

Curiosity is a Selfish _____

Tobak's upper body was half off the bed, arm batting at the floor-level alarm clock truck before he was conscious enough to open his eyes. By that time the truck had slipped past his efforts and rattled under the bed, alarm still wailing, and started another circuit of the unlit room. Beside him, Meli curled into a ball with a whimper, drawing away the warmth of sleep, along with the covers. Tobak groaned and let gravity tumble him the rest of the way out of bed. The laminated boards were cool beneath his heated cheek. He could see the intruder now, LED lights flashing, volume increasing unapologetically, as it exited the far side of the bed; only to be stopped by a foot stomping the snooze button on its roof. The truck tooted—the wailing stopped and lights turned off. With echoes still ringing in his ears, Tobak frowned as Meli's foot flipped the truck forward into the wall before disappearing back up into the covers. He'd given up on asking her not to do that.

Tobak rolled onto his back, unable to see the ceiling with the new black-out curtains in place. It was 07:00am Monday, Mars time. Which equated to some ungodly hour in Earth time. At least the weekend had enabled him to catch up on all the lost sleep he'd been missing. The clock on his lock screen read 01:30am as he unplugged his phone from the wall. Streetlight slit through the curtains as Tobak nudged one askew. Nothing moved outside. The solitary bark of an unseen dog was the only indication the town wasn't deserted. On tiptoes, he braved Meli's side of the room to scoop up the truck, avoiding a tangle of shoes, an overloaded chair, and a mound of various coloured blouses—most of which he hadn't seen before—on the way.

Tobak switched the alarm truck to sleep mode, checking it had calculated an extra 40 minutes for the next morning. Syncing to the Mars planetary cycle meant his solar day lasted an extra 40 minutes longer than the 24 hour earth solar day. Only once every six weeks did his work hours align with Eastern Pacific Standard Time business hours, and his girlfriend's. This was week five of the second cycle since the Curiosity had landed, but the extended, odd hours had left him

constantly fatigued. Tobak reversed his steps and tucked the truck back under the nightstand. Then he crawled over the doona to kiss Meli goodbye before starting the rest of his morning's routine.

In the kitchen, Tobak munched on a carrot, while he waited for the percolator to finish. Halogen light bounced off immaculate bench tops, disrupted only by the unwashed plate, wineglass, and fork in the sink. The fridge held various souvenir magnets. The most recent—from Italy—held fast his work timetable to one door. In pride of place on the other was a photo of Meli looking through a telescope and smiling, held in a magnetic frame. A pen swung from the string tied to the corner of the frame. Tobak picked up the pen and circled the new week. He would have to print out the next cycle soon.

<u>Week 1</u> Day 1: 0800-1800 Day 2: 0840-1840 Day 3: 0920-1920 Day 4: 1000-2000 Day 5: 1040-2040 Sat 1120-2120 Sun 1200-2200	<u>Week 2</u> Day 1: 1240-2240 Day 2: 1300-2300 Day 3: 0340-2340 Day 4: 1420-0020 Day 5: 1500-0100 Sat 1540-0140 Sun 1620-0220	<u>Week 3</u> Day 1: 1700-0300 Day 2: 1740-0340 Day 3: 1820-0420 Day 4: 1900-0500 Day 5: 1940-0540 Sat 2020-0620 Sun 2100-0700
<u>Week 4</u> Day 1: 2140-0740 Day 2: 2220-0820 Day 3: 2300-0900 Day 4: 2340-0940 Day 5: 0020-1020 Sat 0100-1100 Sun 0140-1140	<u>Week 5</u> Day 1: 0220-1220 Day 2: 0300-1300 Day 3: 0340-1340 Day 4: 0420-1420 Day 5: 0500-1500 Sat 0540-1540 Sun 0620-1620	<u>Week 6</u> Day 1: 0700-1700 Day 2: 0740-1740 Day 3: 0820-1820 Day 4: 0900-1900 Day 5: 0940-1940 Sat 1020-2020 Sun 1100-2100

Tobak checked his Lab watch: 0730 Mars Standard Time. Cursing, he pulled last night's boxed chicken curry from the fridge, grabbed his satchel from the stair rail and turned off the lights. Navigating by borrowed streetlight, Tobak rushed through the living room, past the cat clock mounted on the wall with paws positioned at 1:30am. Pausing to clip his retractable ID lanyard to his belt loop, Tobak headed out the door and revved down the deserted road towards NASA's Mars Science Laboratory.

Tobak scanned his ID tag against the faculty's entrance panel. The camera above the door blinked green. The panel beeped and the door unlocked. He nodded to the receptionist as he turned the corner, heading past her to the eastern wall of elevators. The lobby was blissfully silent. Enough so that he could hear the elevator doors rumble on the 20th floor. Tobak looked at his Lab watch: 0750 Mars Standard Time.

On the surface of Mars, 192.14 million miles away, a remote, 6-wheeled, car-sized rover named Curiosity would be powering up for the day. It had been sitting at the crossroads of three types of terrain for the last month, scooping up soil

samples with its shovel. On Saturday, the Curiosity had plotted to capture its first drilling sample from Mars' bedrock. It would be Tobak's job to transform the data sent by the Curiosity into human-readable data samples for the geo-scientists to analyse. The elevator dinged. He swiped his ID on the elevator panel to open the doors and selected the 17th floor. Tobak had purposely chosen the furthest—and quietest—entrance to the Mars Science Labs: with each checkpoint he swiped through the hallways become increasingly louder and more crowded.

Four checkpoints later, he dropped his satchel off at his desk and passed through a fifth to get his second coffee morning. The industrial-sized tea-room was crowded with staff from the numerous departments, preparing pre-meeting coffee and chatting at the tables. The sky blue of their shirts reflected in the windows, mocking the darkness outside. Tobak returned greetings as he headed over to a familiar circle of heads. They were crowded around the third coffeemaker on a long bench that hugged the left wall, which was a floor-length, internal window. Craig, who worked next to Tobak in Data Handling, was the first to notice him. James from Flight Control, Murray from Fault Protection, and Etsuko from Telecom, all looked over as Craig greeted him, "Morning Tobak, how did the talk with the Missus go?"

"She gave me an ultimatum." Tobak grumbled, moving into the circle and grabbing a NASA mug from the tower of identical, stacked mugs, next to the coffeemaker. "Have you heard whether Saturday was a success?" he asked, hoping to divert the conversation.

"Damien said the dust storm breached the safety net two hours earlier than expected." Etsuko said, "I don't think they did more than preliminary testing, before they had to abort." Etsuko was leaning against the bench, watching the muted TV monitor on the far wall. The monitor was split into eight screens, each showing a different channel, clock, map, or graph. Tobak followed her gaze to the top-right screen, which displayed a weather map of Mars.

"Sunday was lost waiting for the storm to subside," James added, from next to Etsuko, "and probably today will go the same till the dust settles."

“An ultimatum?” Craig asked. Murray moved away from the coffee machine, mug in hand, and Tobak took his place.

Tobak braced his hands on the bench, breathing in the rich aroma as his mug filled with liquid. “Work hours, stress, the usual. And our lease is ending soon. Looks like it’ll be a slow day then.”

“Is that Phil?” James asked, “I think we’re ready to go in.”
Craig snorted, but followed James’s gaze through the glass wall.

In the corridor, Phil Gatmin, the Director of Flight Control, had opened the door to the conference room opposite to, and identical in size to the tea-room. From the way the tearoom was emptying, the Director of Command and Data Handling, and the Director of Telecommunications must have also opened their conference rooms further down the hall. Fault Protection had their room on the floor below, along with Mast Camera and Mars Hand Lens Imager. While the Sample Analysis at Mars (SAM) departments had their labs and offices in the next building.

“Lunch at Flick’s?” James asked, before their group split up into their respective departments.

“Sure,” replied Tobak, hearing a grunt from Murray, already halfway across the room, and agreements from Etsuko and Craig.

The Mars Science Laboratory was made of three buildings, nestled within the California Institute of Technology. Flick’s was a café overlooking the rolling greens, and brewed the best coffee on campus.

Tobak added milk to his coffee and followed Craig out the door. While Tobak thought he was fairly average in the mornings compared to the rest of the staff, Murray was almost unable to function before his three morning coffees and two Red Bull.

The meetings were routine by now. The first hour and a half was dedicated to 5-minute updates from the directors of each department via video conference, a fairly lengthy process considering there were still 17 of 21 departments currently

active in the Curiosity mission. The other four had been involved with shuttle launch and the 10-month navigation to Mars, and were redeployed to other projects. Following the updates were 20 minutes of questions, after which the video calls were turned off. Each department then discussed any necessary changes to the current instructions for the sections within their departments, or any new instructions that came from the first hour.

Tobak took exacting notes on his laptop, as usual. Out the corner of his eye, he could see Craig doodling a busty woman on his notepad, occasionally stopping to scrawl an extra dot point at the bottom of the page before adding more emphasis to her shaded curves. The head of Flight Direction—the department that planned all of Curiosity activities—confirmed that Saturday’s drill sample testing had been cancelled due to the dust storm. Most of the other departments reported software testing, delays, or analysis in progress over the weekend, although Barbara from Sample Analysis (SAM) reported positive findings for carbonates in last Wednesday’s soil sample.

Since Saturday’s activity was aborted, Tobak spent the rest of the morning running simulation tests on the next instructions for the Curiosity: to unfold it’s robotic arm—and the drill on the end—to the precise location it was before the storm. Then, once the dust had completely settled, they could run the preprogrammed sequence of movements to begin drilling. The Curiosity was a \$2.5 billion piece of engineering. Every action it made would be unhurried, risk-assessed, and cautious. There was no friendly mechanic around if anything broke.

It was time-consuming and fiddly work. While the simulations ran, Tobak read the report from Dane Phillips, his weekend counterpart. Bulky earphones blocked out any external noises and Tobak jumped, his arms tensing, as a hand tapped him on the shoulder. He looked up and paused the music.

“Hey Craig. What’s- oh, lunch time?” He asked, pushing his headphones down around his neck. Tobak swiveled his chair to face the less cluttered end of his desk, and the door. His foot caught in the strap of the satchel leaning against the left leg of the table.

“Mars noon.” Craig confirmed, having backpedalled to the doorframe, “We were out of the building before we realized you hadn’t shown up. I volunteered to come back, but the others went to get a table before the morning cyclists steal them all”.

Tobak freed his satchel and lifted it onto his lap. The unbuckled flap fell back to reveal his food container. “Ummm, right. Actually, I forgot that I’d brought lunch today...” He said, pulling off the lid. He frowned at the tiny lump of sauce congealed in one corner of the container. “But it looks like Meli got at it first.”

“Ah, an ultimatum, you said?” Craig asked, raising an eyebrow.

“Yeah. Just a moment.” Tobak saved his work, logged out, and pulled his ID card out of its slot at the top of the keyboard. He grabbed his wallet out of the top drawer of his desk and reattached the ID card to his lanyard.

“So you think it’s going the way of Apollo?” Craig asked as they headed to the elevators.

Tobak swiped through a checkpoint and held the door for Craig. “Not quite, I mean, we’re not married for one, and she wants me help her “fix” our relationship or she’ll leave when the lease runs out next month.” Tobak said.

“Fix what?” Craig asked, walking backwards through the doorway to keep Tobak in view. “The fact you’re working 60 hour weeks, the crappy work hours, the constant fatigue? When’s the last time you guys had sex?”

“I-what?” Tobak yelled, “Geez, recently enough. The 2am, 3am starts don’t help, but it’s the fatigue mostly”. They passed through the last checkpoint and turned the corner to the elevators.

“Dude, we’re making space history. An odd workweek is a sacrifice we all chose to accept.” Craig said, double tapping the button. “The fatigue isn’t going to go away, but you’re not the only one feeling the strain. My kids have stopped asking

me to go on bike rides with them, like we used to do. It may have been easier before the Curiosity launched, when we were on Earth time, but we're doing great things here. Don't forget that."

"Yeah." Tobak stared at the floor, hands in his pockets. Craig nudged him into the waiting elevator, when it was obvious he wasn't going to move on his own. The doors closed. Craig swiped his ID card and selected the ground floor.

"I missed our anniversary."

"Oh... is that why your lunch-"

"...and her mum's birthday party two weeks ago." Tobak said, frowning. They walked out the elevator and through the lobby, "Although I don't really understand why she was mad at me for that one. I apologized to Suzie."

"Women, hey."

A flock of white-crowned sparrows squabbled loudly on a roof across the road. The sky visibly lightened as they walked across campus, streaks of pink and orange and blue chasing away the darkness.

They paused as five in-line cyclists cut across their path. As Tobak and Craig walked towards them, they pulled up across the road at the tables spilling out onto the pavement and added their bicycles to the growing stack at one end.

"What are you going to do?" Craig asked as he spotted Etsuko waving at them.

"She was always going to leave at some point, wasn't she?" Tobak asked. On the far side of the spandex-crowded table, James placed the table number 14 next to Etsuko and sat down.

"They inevitably do."

They each stepped forward to claim a chair and returned their coworkers greetings. Some 192.14 million miles away, on a dusty planet not entirely unlike

Earth, a nuclear-powered rover was tucked away—a lady whose presence commanded 410 of Earth's most brilliant scientists and engineers—waiting patiently for new instructions.