creature, we are ready to take the next step.”

John nodded. “Every time I start to—to feel myself reaching out—each time I feel like I go a little further, and it’s harder to get back. It can’t be real; it’s an hallucination or something—something brought about by the meditation. It’s painful—I passed out.”

“I know, John.” Philip placed a hand on John’s knee. “It’s difficult to control, and difficult to recover from, but it is real. That’s why I thought it best that we brought you here. It’s safe here, and we can help each other, as I said. Here you’ll have the support—the mental support, the cognitive support—of the rest of the group, and myself.

“There is no easy solution, John. If you want to, you can simply walk away. But I think you’ll find the support helpful, and productive. We all want it: connection! You are the most connected person alive right now. We’ll all appreciate your presence here.”

“I don’t think you understand me: I don’t know that I want to control it—I want to be able to sit and think and not feel like I’m dissolving into the air around me.”

Philip nodded. “That is control, John. Now that you’ve unlocked the potential energies of your mind you can’t simply put them away. This is Pandora, John: it is not a box that can be closed again. The only way to maintain your embodied self is through control: control of your mind, your body.

It takes an energy input to maintain the walls of the self now that you’ve opened that box. We can teach you—let us.”

John turned his eyes away.

“If left unchecked, that energy will disperse,” Philip said. “It will take you with it.”

John gave a small nod.

Philip nodded. “Shall we rejoin the others?”

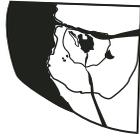
John nodded again.

Philip stood, slowly. He gave John’s shoulder a quick pat, and offered his hand. John took hold and stood.

Philip turned and led John out of the small room into the grand chamber. John sensed an electric charge in the air: the feeling of anticipation. They crossed the room, taking care to step lightly and not disturb the others.

Philip took his place again on the raised platform, and John sat down in the circle beside Valentina. Her eyes were closed, and she breathed deep and steady. Her lips parted, and tiny beads of sweat dotted her nose.

John crossed his legs, placed his hands on his knees, and closed his eyes.



The group was small. Aside from John and Valentina, and Philip, sitting on his raised dais at the top of the circle, there were fourteen others: a trio of three young women with pale skin and hair dyed a pale, nearly silver blue, sat at Philip's left hand. There was a man and a woman in business attire: buttoned grey shirts and pleated calf length trousers; a pair of young men with unshaven faces and long brown hair tied back in leather thongs.

A man with a thick white beard, wearing a long dress-like spatter-dyed shirt sat alone, but nearby to a pair of women with the bearing of military officers. There was a trio of elderly men and women, all with short-cropped silver hair and necklines heavy with beads, and a woman with long waist-length wavy blonde hair.

John's eyes were closed, but even so he could see every one of them clearly, sense them in his mind's eye. The space was quiet. All John could hear, even as he allowed himself to sink deeper, was the breath and heartbeat of those around him and the gentle rustle of swaying fabric. The room somehow negated all street noise, and the sense that they were

in the middle of the city fell away. John felt a great light; whereas in the forest his meditation took on a hue of deep earthly browns, sienna reds and greens of all values, here it was a bright, cool white. Everything was still.

As John fell deeper he became aware of the blood moving through his body and the slow beating of his own heart. He felt his heartbeat quieting, the tempo slowing, until it seemed to beat only once every forty seconds. His breath, too, slowed to a gentle intake and exhaust. He felt his blood moving through his body, the air sinking deep into his lungs and dispersing through his bloodstream. He felt his body processing water, filtering it and building new blood cells to join in the march through his circulatory system. He felt the slow growth of hair follicles on his head, his arms. His skin crawled with the movement of tiny, unseen microorganisms: bacteria and yeasts.

He sensed the movement and the instinctual thought processes of the tiny, microscopic dust mites making their home in the cushion on which he sat.

He felt his body dissolve: the borders of his skin becoming porous, and the molecular interchange between the air molecules of hydrogen, oxygen, nitrogen and carbon dioxide and those of his own flesh. He became an empty body: a body without clearly defined limits; he became blurry, amorphous. The boundary where his body met the world dissolved.

John sensed the bodies of those others in the room dissolving as well—the edges becoming undefined and expanding into the room. He felt his own organ-less body expanding further, occupying the whole of the room along with the bodies of everyone else: everyone occupied the entirety of the space, their bodies blending in a molecular *mélange*.

John felt the other minds, too, intermingling. He sensed the expanding thoughts of Valentina first as their bodies

dissolved into one another, her mind and sensations becoming linked with his own. He felt her wonder at the expansion, her surprise and delight coupled with a slight unease as her body and consciousness met his own. Soon, John found himself linked with all others in the room: every consciousness intertwining until John was unable to distinguish between his own thoughts and the ecstatic joy radiating from Philip's being.

Suddenly, the room itself fell away.

The group mind expanded beyond the confines of Philip's high-rise refuge and reached out over the whole city like a psychic umbrella. John could sense the mind of every living being in the city: the people at work, at home; the animals kept as pets and those that scrounged a life among the overlooked parts of the city; the insects, the pigeons. Every mind blinking like a psychic strobe, somehow aware of the growing group mind and resisting its pull.

They reached upwards, expanding into the upper atmosphere, aware of but unaffected by the coldness of space. The stars spread out above them.

The Earth fell away beneath them, though still those earthbound minds remained linked to the psychic mesh.

Planets spun. The sun discharged gaseous clouds of plasma.

Stars spun around them, pulsing. Threads of consciousness began to reach towards the mesh from distant star-systems: foreign, unfathomable minds.

There was a sharp twinge of fear in the group mind: a twist: the wringing of a wet towel.

John withdrew. He carefully drew the group consciousness about himself, tightening the umbrella, and retreated. He lowered the group mind back into the city, into the room. He felt each mind slowly contracting, pulling away

from the group and reforming itself as an independent consciousness. The members of the group became individuated again, their bodies and minds re-adhering.

First the elderly trio retreated; then the man and woman; the one with long, long blonde hair. Each became again differentiated. The others fell away; Valentina pulled herself out of the group mind, and lastly John felt Philip condense.

John felt his mind and body drawing itself together. He breathed deeply.

A breath in.

A breath out.

A breath in.

A breath out.

He felt his body re-condense.

The boundaries reasserted themselves. He felt his mind retreat into his own consciousness, and felt his breathing and heart rate slowly increase.

He felt himself reform entirely: his mind and body again distinct and differentiated.

He opened his eyes.

Philip remained with his eyes closed. Everyone else in the room was staring at him, their mouths slightly agape. The woman with the long, long blonde hair had tears running down her face.

He looked over at Valentina, next to him. She looked back at him.

"You were luminous," she said.

John walked across the vast gaping lobby of the highrise, almost running. Valentina was behind him, rushing to catch up.

Their footsteps clicked across the Travartex floor, the

sound swallowed by the yawning space.

“John!” Valentina grabbed his arm.

“John, wait a minute! Where are you going?”

He pulled his arm away from her.

“I don’t think this is where I should be!”

“What do you mean? That was amazing!”

“They were terrified! I’m terrified!”

“Look, just—Philip can help you! He knows what he’s doing. You’ve just got to give him a chance.”

“Give him a chance for what? I don’t know who he is, I don’t know what he wants—I’m losing my mind and he wants me to be some fucking guru for a bunch of burnouts!”

“Oh, come on!” Valentina shook her head and scoffed.

“What? None of this—whatever it is—this didn’t start happening to me until I met him—until I went to his shop. Maybe he’s fucking with me. Obviously he is, all of you are! He dosed the marshmallows or something and this is all some fucking nightmare.”

Valentina stood, staring at John, her arms crossed across her chest.

“Maybe he—maybe the seeds he gave me were poisoned, I don’t know! Something though, somehow he must be doing it.”

“No. He didn’t do anything to you, he only recognized something in you.”

“How do you know? How can you possibly know?”

“Because I know him, John. I’ve known him a long time, that’s not his way. He sees something in you; I see something in you. Something great.”

John shook his head.

“I know you don’t believe it but it’s true, it’s there. Those

other people, those other people in the room, they hardly even matter; they’re just people who are looking for something, for some meaning in their lives. They’re just lost people who find Philip to be—I don’t know—comforting, or inspiring.

“But John: it’s you. You’re the thing they’ve been looking for! You just don’t know it yet; they just don’t know it yet. You have something that no one else has, you can do things that no one else can do: you can see the world as it really is, for what it really is!”

“Sure. And what is that? Some great spirit or something? How am I supposed to believe any of this?”

“Not a spirit, John, not some all-powerful God or gods, not some aether that wiggles through everything. Come on, you can see it! I know you can see it!”

“I can’t see anything. Everything falls apart, drifts into pieces, tiny bits of itself. Molecules, atoms, shapes: tiny, infinitely complex shapes.”

“Information, John.”

He looked at her.

“Everything is information. You can see that information! Everything is connected into one giant mess of data that somehow coalesces into the world, the universe, that we know.”

John squeezed his eyes shut, grabbing his forehead with one hand and squeezing his eye sockets.

“This is insane; you’re all insane. Or I’m insane.” he said.

He looked around. The lobby of the building was empty except, way in the distance, the receptionist seated at the large desk near the elevator. Through the glass front doors a hundred yards off John could see swarms of people striding over the sidewalk. No one looked inside. Less than half an hour previous he could feel each and every one of those

minds: feel their consciousness moving through the data stream, each its own signature swarm.

“There’s this idea—I don’t know how much of it Philip told you—there’s this idea that began circulating in the 1980s or 1990s, or maybe earlier, that the world, the universe, isn’t really built up of stuff, like, I don’t know how to say it really—” Valentina looked around them. “Like, this floor is neo-stone, right? Some sort of stone composite made in a lab?”

John nodded.

“And, like, that plant over there near the reception desk is made of, well, of plant fibers and—right?”

John nodded, again.

“Ok, well, it is those things, and it’s also not. It’s those things, but it’s only those things because that’s how we, as humans, understand those things. They’re neo-stone and plant because we recognize them as such. Our eyes can see them and recognize them, we can touch and smell and sense them as ‘neo-stone’ and ‘plant.’ But, there’s a level to them that we, as humans can’t see—a ton of levels—like, that plant has a heat signature, right? That exists in the infrared spectrum, and we can’t see that without a machine or something, but some insects can. So, even beyond that, are other levels, more levels, until maybe there’s a root level that’s just data: information. It’s like the Allynnet or a pocketcom—all this information: videos, personal networks, images, text—encoded as binary code information that just exists in the server banks somewhere waiting to be recalled. Until it’s recalled and reconstituted, it’s just numbers, information!”

“Alright,” said John, tentatively. “Alright, so, everything is numbers? Everything is information and, what? I can see it and no one else can?”

“Yeah, basically. You can see it and no one else can.

There’s more to it, though. There were some thinkers around the turn of the millennium who saw it as something more: with training or recognition one could see it, but beyond that—” She paused. “People wrote about what was then called the internet as this all encompassing thing, but a thing that also had dark pockets: a quote-unquote darknet, like, the internet was the Earth, and the darknet was the underground, or something. There’s a structure there that’s sort of similar, I guess. And with training, one could see the information, yes. Going further, one could *become* information: could experientially enter into that information stream and move through it, at will.”

“I think that’s insane,” said John.

“Yeah, but John: you’re doing it.”

“I’m not. I’m meditating, and, I don’t know—I’m definitely not moving through it at will. I don’t seem to have any will; it’s totally outside of my control.”

“Sure, it’s out of control now, but that’s the point! Philip can help you!”

John shook his head, his eyes closed. “I don’t know, I don’t know.”

The two of them stood silently in the bright white light of the building lobby. They listened to each other breath, and to the subtle creak and rustle of their bodies and clothing. John and Valentina stood a couple of feet apart looking at each other, looking down at the floor, looking up at the ceiling. Neither knew really what to say, or what to do.

John closed his eyes.

Valentina closed her eyes.

A moment passed.

Valentina opened her eyes.

John opened his eyes.

They stood a little bit closer. John had his hands in his pockets.

Valentina uncrossed her arms, stepped forward and embraced John. She rested her face against his chest.

“We can help you,” Valentina whispered.

John pulled his hands out of his pockets, and wrapped his arms around her small body.

“We can help you.”



Alpha and Beta Rover are parked, motionless, at the settlement. There's a light wind, and red dust is swirling over the hard packed ground. The sun is low, and the sky a hazy yellow smeared a grayish blue.

Outside of the pods, nothing is moving, except for the dust.

Inside, #2 is laying in bed, on his back; the micro-fiber insulating blanket is pulled up over his shoulders. His face is sunken. His eyes are closed, and the blanket over his chest rises and falls very slightly, very slowly. There's an IV hanging beside the bed, the tube hanging down and disappearing beneath the blanket. There is an empty stool beside the bed.

The bed across the room from #2, the bed that belongs to #3, is unmade; someone has slept in it, recently.

#1 and #4 are in Eco-Compartment A.

#1 is seated at the small table. The map and several scattered sheets of paper, printed with streams of numbers, are laid out in front of her. There are dark circles under her eyes and her hair is pulled back loosely. Stray strands hang stiffly in front of her face. She is staring down at the map.

Beside the table is a small wheeled cart, on which are several tools related to the assembly and maintenance of the hydroponic system: small hammers, wrenches, plastic tubing and zip ties, small containers of adhesives and water sealants.

#4 is pacing. He is walking in quick strides back and forth across the cramped compartment. His hair is unwashed and sticking out in all directions, and he's tugging lightly on his beard as he paces. Behind him are the racks of hydroponic plants, glinting green with life.

#4 is speaking—shouting, it appears. He gestures wildly, pointing out behind him, towards the rear of the compartment. He continues pacing.

Back and forth.

Back and forth.

He shouts. The light is bright and blinding white—a spectrum designed to encourage plant growth. Everything is thrown into sharp contrast. There are very few shadows.

#4 shouts.

#1 stares down at the map. There is water welling up in her eyes but she is restrained.

#4 shouts, and paces.

#4 shouts, and points.

#1 picks up a thick black marker from the tabletop, and turns over a sheet of paper. She begins writing something in large letters on the blank page.

#4 shouts. He stops pacing, and strides across the room to the table. He looks down at the sheet of paper. He shouts.

#1 keeps writing.

#4 shouts. He points toward the viewpoint: the camera.

#1 sets the pen down.

#4 shouts. He picks up a medium-sized metal wrench.

He turns, facing the viewpoint: the camera.

#4 cocks his arm back, and hurls the wrench at the viewpoint: the camera.

The wrench hits. A web of cracks blasts across the view: the lens.

Through the web of cracks and fractures, the view of Eco-Compartment A is obscured.

#4 stands, unmoving.

#1 jumps from her seat beside the table. She shouts at #4.

#4 stands.

#1 cocks her arm back, her hand balled, and swings a fist at #4's face. Her fist connects with his left cheek. His head is knocked back. He staggers a step or two.

#4 regains his balance. He stands still.

#1 stands still. Her fists balled. Taut.

#4 strides across the room, out of view. He doesn't look at #1, he looks at the camera: the viewpoint.

#1 turns, and picks up the sheets of paper and the black marker.

#4 strides quickly from pod to pod, passing through a pantry pod, the central life-support pod, the wash-closet pod and the fabrication shop.

#4 enters the airlock attached to the fabrication pod. The door slides closed behind him. He steps through the rear-portal entry of his mounted pressure suit.

#1 exits Eco-Compartment A. She steps through the front pantry storage pod and into the next pod, the central life-support station, through the second pantry and into Eco-Compartment B.

Eco-Compartment B is nearly empty; assembly of the second hydroponic system, which will eventually occupy the

bulk of the compartment, has just recently begun. At the far end of the compartment are the beginnings of racks, along with several white plastic crates and a small pile of plastic pipe and tubing, extruded by the nearby composite-printer.

The front of the compartment is cluttered. There are several small rolling tables piled with tools and equipment, and partially rolled plans and schematics.

#1 walks across the room to the closest of these small tables. She pushes aside several wrenches, and tosses some data printouts onto the floor. She puts the pieces of paper she holds down onto the table, leans over, and begins writing with the thick black marker.

She looks up at the viewpoint: the camera.

She wheels the table closer, so that she and the table are almost directly below the fish-eyed lens.

#1 looks up at the camera. She picks the piece of paper off the table, and holds it up to the lens.

“██████████ [#2] SICK & DON’T KNOW HOW 2 HELP”

The name is censored, blacked out by the network, and replaced by the corresponding number.

#4 is in the outer airlock. He wears his bulky pressure suit, and the glass faceplate is opaqued in preparation for the late, low-angle sun. He opens the exterior door, and steps outside into a bright light.

#1 bends down over the table, writing. She stands and holds up another sheet of paper.

“PLEASE SEND HELP MEDICINE OR?”

#1 drops the piece of paper. She turns to the table.

#4 is walking across the hard packed ground. Red dust is swirling around his feet as he walks. The yellow sun glints off of his dark tinted faceplate.

#1 bends at the table and writes. She stands and holds up

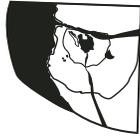
another sheet.

“██████████ [#4] GOING 2 LOOK 4 ██████████ [#3]—MUST B DEAD—DON’T KNOW.”

She drops the piece of paper. It falls to the floor, arcing and sliding across the room.

#1 stands in front of the camera. She looks up at it. Her mouth moves. There’s no sound, but she looks like she’s saying, “please, please, please.”

#4 climbs into the seat atop Beta Rover. He flips a switch and makes some adjustments to the controls. He backs up, slowly rolling over the dust. He makes another small adjustment, and he and the rover move forward, slowly at first, picking up speed as they pull away from the encampment. The lights on the rover turn on. It speeds into the red desert.



John heard the soft sound of bare feet on neo-stone. He looked up, and stepped away from Valentina.

Philip was striding in cool and easy steps across the Travartex floor.

John stuffed his hands into his pockets and waited for Philip's approach.

"John," said Philip. "Everybody is waiting for you upstairs."

"Right."

"That was a great thing you showed them—showed us. They'd like to speak with you. Everyone has a lot of questions."

"So do I."

"Yes? So let's head back up then and get them all answered."

"What do you want from me? I didn't want any of this. All I wanted was to be left alone."

"We don't always get what we want, John; we don't

always know what we want. You have a great potential that you're only just beginning to utilize. We all simply want to learn from you. I think Valentina has already told you about the theories, correct? That's all we've had up until now: theories. Now, suddenly, it's more. You've given us a glimpse of proof, a glimpse of the truth.

"I remember my first breakthrough meditation, John." Philip turned his gaze upwards for a moment, watching the light shift across the ceiling. "I was young, then, probably about as young as you are now." He looked back at John, eye to eye. "I was afraid. Lonely. I remember: I was sitting with a group of friends out on the bluffs above the Pacific Ocean—there were these great expanses of beach and rock, low grasses, flowers. I was there, and could hear the waves crashing below and smell the salt. My eyes were closed, but all of a sudden the darkness gave way to a sudden blinding light. I could feel myself lifting up out of my body, like I had been plucked from the Earth by some great seabird. I realized my body was a weight to be shed. I drifted out over the water. The sound of the waves was first everywhere, all around me, and then it receded.

"I was totally alone, completely alone—it was terrifying, John, but it was also freeing. My spirit was free, and I knew that there was something more to the world than just bodies of meat and blood. There was a spirit, a mind, a consciousness that somehow existed separate and apart from the body."

John nodded. "I get it: soul and spirit and—whatever. I still don't see what you want from me. I am not a teacher. I don't know what's happening to me or how to control it. I sit down, I focus, and my senses start to change. It didn't happen until I started spending time out in the forest sector, so—maybe there's something about that place or something in my diet—something in those seeds you gave me or—I just don't know. It just happens. I feel it happening and getting

stronger until it's too much and I suddenly snap back from it."

"Right," said Philip. "But you are getting stronger; the last time you went so far out you went unconscious, no?"

"Yes."

"Philip, you're pushing," said Valentina. "You're pushing too fast."

"I'm not pushing at all," Philip replied, his gaze locked on John. "I think you're moving just as quickly as you want to, John."

Philip turned and looked out across the lobby towards the door. The light outside the thick plate glass was like honey. Philip turned back to John and Valentina.

"Let's go for a walk," he said. "The sun is getting low."

He turned and started towards the door, and John and Valentina followed him.

"Oh! Just a moment." Philip stopped abruptly and half-jogged in his bare feet back across the room to the receptionist's desk. He stopped and spoke in hushed tones to the man there. Philip stepped behind the desk and bent down, rummaging. He stood, and quickly slipped on a pair of thin-soled canvas shoes.

He walked quickly back toward John and Valentina, and continued to the heavy doors. The doorman swung the doors open as they approached.

"Do you remember what we talked about when we first met, John?" The three of them stepped out of the glass fronted building onto the sidewalk. Foot traffic had slowed as the day wound down, though the street was clogged with vehicles—some idled silently, some spewed thick clouds of bio-exhaust, chugging and churning.

Philip started walking westward, John and Valentina just behind him.

"You were watching that old film and we talked about camping, mostly."

"Right. I asked you if you'd ever tried to imagine a world," said Philip. "How difficult that must be."

"You asked me the same thing," said Valentina. "A long time ago."

"I did."

The light hung like a golden fleece over the city.

"It's an important question," Philip continued. "Nothing exists without imagining—without being imagined, once. And once one imagines a thing, one day it will become a reality."

"I tried, out there in the forest," said John.

"We talked about that a little, didn't we?"

"I think so. I didn't get very far: I imagined a place of rocks, soil, dirt. Red stones everywhere as far as I could see; red mountains, yellow sky. I tried to imagine microbes, worms."

"It's difficult, to imagine an entire world at once," said Philip. "It usually comes in pieces, increments."

They were walking slowly, strolling. They passed building after building of gold, brass and copper, neo-stone lobbies and doors of color-shifting poly-glass.

"The planet, Mars, was once covered by flowing water, ice, oxygen," said Philip. "Can you imagine that? Once a red rock, once an ocean."

"There are people there now," said Valentina.

"There are people there now, so they say. Of course there are people there," said Philip. "Earth, once, was just rock: molten and churning. Once a red rock, once an ocean. There's no end to the things we know and the things we don't know. Every stone is potentially the home of an entire

civilization.”

John stopped abruptly.

“So what?”

Philip and Valentina stopped, and looked at him.

“So what,” said John. “You’re talking in circles, and I’m tired. I’m tired of listening to you go on about—about whatever it is you’re going on about. I’m tired of being in the city. I’m tired of being alone all the time, of thinking. I’m tired of the cars and the people and the bus that’s always noisy and sticky with spilt soda. I’m tired of this artificial sunlight and the fake marble floors and fake glass and fake plants in the space-defying lobby of your disgusting building. I’m tired of walking.”

“John—” said Valentina.

He looked at her. “I’m tired of being some sort of tool.”

He looked at Philip. “Tell me what you want from me, or leave me alone.”

Philip looked at him, and then looked down at the sidewalk. He ran his fingers over his moustache. His brow furrowed over his eyes.

“I want what you want, John.” Philip looked up at him. He tugged at his moustache. “You came to me wanting an escape. To get away from your life, your self. You wanted to go somewhere.”

Philip looked down the block. They had made several turns in their walk and John, following Philip’s gaze, was surprised to see that they were standing a couple of blocks away from the office John used to work in. The office probably still expected him. They were probably still piling papers up on his desk, unaware that he hadn’t stepped foot inside in weeks.

“You were sitting at a desk on the tenth floor of that building, alone.” said Philip. “You were resigned. You were

finished. But still, somehow, you dreamed.”

Philip looked back at John, at Valentina, and back at John.

“You wanted to be somewhere else.”

“I wanted to be on Mars,” said John.

“Mars?” Valentina looked at him, puzzled.

“I was watching the broadcast obsessively and wished it were me. I applied, a long time ago.”

“You want to travel,” said Philip. “I want you too, also.”

The light was fading. As the golden light dimmed to a dull and beaten steel, the city street lights turned on. LED overheads and sidewalk runners, glowing animated display signs on tiny street shops that seemed to appear out of nowhere.

“This is what we’re working towards: control over the information stream. Immersion, dissolution and reconstitution. Until now it’s all been just conjecture, theory. You, though: you’re closer than anyone. If you can imagine it—if you can imagine being in a place, you can be.”

“Right now, Philip, the only place I want to imagine being is back at my campsite, at my garden.”

John turned, and started walking.

Valentina watched John take a few steps, and turned to Philip. She gave a small shrug. “Sorry. Give him some time.”

She turned and hurried after John, catching up to him quickly.

Several blocks later, they stopped, and John ducked into a small automat. As he stood perusing the vending machines in the bright white light, Valentina stood on the sidewalk. Foot traffic was light, and traffic had thinned as the workers cleared out of downtown. She took her small, round pocketcom out of her pocket and opened its holo-screen. She

made a few quick gestures through the projection, swiped it closed and returned it to her pocket.

She walked over to a small stainless-steel stand with bright red lights that had popped up on the corner, pressed between buildings.

“Two Coke-Kaffés,” she said to the vendor.

“Would like those hot or cold?” He was tall, thin and very young, with his black hair molded to resemble a swirling helmet.

“Hot, please.” The vendor’s holoscreen blinked to life, and Valentina swiped her thumb across the projected surface.

“Two hot Coke-Kaffés.” The young vendor passed the steaming bio-plastic cups over the counter.

“Thanks,” Valentina smiled and took the drinks. She turned and walked out onto the sidewalk, watching John inside the automat. He was making selections on one of the machines, typing in numbers on the old outdated keypad.

He retrieved his selections from the service slot, and walked out of the bright white light into the half-light of the sidewalk.

“Here, I got you a Kaffé.” Valentina handed him one of the drinks.

“Thank you,” said John. “Do you want a sweet roll?”

“Yeah, sure,” Valentina answered, taking a pastry from John’s outstretched hand.

She took a sip of her Kaffé. “I ordered us a car. It should be here any minute.”

John took a bite of his pastry, followed with a sip of his Kaffé. “Where are we going?”

“I thought you wanted to go back to the forest sector.”

“Yeah, I do.” John looked at her. “You want to go with

me?”

“Of course,” Valentina said. “As long as that’s ok.”

John nodded.

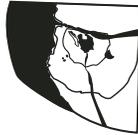
They stood there on the corner, watching each other eat and drink, while thin streams of people threaded their way around them. The streetlights cast a cold blue-white glow, and vendors’ signs were flashing red and white all around. There was the faint rhythm of a heavy, jittery bass line drifting from somewhere.

A black sedan swung out of traffic and stopped at the corner. Valentina’s pocketcom buzzed.

They finished their Kaffés and tossed the cups in a street-side compactor, and climbed into the waiting car.

past the tent; an owl's talons clinking against an overhead branch; crickets singing in the clearing.

He slept.

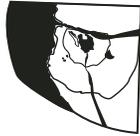


The drive was long. John and Valentina got back to the Forest Sector campsite late in the night. There was no moon. They hiked the pathways silently, in the dark, and decided to forego building a fire in favor of sleep.

At the campsite, John retrieved several thick blankets from a plastic trunk and unzipped the door of the small tent. He pushed his sleeping bag aside and spread out the blankets, making a small pallet. He shook out the sleeping bag, fully unzipped it and spread it out over the blankets. Valentina stooped and crawled into the tent and under the sleeping bag. John followed, and zipped the tent door closed.

They lay in the dark, John on his back, arms beneath his head. Valentina curled her compact body around him. She slept almost immediately.

John stared up at the roof of the tent, watching shadows cast by moonlight drift across the thin fabric. There was a breeze rustling through the branches overhead, and John listened to the animals and insects of the night: the quiet skittering of leaves as a small rabbit or raccoon rustled



John unzipped the tent and stepped outside. Sunlight was just beginning to filter over the treetops; the dew began to rise in wafts of steam off of the meadow grass. Valentina slept, her body curled about itself beneath the sleeping bag, her breath slow and heavy.

John built up a small fire, brought some water to boil and poured it over a Kona-Koffee tablet in a small mug. He walked, sipping his Koffee, out to the garden at the edge of the clearing.

The tomatoes glinted in the first morning light, the rising dew green-scented. The corn was taller than John, the ears plump and sweet smelling. John set his cup down on the ground, and bent beside the rows of kale and radish. He lifted the leaves of the plants, peering beneath them for signs of invasive insects.

He sank his fingers into the dirt, pulling aside the sandy soil and revealing thick round red and white radish roots. He pulled several from the dirt, and brushed them off with his fingers. He bit into a radish, crunched quietly and tossed the others down at the edge of the plot.

He walked slowly along the rows, hunched over, plucking out small sprouts of grasses and wildflowers, flinging small brown slugs out into the field.

John sat down at the edge of the garden. The corn towered over him and he watched the stalks move in the light breeze. The sunlight filtered through the long silk tassels, hitting the thin yellow strands and scattering, prismatic.

“After some time away, it can be difficult to get back into the swing of things.”

“That’s true,” John said. “Everything seems to go on whether one is there or not there.”

John twisted around, looking behind him. Philip stood at the edge of the clearing, just at the edge of the tree canopy’s shade.

“You’ve made a nice place for yourself here, John.”

John nodded. “Would you like a cup of Koffee? I just boiled the water, it shouldn’t take long to reheat.”

“No, thank you, John. I appreciate the offer, though.”

Philip stepped out into the sunlight. He looked tired under the morning glow, away from the highly controlled lighting of the city center.

John shifted his weight.

“No, no, don’t stand,” said Philip.

The small, aging man approached the edge of the garden and moved a large stone. He rolled it closer to John and sat down upon it.

“I’d like to apologize for yesterday.” Philip gazed up at the scattering sunlight. “I realize I may have put you in an awkward position that you were not prepared for.”

John sat for a moment. He watched as a bead of water formed itself on a strand of corn silk: thousands of mist-like dew droplets coalescing. The bead of water ran slowly down

the length of the strand of silk, hung for a moment at the end of the thread before falling to the dirt below.

“Before I met you—before I went to your shop—it’s like a different life, then and now,” John said. “I was watching the TerraNext streams constantly, whenever I could. I actually applied, back when they first posted the call. I made a video, really simple: just me at my desk talking to the camera. I explained why I wanted to go and that it was all that mattered to me: apply; go through training; go to Mars; and then? What would I do there? What would I really have to offer? I don’t remember now what I said in that video but I know I believed it. I felt like I needed to go, like there was no room for me here, that here I had no purpose and that there, maybe, there I would be needed—wanted.”

“Things sort of stopped once I—once the announcements had been made and I realized I wasn’t chosen. Things didn’t—I stopped. The world kept going, though it doesn’t really seem to go anywhere either.”

“You didn’t stop, John,” said Philip. “You’ve been moving forward, always. Sometimes that movement is happening in such a way that it appears the mover is remaining still. You’re here, now, and something has clearly changed since that time.”

“They’ve been up there this entire time, you know?” John pointed up towards the sky. “I think people stopped watching them. Everyone watched in the beginning: the voyage across space, the landing, the beginnings of a new world, a new society. Everyone wanted it to work, and everyone wanted to be watching if it didn’t. Eventually, though—you’re just watching four people living a fairly mundane day-to-day life. They eat, they work, they talk, they shit and sleep. It’s not much more interesting than any person’s own life, aside from the setting.”

“So people stopped watching. Sponsors pulled out. There are four people on Mars and no one is watching. No one

really cares anymore. There’s no money in it, and there’s no guarantee, if the TerraNext Corp. is unable to follow through with support, that any government agency has the means to step in. Not even four people, anymore, I guess. One of them went missing. The audio relay was damaged a long time ago. Somehow, lately, I think I know what they’re thinking, feeling, despite having stopped watching myself.”

“Once a thing begins,” said Philip. “Once a thing begins, it can be difficult to stop it before its cycle completes.”

John turned to look at Philip.

“Everything can be stopped, Philip. Everything can be arrested—interrupted. Whether that’s part of its ‘cycle’ or not.”

“I think you should come back and see the group again, John.”

“I know. Why else would you come all the way out here?” John turned away again to watch the sun trace its arc across the sky, filtered through corn silk. “You wouldn’t come all the way out here just to bullshit about TerraNext. For all your talk and encouragement about camping and gardening, you’re a man of the city.”

John turned to meet Philip’s eyes.

“There are no strings out here for you to pull,” John said.

There was the sound of rustling nylon and plastic teeth unclenching as Valentina unzipped the tent under the tree canopy. She stepped out into thin slip-on shoes, only half dressed in a T-shirt and underwear.

“Those people, John, they want to learn from you,” Philip said. “They want you to teach them what you know, what you’ve somehow managed to learn instinctively. This is not about me; this is about you helping people.”

John gazed past Philip, over his shoulder, and watched Valentina fixing herself a cup of Kona-Koffee.

“Sometimes, once you start something,” said John, returning his gaze to Philip. “You realize too late that you’re lost—that you aren’t really very good at whatever it is that you’ve started, or that it wasn’t a good idea to begin with, or that maybe it’s perfectly good but just isn’t quite what you had in mind. Sometimes you realize halfway through a thing that what you’ve started is totally outside of your control, and the only thing it makes sense to do is to just keep going. You’re almost done, anyway, right?”

John looked back up at Valentina. She walked to the edge of the meadow, her bare legs catching the sun. She brought her mug of Koffee to her lips and raised her free hand, waving to John over the swaying grasses.



Everything is the same everywhere.

Red dirt.

Red rocks.

Red dust drifting across a flat red plane.

Away in the distance jagged red mountains jut over the horizon; they never seem to get any closer.

Red like rust.

Iron oxide is swirling around the stones, kicking up behind the wheels of Beta Rover, catching the wind.

#4 is perched in the rover’s seat. His white pressure suit is coated with a film of red dust. He’s leaving a heavy wake behind him, a cloud that could be followed back to the encampment.

#4 is driving in a nearly straight line. He can barely see through the dust that coats his clear faceplate. He is steering by a combination of the scant visual reference he can gather through the red film and data readouts appearing on the interior of his faceplate: a small gridded map pinpointing his location by satellite positioning, numbers gauging his

altitude, external temperature, internal temperature, oxygen supply levels, external wind direction and speed, and a careful plotting of a search radius he has programmed into the system.

Still, though, he's searching blind. He knows where #3 isn't: he isn't at the encampment, and he isn't at any of the locations Beta Rover has visited on its own automated search grid—or, at least, #3 *wasn't* at those locations.

Things change.

Things change quickly, sometimes.

There's little hope—no hope, really, if #4 is honest with himself—of finding #3 alive. But, still, #4 can't abide leaving him out here in all this red nothing to be buried in dust for eternity, alone, with no one to bid him “bon voyage.”

#1 is back at the encampment, in Eco-compartment A. Her figure, hunched over the broad white worktable, is fractured and broken through the spider-web cracks of the camera lens.

There's no ignoring the fact that we have a locked perspective—that we can't really be down there alongside the settlers as they go about their duties. We have fixed points of view, alternated between by someone somewhere manning a control board, or perhaps by a computer algorithm.

#1, from what we can see, looks tired.

Of course she looks tired. She's living 140 million miles, on average, from her place of birth, her family, her friends; 140 million miles, give or take 100 million miles, from the town she grew up in, from the beach she and her dad frequented on summer days, eating lunch on the bluffs over the Pacific, back when there were bluffs over the Pacific that you could eat at, if you had the right kind of connections; from the private university she attended, where she drank too much and for awhile snuck away from sorority functions to go see loud mechanistic performers growling in sweaty

basements. 140 million miles from everything she knew and loved, from everything she chose to walk away from to be hurled across space and work, all day every day, to build something that just might develop, over time, into a shred of hope for building a new home for humanity.

She's hunched over a map displayed on a large flexible display screen, rolled out across the table surface. Nearby is a small freestanding monitor. On the monitor, #1 can watch the progress of Beta Rover via a small camera mounted in the front of the vehicle. She cannot see #4 from this vantage, as he's positioned behind the camera. She can see the landscape ahead: the endless flat plain, the stirring dust and the jagged peaks in the distance.

In the lower right corner of the monitor is a super-imposed map: a gridded view of the planet's surface scrolling toward the bottom of the window, and a small dot, denoting the position of Beta Rover, at the center. The map scrolls and turns about the center point, blinking red.

On the map there are a series of concentric circles. The smallest, central circle denotes the space occupied by the encampment. A series of other circles, in various colors, expand outward. Some of them overlap. The largest circle appears to have a radius of approximately four or five times the diameter of the encampment.

There is a series of mid sized circles, each with a radius of approximately one and a half times the diameter of the encampment, at differing distances from the encampment, all entirely or partly within the borders of the largest circle. These mid sized circles are each connected to the encampment circle by tangential lines, like rays radiating from the center. Each is labeled, at its edge, “BR Search Grid” with a date and time.

#1 makes a few motions on the map display with a small stylus, and a small blinking red dot appears on the map, moving away from the center encampment, tracing a course

between the areas demarcated as “BR Search Grid.”

#1 stands up for a moment, stretches, arching her back. She lifts the standing monitor display from the table, and collapses its legs into its thin, tablet-sized body. She taps the screen, and the display collapses. She makes a few gesturing movements over the surface of the display and a grid of images appears, each a thumbnail view from the various cameras on site at the encampment and aboard the vehicles.

She taps one in the upper left: an exterior view from atop the signal tower outside the living pods. The camera provides a view of the small outpost from an elevated perspective. She can see Alpha Rover shuttling crates from one outbuilding to another, and in the distance the growing plume of dust kicked up by #4 and Beta.

She taps the lower portion of the screen and a small dial and time stamp pull up. With a few gestures, she has the video display playing in reverse, spinning backward through its recorded video.

She swipes her finger and the display stops, a freeze frame. She taps it and it begins playing forward. Dust is blowing around the outbuildings. Both rovers have parked themselves, expecting a storm.

A figure steps out of the airlock of Eco-Compartment A. The figure is bulky and unidentifiable in its pressure suit, but emblazoned on the back, on the boxy life-support system, is a large red “3.”

#3 approaches the Alpha Rover, bends down beside it and does something to the input control panel.

He does the same to Beta Rover.

He walks through the settlement a few paces, then stops, turns around, and walks backward.

He leaves footprints in the red dust, visible just for a moment and then gone in the rising wind.

He turns, and walks out of the settlement, heading off in the very same direction that #4 was currently pursuing on Beta Rover.

#1 watches the display as the figure of #3 grows faint in the haze of red windblown topsoil and vanishes.

#1 sets the display down on the table. She looks back to the map and traces a line with the small stylus. She demarcates the path #3 took out of camp; then she stops and draws a small circle. The line ends not far from the settlement at a point one could estimate to be approximately the distance at which #3 vanished from the camera’s eye.

She makes a few tapping and swiping gestures on the surface of the map display, and a small keypad appears. She inputs some commands, and the keypad vanishes. A circle appears on the map, centered at the point #1 had terminated her hand drawn line. #1 makes a few small gestures and the circle morphs, one side collapsing until it resembles more of a semi-circle: an area of land extending in a set distance from that central point, but containing no area closer than that point to the settlement.

She makes a gesture on the surface of the map display and the view zooms in on the new demarcated area. She makes a tapping gesture on the surface and the map shifts from a two-dimensional image to a three-dimensional topographic projection. Most of the area enclosed by the newly demarcated space is flat plain: the remnants of an ancient lake or seabed. One area, however, features a series of rough outcroppings: stone formations eroded and chiseled by the wind and dust, forming a series of jutting red rocks and sheltered overhangs.

She swipes at the display and zooms in on this outcropping.

She stands back. She turns around.

#1 walks across the room, and back again to the table.

She walks over to the wall-mounted communications dock. She presses a series of buttons. A red light comes on, and she speaks.

She pauses, listening.

She speaks again.

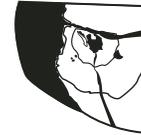
She nods, and releases the button. She walks back to the table, and stares at the map.

#4 is driving Beta Rover across the desert.

The rover stops abruptly.

The wind picks up the dust in front of the rover.

The rover moves forward again, turns in a tight arc to the left one hundred eighty degrees, and speeds back the way it came, driving with full force into its own dust-heavy wake.



John's eyes are closed.

The air around him is warm, body temperature, edgeless. He is seated on a pillow. His legs are folded beneath him.

He can hear the rustle of fabric and bodies shifting in space. Someone in front of him and to his left coughs. Valentina is next to him, breathing softly.

There is the sound of air moving through diaphanous silk.

John opens his eyes.

He is at Philip's high-rise loft. The room is lit by soft white lights hidden behind thin draping fabric. People are seated in a circle. John is at one edge of the circle and directly opposite is Philip.

Everyone is wearing a thin white gown—everyone but John. John is dressed in dark pants and a long sleeve shirt.

Everyone is looking at him. He can smell the perfume of Valentina's hair beside him.

John recognizes members of the circle from his last visit, plus a few new faces.

John looks across the circle at Philip.

“Philip told me,” said John, “that you all wanted to be taught. That you wanted me to teach you.”

He kept his voice low.

“I’m not sure what it is that I have to teach, or what it is that you think I know—that you yourselves want to know. In all honesty, I know very little.

“Sometimes—sometimes you start something and all you can do is finish it.

“I know little, but there is something somewhere that knows: that knows what has happened and is happening and is going to happen—something that knows the codes; that can read the information streaming through the world and see where it’s all headed.

“That something is not me.”

John looked around the circle. There were old faces, young faces. Everyone looked hungry.

“I only know what I see. I see time opening up like a pool. I see space collapsing on itself, folding together like an accordion. I see myself, and the world around me, dissolving—dispersing into something just one step removed from nothing: into the building blocks of matter, into information.

“I don’t know how to teach you this. All I know how to do is to show you: to carry you with me, to carry your consciousnesses along with my own.

“Let’s close our eyes.”

John closed his eyes. Each person closed his or her eyes.

John sat still for a moment, allowing everyone to settle into the quiet, to the space. Allowing everyone to settle into his or her body.

The room was still. The room was quiet except for the

sway of fabric and the involuntary movements of bodies in space. John could hear Valentina breathing.

John listened as Valentina’s eyes opened. Her head turned toward him. He felt her lean in toward him and place a small, silent kiss on his cheek. He heard her stand. Her hands brushed over his shoulders, and she walked toward the exit. A door opened, and closed.

The room was still.

Bodies shifted in space; fabric swayed in a slight unfelt breeze.

John felt the borders of his body beginning to dissolve. He watched, in his mind’s eye, as each cell of his skin began to move outward, followed by each cell of his muscle tissue, his circulatory system, his bones. Each cell of his body lifted itself outward and away from the others. He became a porous cloud of microscopic components.

Each cell further separated, breaking itself into component molecules. Each cell fractured and became, itself, a porous cloud.

Each molecule divided into proteins, into elements, into atoms, into protons, electrons and neutrons, free floating.

The air around him likewise splintered into component parts, as did the pillow on which he sat, the floor on which the pillow sat. The other bodies in the room, the draping fabric, the walls: everything slowly exploded into a cloud of raw material: raw data at its most base state.

Within this cloud of free-floating information, John could sense the flickering impulses of individuated minds. He reached out with his own, linking himself to the others, catalyzing a mass intermingling of consciousness.

There was fear in the cloud: panic, anxiety. John allowed the consciousnesses to sort through this fear and soon it dissipated, dissolving into wonder and awe. The

consciousnesses merged into one.

The group consciousness felt itself expanding. Everything dissolved: the room, the building, the city; fragmenting into a mass cloud of data pools: streams of information linked by proximity into clusters of code. Everything bled into each other thing. The consciousness expanded like an umbrella; other minds became caught in its pull: people and animals, unsuspecting, found themselves frozen in a moment of wonder and dread.

The consciousness grew.

The consciousness expanded.

It reached outward and upward. The city was data; the continent was data; the world was data. Space itself was data: thin and unclustered, with emptiness between data pockets in the vacuum. Atoms encoded as mineral components of interstellar dust. Free floating molecules. Emptiness filled with data.

The consciousness floated, dispersed.

A cluster of signals began to coalesce within the consciousness. A cluster of data re-adhered, differentiated to a small degree. John felt his mind tighten; it wrenched itself out of the dispersed group mind. As he retracted, he sensed other data re-coalescing around his unbound mind.

John sensed, around him, the silence of outer space. He sensed the emptiness of the vacuum, and a slight gravitational pull from an outside mass, beginning to re-adhere. A mass of silicates, iron and sulfur, and the faint flickering of three consciousnesses clustered around a single point.

John relaxed, and the elements dispersed again. He freed his consciousness from the cloud of data that was the group mind, and began to retract himself.

He felt his consciousness tighten again. He felt a rushing sensation, that whip-like crack as his mind raced toward a

re-cohering body. He pushed together the data that formed the planet, the continent, the city. He felt his body differentiating itself from the mass. He felt the atoms of his flesh re-forming—molecules, minerals, proteins. DNA and cell walls tightened.

John envisioned, in his mind's eye, his campsite. He paused for a moment, and brought everything into its proper place: the tent, the campfire and camp stove; the bin of dishes and insta-food paks; the garden, each radish and stalk of corn; the meadow, the trees.

With a sudden, rushing force, John's body reformed and his mind snapped back into place.

Everything was dark.



John awoke in his tent, lying nude atop his sleeping bag. It was light outside and through the mesh ceiling John could see birds moving through the tree branches above.

He sat up, unzipped the tent and stepped outside. He walked barefoot across the campsite to his fire pit and built a small fire. He set some water to boil, and as it heated he watched the dew steaming up out of the meadow in the morning sun.

His water boiled, and he poured it into a mug and dropped in a Kona-Koffee tablet.

He carried his coffee out to the meadow and sat down in the sun at the edge of his garden.

He drank his Koffee. The world was quiet, and still, but life moved around him.

John sat at the edge of his garden, and watched the sun arc across the sky, degree by degree.

As the sun was making its descent, just as it hit the tree-tops on the western edge of the clearing, John turned to see Valentina cresting the rise from the trail into his campsite.

Her eyes darted around the clearing.

John stood up.

Valentina saw him and ran to him, wrapping her arms around his body. Her face was wet, her eyes red. John encircled her with his arms.

“I thought somehow you’d be here though I wasn’t sure,” she said.

John nodded.

She pulled away and looked at him. “What did you do?”

John didn’t answer.

“I went back and the—the room was—everyone is dead. They were barely there—inside out. The room was tangled—everything was—bodies and the walls and furniture and—everything was fused and—”

John was quiet for a long time. The pre-dusk light was a golden yellow.

The grass of the meadow was tall, and swayed in the wind.

“It’s good you left when you did,” said John. “I came back. I didn’t bring them back with me.”



For some reason something has changed.

All the lights are still on. Everything is still flooded with bright white fluorescence from all directions.

#1 still has the large flexible display rolled out on the table, and the map is still there, one small rocky outcrop jutting out in topographical display.

She is sitting down on a tall stool at the table. She is drinking something from a cup: it appears to be hot; steam is wafting off the surface and into her face. She holds it to her lips and inhales the steam through her nose.

#4 pulls Beta Rover up outside the compartment. He stops the vehicle and jumps off, taking bounding steps across the red dirt to the airlock.

He turns the locking mechanism and opens the door. He steps up the few small steps into the airlock and closes the door behind him. He quickly punches a few buttons on the wall panel.

He backs up toward his wall suit hatch.

#2 is still in bed in his sleeping chamber.

He is lying on his back.

His hands are folded on his chest.

His eyes are closed.

The blanket is pulled up and tucked in tight around him.

The IV is disconnected, the saline rack wheeled across the room beside the empty bunk of #3.

#1 is drinking a hot beverage, seated on a tall stool at the table in Eco-Compartment A, awash in fluorescent light.

#4 is backed into the wall.

He presses a series of buttons on his chest mounted control panel. The rear hatch opens, and he stoops and leans backward out of his suit.

He climbs out of the rear hatch of his suit into the interior airlock compartment. He opens the door into the fabrication shop and moves through quickly. He makes his way through the various pod-chambers of the encampment housing the wash-closet, the life-support systems, and one of the pantries.

He opens the door that leads from the pantry into Eco-Compartment A.

The rye grass is flourishing at the rear of the compartment, and when #4 enters he is hit with the smell of growing green things and damp earth: the smell of life.

He crosses the compartment towards the table and the stool upon which is seated #1.

#1 sets down her cup containing the hot beverage.

She stands. She says something to #4.

#4 approaches. He looks at her. He says something to #1.

She bends down over the map, leaning on her elbows on the table. She swipes her fingers and the map zooms out. Visible is the small circle demarcating the

settlement, the large circle labeled “MAXIMUM DISTANCE TRAVERSABLE BY FOOT,” the series of wedges labeled as “BR SEARCH GRID,” and the stylus drawn line and corresponding half-circle.

#1 says something.

She points to the portable display monitor.

She says something, and points to the stylus-drawn line on the map.

She picks up the display monitor, makes a few swiping gestures over the surface and pulls up the camera feed from the central settlement camera. She taps the screen and #1 and #4 watch as #3 steps out of the airlock, bends down beside each rover, walks backward in the wind, and then sets off away from the camera and the settlement, disappearing in the rising dust storm.

#1 taps the screen a moment after the figure of #3 is no longer visible and pauses the playback. She points to the map, to the point she marked with the stylus.

She says something.

She gestures to the half-circle that takes as its center the end point of the drawn line.

#1 says something.

She swipes the surface of the display. The map zooms in—closer—closer—on the one rocky outcrop in that region of the red dusty plain.

#1 points.

She says something.

#4 bends down, his hands on the table. He leans in, his weight resting on his arms.

#4 nods.

#4 looks up from the map. #4 looks at #1.

He nods, and says something.

#1 says something.

#4 nods. He says something, looks down at the map, and says something else.

#1 stands upright. She says something.

#4 nods.

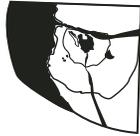
#1 turns and walks to the airlock.

flame.

He turned and looked at Valentina.

Her eyes were fixed on the flames. Her face was glowing warm in the firelight and her dark hair caught the flickering of the flames.

John looked away, back to the fire, out to the clearing, letting his eyes rest on the treetops on the other side. His eyes relaxed into the darkness, and flitted between stars.



John and Valentina sat beside a small fire. The sun had fully set and there was no moon. Through the gap in the trees over the clearing, the stars were visible. Light seeped up from the city to the east and the west, but up above the sky was clear and dark and the stars shone.

John had dressed.

They each held a small blue enameled mug, and were drinking a hot Moka flavor caffeine-free Koffee. The wind rustled in the trees, and the fire crackled and popped.

John watched Valentina drink from her mug. He looked at her face in the firelight, an orange glow.

She watched the sparks rising up out of the flames, carried aloft red and glowing by the rising heat, burning out to fall, later, as ash.

John watched her watch the fire. John opened his mouth for a moment, and then closed it again.

He turned away from her. He let his eyes come to rest on the fire. He bent down and picked up a small split branch from the woodpile on the ground. He pushed it into the



#1 is inside the airlock, stepping through the rear hatch into her pressure suit.

#4 is in the exterior chamber of the airlock. His suit is on, the rear hatch of his suit sealed. He is waiting for #1.

#4 is carrying two large tanks, labeled “O₂” and “Flammable.” He carries one tank in each hand.

#1 has her suit on. She keys in an entry on the wrist-mounted control panel. The rear panel seals closed and releases from the wall. She steps away from the exterior chamber wall. She presses some buttons on her wrist and the view-plate shifts from transparent to an opaque, reflective gold.

#1 punches a few buttons on the control panel on the wall. #1 and #4 each gaze upward.

A moment passes, and the door opens leading out onto the surface of the red, dust-blown planet. #1 steps out of the airlock, down the couple of small steps and out onto the surface. She turns, and #4 hands her the two oxygen tanks he had been holding. #1 takes them from him, one in each

hand, and carries them across the dust to Beta Rover. She walks to the rear of the vehicle and opens a large storage compartment. She sets the tanks into the compartment, one at a time. She then reaches in and pulls out a large coil of rope and a toolbox.

#1 carries these objects back across the dust to the airlock, where she hands them up to #4. #4 takes them and sets them down inside. He picks up two more oxygen tanks, and hands these down to #1.

#1 places these tanks also in the storage compartment attached to Beta Rover. She returns to the structure, where #4 hands her two more tanks. #1 carries these to the rover.

As #1 places the fifth and sixth tanks into the storage compartment, #4 steps down from the airlock pod. The airlock door seals shut behind him.

#1 closes the storage compartment on Beta Rover. #4 approaches the vehicle.

#4 points to Alpha Rover, parked beside the crate storage container, dusty.

#1 shakes her head.

She points to Beta Rover.

#4 walks over to Alpha Rover. He bends down beside it for a moment. He stands, brushes dust off of the saddle.

He turns back toward #1.

She motions to #4. He turns away from Alpha Rover and walks over to Beta Rover.

He climbs into the driving saddle.

#1 climbs up after #4 and sits in the rear saddle, behind #4.

The rover begins to move.

It backs up, and turns. #4 gestures toward something.

#1 points. The rover starts moving forward. It turns to its right and makes its way around the settlement.

Once clear of the settlement, the rover straightens out. It drives away from the cluster of pods, leaving in its wake a large and growing plume of dust to be whisked away by the wind.

Beta Rover is heading in a straight line. The view from the prow offers no easy visual landmarks: ahead is a vast distance of flat space, empty but for small rocks and swirling red dust. Over the horizon is a low ridge of mountains catching the sunlight against the golden sky.

The rover is moving faster than usual, speeding across the stony landscape. The vehicle is bouncing over the rocks in its path.

#4 is driving. His view is nearly identical to that of the prow-mounted camera on Beta Rover.

Inside the faceplate of his helmet are projected various lines of data: external conditions, his own heart rate, the speed, direction and power level of Beta Rover and a map that scrolls and pivots around a blinking dot that represents the vehicle. At the top edge of the map is a second blinking point: the position of the rocky outcrop, as input into the computer system by #1.

According to the map, scrolling through the periphery of #4's view, the rover is headed straight for that rocky outcrop.

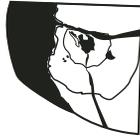
#1's view, as captured by the small camera mounted inside of her pressure suit, provides a third perspective aboard Beta Rover. Projected on the interior of her faceplate is a similar dataset to that inside the helmet of #4.

#1 is also seeing a data set of external atmospheric conditions, her own bodily conditions and the scrolling map.

#1 is not looking straight ahead. She is seated behind

#4, and his body is obscuring her view forward. She looks instead to the left of the rover, watching the horizon scroll past. She is gripping the set of rear handles—handles molded into the rear of the driver's saddle—as the vehicle bounces heavily over rocks and small gullies.

Her view rises and falls with the bouncing of the vehicle, pausing every so often at the peak of its rise, as if she's off her seat in a moment of free-fall.



Sometimes it's easy to tell when there's nothing left to say.

Sometimes halfway through telling a story you realize there really is no need—you've already told the story, or it's already happened and everyone knows it, or the story is happening as you're telling it and so, well, it's only a transposition.

Sometimes, everything that should be said has been said.

John is staring at the stars.

Valentina is staring at the fire.

She sets her cup down on the ground. She stands up and turns away, letting a hand fall for just a moment on John's shoulder, then fall away. She walks into the dark, zips open the tent and stoops inside. There is a rustling of blankets, of fabric on fabric. She zips the tent closed.

John stares at the stars.

One star in particular: a specific point of light in the night sky that is a little different in hue, a little bit warmer, a little bit bigger. A star that might not be a star.

John is trying find space for himself.

The stars move across the sky, a slow and evenly paced arc. Some move faster than others.

The fire is burning low.

The fire dies.

There are coals glowing redly in the darkness, and John is staring at the stars in the night sky: at one in particular that glows redly.

John stands up, walks to the tent, unzips it and stoops through the doorway. He zips the tent closed. He lies down beside Valentina, atop the blankets and bed pallet. He lies on his back and stares up through the mesh roof of the tent, and watches the tree limbs and leaves sway dark against the night sky.

Valentina is asleep. She stirs, breaths low and slow.

Time keeps moving on. The stars keep rotating on and on in a steady arc. One star glows redly.

John's eyes open and the darkness is giving way to light. The limbs and the leaves of the trees overhead are black against grey, and the sky is lightening. John lies on his back.

Valentina stirs, turns over on one side and her eyes open. She folds open the blankets, and pulls her legs out from under. She picks her pants off the floor of the tent and, lying on her back still, pulls them on, lifting her hips.

She sits up, leans forward and unzips the tent door. She slides on her shoes and steps outside, zipping the tent closed behind her.

John can hear her footsteps as she walks away from the tent, through the campsite, and into the forest.

John lies on his back. It's light outside.

There are birds singing.

John sits up and unzips the tent, stepping outside. He

walks barefooted out into the meadow and looks up at the sky.

The sun is up and the sky is blue but the moon is hanging there also, pale and wan. The stars are there still, their light washed out by the sun.

And the one star that maybe is not a star at all is still up there too, somewhere, glowing large and redly.

There are birds singing in the morning, and dew on the grass, and a moon about to fall and so many stars they could blind you.

John sits at the edge of his garden, and stares up at the sky.



Beta Rover is driving across the red plain.

There are rocks everywhere, the smooth surface of the lakebed giving way to an ancient shoreline: broken stones red and jagged, drifts of dust shaped by the wind.

#4 is driving.

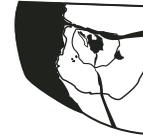
#4 is driving fast, the landscape rushing past the prow-mounted rover camera. The rover bounces up and down erratically, flying over rocks and slopes, airborne, landing hard and flying up again.

#1 is in the rear seat, seated behind #4. The view from her helmet camera, through the faceplate, is dizzying. She is clinging to her handgrips, but her view is shaking: an erratic jostling, a rattling. Nothing remains still; each bump over an exposed rock outcrop is a large jolt made up of a hundred smaller jarring blows.

There is speed. The rover is going too fast, it's obvious. A digital readout, captured for just a moment through the faceplate of #4 as he steers the machine across the redness, reads 46 miles per hour. Rocks and dirt are flying out in a heavy, machine gun spray from behind the vehicle.

There is a large outcrop of red stone. The vehicle hits the rock with its left front wheel. The vehicle hitches, bouncing upward. The stone is large, at least 30 inches tall, a round red swollen thing, hard.

The vehicle pitches up with its front end, tilting hard to the right and slams back down again as its rear left wheel jars against the stone. The vehicle lands hard and on its wheels and dust explodes around it. Visibility is poor. There is a rut in the ground and the vehicle pitches down, diving nose first and back up again, landing, spraying dirt and rock and hits another rock outcrop on its right side and #4 wrenches the steering grips and the vehicle jolts upward. The front right flies up into the air and the rear right flies up into the air and the front left wheel comes down not quite gripping the ground and the rear right wheel is still up in the air and #4 is trying to turn the vehicle left and right and the front left wheel doesn't grip and keeps slipping as the rear right flies higher still and suddenly the weight is off balance and #1 loses her grip on the handles and is thrown off of the rover which is bucking wild and #4 is still holding on and the vehicle somersaults and #4 holds on and rolls with the vehicle and everything lands in a cloud of dust sideways with an axle broken and the rover tossed like a child's toy truck left out in the dirt.



The meadow is churning with sound: small birds swooping low over the grass, their quick breaths and the wind in the fibers of their feathers; dragonflies darting, wings vibrating like the rotors of a dozen helicopters; gnats in a static buzz; the wind through the tall grasses, plant fibers rubbing against one another, swaying, breaking, cracking; a small field mouse, running, stopping, chewing; the soil moving and shifting as the grasses reach deeper, grabbing stones and silicates; earthworms, mining perpetually; molecules of water rising as steam into the air; oxygen and carbon dioxide colliding.

The edges are blurring. John is sitting. He has shed his clothes, which lie folded in the grass behind him. He is sitting in the sun.

A bead of sweat collects in the dip between his collarbones, pools, and flows quickly down his chest. His eyes are closed.

He is listening to the sounds of the meadow, isolating and pinpointing each one.

He turns his attention inward, focusing on the sounds

of his body: the flow of blood from heart to head to heart to foot; the expansion and contraction of his lungs and the inward and outward rush of air; the electrical firings at the synapses of his nerve cells; the creak and groan of cartilage between his joints and the strain and contraction of muscle fibers in his back, in his diaphragm.

He slows his breath, matching the rate of respiration of the meadow grasses: the opening and closing of microscopic stomata. He begins to slowly push his cells apart.

He envisions a micron of space between each cell; then two microns; three microns.

He becomes porous—a cloud of expanding information, suspended and linked through consciousness. He feels his cells moving between those cells of the air: yeasts and floating bacteria, particulates of dust and pollen, molecules of oxygen, nitrogen.

His mind, too, dissipates. John begins to sense the consciousnesses of the meadow: the bird, the dragonfly, the gnat, the mouse, the worm, the grass.

He spreads outward, his mind touching the trees, the fish and insects of the creek. He reaches the dogs chained outside of the houses on the outskirts of the city, the rats in the gutters. The pigeon. He touches each mind of the city: the man in the lobby of Philip's glass building, the Kaffé-vendor, the driver, the woman at the diner.

He feels Valentina, senses her consciousness, attuned to his own, reaching out to him like a beacon.

His mind rises. He feels the world, then the emptiness of space. He fixes his mind on that one red star.

He imagines a red light expanding like a horizon across a field of deep cerulean blue.



The view is skewed at an angle, low perspective tilting up from the ground.

#1 is lying in the dirt, red dust coating her white pressure suit. She starts to move, shifting as if unsure.

She turns onto her side, pushes herself up onto her arm. She rolls onto all fours. She rights herself on her knees, and wipes a hand across her faceplate, brushing off the dust.

Through her faceplate, #1 is viewing the overturned rover. Her view is cloudy with dust, lingering in the air and clinging to the edges of her faceplate.

She wipes a hand across again, clearing more of her vision.

The rover is turned on its left side exposing its underside. The front end twisted up and towards her. The rear left wheel is hanging at a strange angle. Something has broken, or bent.

#1 stands, the view through her faceplate rising. She moves unsteadily towards the vehicle, dust falling from her mask.

The sky is yellow.

She approaches the vehicle, moves around its front end. #4 is lying on the ground, his left leg beneath the overturned rover. #1 grabs hold of the side of the rover and lifts it, turning it back onto its distorted wheel frame. #4 is lying very still, his left foot twisted. #1 bends down, and wraps her arms around his bulky pressure suit. She lifts him, and half-carries, half-drags him up onto the righted rover.

The view through #4's faceplate is obscured. Dust clings to the outside, and inside it is dark. The data viewable on the interior of the faceplate is apparently malfunctioning, a flashing red "—" in the lower left and right corners. A thin hairbreadth line arcs through the upper right corner of the faceplate view.

#1 secures #4 on the rover, positioning him so that his body won't slide off of the stationary vehicle.

She scans the horizon, looking in the direction the vehicle was travelling. The landscape grows rockier in the distance, and at the edge of the plain, before rising up into hills that mark the edge of the ancient crater-like seabed, is a rocky outcropping, dark and shadowed: a sheltered cave in the rocks.

#1 turns and walks around to the rear of the vehicle. She opens the storage compartment, and removes two of the oxygen tanks. She sets one down, closes the compartment, and retrieves it.

She starts walking.

The camera mounted on the front end of the rover is dirty, smeared with dust, and partially obscured, but still #1 is visible walking into the distance, quickly covering ground in her dusty white pressure suit, an oxygen tank in each hand.

The rocky outcrop is in the distance: two points—settler and cave—converging into one.



Everything is converging into one thing.

Here are the molecules that make up a body: boron and chromium and cobalt and copper and fluorine and iodine and iron and manganese and molybdenum and selenium and silicon and tin and vanadium and zinc and magnesium and chlorine and sodium and sulfur and potassium and calcium and nitrogen and hydrogen and carbon and oxygen.

Here are the minerals that make up a planet: olivine and pyroxene and plagioclase feldspar and calcium and silica and andesite and granitoids and dacites and calcium sulfate and magnetite and titanium and hematite and phyllosilicates and goethite and jarosite and opaline silica and gypsum.

Here are the molecules that make up an atmosphere: carbon monoxide and oxygen and nitrogen and argon and carbon dioxide and methane.

Everything is converging into one thing.

The bodyconsciousness is a cloud without edges. The bodyconsciousness is dissipating across space, moving at a speed that cannot be quantified. The bodyconsciousness is

fixed on a star that may not be a star: on a red line in a blue space.

The red line is growing larger; thicker; brighter.

The bodyconsciousness begins to feel out its boundaries, begins to draw its limits back, to tighten like a closing fist. The space between the molecules begins to shrink, begins to condense in the emptiness.

The Johnbodyconsciousness feels its mind brushing against another, and another.

It feels a flickering as those minds register at the edge of its own, like a peripherally seen flicker of movement: a bounce of light at the border of vision.

Johnbodyconsciousness touches the silicates of the rock, and iron bound with oxygen in the dust and stone. He feels a bounce of carbon dioxide against his synapses. He tightens, tightens.

Things begin to move faster, as the space decreases between himself and himself.

A parsec.

A light-year.

A kilometer.

A meter.

A centimeter.

A millimeter.

A micron.

The cloud coalesces, condenses like water vapor against a pane of glass.

With condensation comes displacement; the shifting of molecules; the dispersal and appropriation of foreign matter.

There is a low rumbling sound like thunder that won't quite resolve itself.

There is the rushing of blood through veins: a torrential flow of fluid through constricted channels.

There is the rise and fall of the diaphragm, the relaxation and contraction of muscle fibers in the back, the chest.

There is the deflation and inflation of lungs, the squeeze and release of the heart.

There is sweat crystallizing into salt on skin.

There is a heavy deep red bright line marking a horizon across a field of deep cerulean blue.

There is a yellow sky. John's eyes are closed.



#1 is making swift progress across the red and rock-strewn beach. The stony outcrop is just ahead. It's possible now to make out within the shadow of the rock the contours of the shallow cave: a recessed space worn by wind and time. It's deep enough to serve as some sort of shelter: a space in which to escape those elements that served to form it.

The outcrop is tall, arcing twenty feet into the yellow sky. Dark and basaltic.

As she gets closer she moves faster. She moves as fast as her bulky pressure suit will allow her. She is almost running, taking long bounding strides across the rocky and red-strewn beach.

She carries two oxygen tanks, one in each hand.

There is a lightness there in the shadow: a lightness in the dark obscured by drifts of red dust.

The sky is yellow.

There is a red line in her mind glowing and arcing against a deep cerulean blue.

Her footsteps have a steady rhythm, long and loping

strides.

There is a space of lightness in the dark obscured by red dust.

There is a space of lightness in the dark, a space that is roughly human sized, low on the ground.

#1 stops, several yards from the outcrop. It fills her view: dark basaltic stone, softer conglomerates, wind worn into a rising, sinuous shape. There is a shallow cave. There is a lightness in the dark that is human shaped, white.

#1 runs into the cave, drops the oxygen tanks and falls to her knees beside the half dust-buried white pressure suit. The dust is thick, caught in windblown drifts against the pressure suit, piling over the arms and legs and neck. She brushes the dust off, and lifts the suit up out of the dirt.

It has mass, weight.

She lifts it just clear of the dust, which flows off like water.

She sets it back down in the dirt.

She is looking downward. A drop of water falls against the inside of her faceplate.

She turns the body on its side, away from her. She brushes dust off of the rear component pack on the exterior of the pressure suit. She unscrews a valve, fumbling a little in her thick, pressure suit gloves. She gets the valve open and pulls from the pack a thin dark hose, black and silver. She grabs one of the two oxygen tanks and threads the end of the hose over the screw-valve of the tank. She twists a valve on the tank, and sets it back down.

She turns the figure over, onto its back. She presses several small buttons on the wrist panel of the pressure suit.

A dim light turns on inside the pressure suit helmet, filtering through the coating of red dust that clings to the faceplate.

She reaches up to the faceplate. She slides her gloved hand across the surface. She wipes again, and again, brushing off a thick layer of red iron rich dust.

A thick glowing red horizon.

A yellow sky.

#1 looks through the facemask. There is a man in the suit: a thin faced man, darkly tan, with a thin brown beard. His eyes are dark. His face traced with thin lines.

His lips are just parted, breathing slowly.

A thick red line contracting across a field of cerulean.

A yellow sky.

John feels his body: he feels light, though restrained by exterior bulk.

He opens his eyes. He is looking through thick glass, obscured at the edges by dust.

A woman is bending over him. She is looking at him through the curve of a pressure suit helmet and her eyes are wet and she is smiling a small smile.

Her eyes widen.

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