

the art of the future

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Remote Operations

By Marika Landau-Wells

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The soft buzz gave Kaia a split-second warning before her implant piped Nurse Ellen's voice into her ear. "I notice your blood pressure is a little high, Kaia. Is anything the matter?" Kaia yanked down on her t-shirt before the seatbelt slid into place across her chest. "Nope. Everything's fine. Just in a hurry is all." Kaia pressed the glowing Start button next to the steering wheel.

"Well, okay, Kaia," Nurse Ellen said before a precise pause. "I'm here if you need me."

The AI's built-in lag unnerved Kaia. So did its colloquialisms.

Where is "here" exactly? Kaia thought. She knew better than to ask the question aloud.

She did say: “Walmart, please, Joe.”

The Jeep backed out of the garage. Kaia glanced at the clock on Joe’s heads-up display. 10:22 AM. “What’s our ETA, Joe?” she asked as the Jeep swung on to Normandy Drive.

“We will arrive at our destination in forty-two minutes.”

Kaia found Joe’s decidedly fake voice reassuring. It was good to know when a machine was a machine. Somehow that made it easier to call him a him. And to give him a name. With Freddy it was the same thing. Nurse Ellen is definitely an it.

The identical houses of Fort Irwin slid by as Kaia leaned back and Joe did the driving. The base was active this morning. The war was over for most military personnel, demobilized and downsized. But Fort Irwin supported on-going patrol ops in Panama and the SLOCs, so it was running at a high tempo, even three years after the treaty.

Joe maneuvered through the base traffic as fast as his safety specs allowed. The other vehicles were mostly military-modified combustibles left over from the war. No autopilot, no onboard computer. Nothing that could be hacked, infected, or otherwise compromised. Except their human drivers.

Kaia had to keep Joe shut down throughout the war. Even now, the price she paid for him was the mandatory clean-install she performed once a month. He was worth it though.

Joe slowed at the base exit as he slalomed through the K-rails and the guardhouse’s scanners washed over them. Kaia felt her chest unclench a little as the gate lifted and Joe accelerated up the long road that led to Highway 15.

Kaia leaned against the Jeep's doorframe. She wanted to sleep, but that would just get Nurse Ellen on her case. The AI knew how many hours she'd slept. It knew what she'd had for breakfast and when she'd taken her meds. It knew how many stairs she had climbed that morning. It monitored a thousand vital signs per second and yet missed the most important thing about Kaia today. Because Nurse Ellen didn't seem to know – or care – that it was Emily's birthday.

"Music, please, Joe," Kaia said. She needed something to keep herself awake.

"Default source is radio," Joe said.

"That's fine."

I forgot to synch music after his last clean-install, she realized.

She had squeezed in the install two days ago, between dropping off Emily at preschool and the start of her shift, afraid he would set off a sensor somewhere for violating regs.

A minute passed in silence. Kaia's chest tightened again. "What's wrong, Joe?"

"No stations available," Joe replied.

Kaia checked the mile markers out her window. They were only ten miles from base. Still inside the jammers. "Okay, never mind."

They reached Highway 15 and headed south towards Barstow. A mix of civilian vehicles and military headed the other way, towards Las Vegas.

Five miles outside of Barstow, the flat scrub of the desert gave way abruptly to a different kind of barrenness. Kaia cringed. Barbed wire fences stretched along the

15. Litter spilled underneath and blew across the highway. Inside rose the building blocks of Campo Esperanza. Ten thousand shipping containers, stacked four high, home to more than thirty thousand refugees. More than the population of Barstow itself.

As she passed the gate of the camp, Kaia saw a dozen men sitting in the shade of a road-side lean-to. Smoke wafted out the back. A hand-written sign read: “Tortas \$10! No synthetico!”

Kaia wondered if what the sign said was true. Had the refugees managed to find a supply of corn clean enough to be labeled “no synthetico”?

Probably not. And definitely not for ten dollars. She patted the front pocket of her jeans absently.

“Your destination is on the right,” Joe said as he turned into the sprawling parking lot in front of Barstow’s Walmart.

Kaia got out of the Jeep and brushed the frame to lock it. Her skin prickled with the heat. Kaia crossed the hot asphalt of the near-empty lot. Barstow thrived at night when traffic between Los Angeles and Las Vegas was at its peak and the temperature ebbed. Daytime belonged to the refugees, before their chipped wrists called them back for Esperanza’s curfew.

A small woman, round-faced, dressed in refugee-mismatch sat outside Walmart’s sliding doors. She wore a plastic visor to block the sun. A blanket spread before her held a dozen woven bracelets. When she reached down to place a newly-finished bracelet on the blanket, Kaia saw the sores running up and down her arms. Black around the edges, swollen red centers.

Salvadoran Plague, Kaia thought with a shiver, knowing the name was unfair. The plague was carried by an engineered weevil the Chinese had introduced to Central American rainforests in 2041 to clear trees quickly in their attempt to secure the flanks of the canal after the invasion. Their own ground troops had sickened first. Story was, the PLA had rounded up its own and burned them to stop the plague from spreading. It had spread anyway. Mostly to the civilians fleeing north and south of the advancing PLA forces. The Salvadorans had been the first group to survive and move north on mass. The first ones to hit the U.S. border, pleading for sanctuary.

As a young Army lieutenant, Kaia had believed every word about the brutality of the PLA. She had seen plenty of burned bodies when she and Freddy had landed at Boca Chica with their company and started pushing east through the Panamanian jungle. The woman selling bracelets looked like the other survivors. Blackened and in constant pain, trying to out-run an invisible terror in the weevil. And a visible one in the PLA.

Kaia tried to not make eye contact with the woman on the blanket. Now was not a good time for a relapse. Nurse Ellen would pop an emergency tranq on her, Emily's birthday or not, and Kaia had too much to do.

Inside Walmart, the bright florescent lights and chilled air made Kaia feel clean again. She dug the list out of her pocket, inked on a sheet of surplus army-issue memo paper. The kind that had made for secure comms during the war. Mike had hoarded blocks of it. He loved the gritty, real feel of it, he said.

Balloons, plates, cups, hats, party favors, Kaia read.

She tapped a bot and it followed her, basket waiting. She started down a wide aisle at random, enjoying the store's vastness. As a child, Kaia had dreamed of living in a Walmart. It had everything.

In fact, the day she first saw empty shelves at a Walmart was the day Kaia had realized the Trade War was serious. More than half of the shelves had been empty that spring day in 2041. Global supply chains had not yet been re-mapped. The shortages seemed almost random unless you had a map of ocean-going trade in your head. Kaia had no map. The bare, white shelves had scared her in a way that combat duty in the jungles of Panama had not.

She was still on her first tour that spring day in '41. It was an off-day for her remote operator unit. She'd left Freddy thirty feet up a slope, buried in the decomposing leaf litter of a Panamanian rain forest. Powered down, no heat signature, totally camouflaged with the other rovers. Nevertheless, she'd hated leaving him, hated de-linking. The instantaneous drop in sensory input made her brain feel like oatmeal. Army docs insisted it was healthy for remote operators to de-link from their rovers for one full day every week. The forced-24, remote operators called it. Or dead day.

Kaia and the rest of the operators had privately grouched during the war that the Army docs didn't know what they were talking about, didn't understand the cost in readiness. There was always a hang-over when they linked back up with their rovers. Slowness, imprecision. Freddy's paws wouldn't go quite where she wanted. His senses weren't entirely hers for the first ten hours of re-link. It was frustrating. And dangerous.

Kaia remembered the first time Freddy got hit. It had been in that hang-over window. Her unit had stumbled across a PLA recon team. Warm bodies lit up the rover's heat sensors but the PLA soldiers had been faster than the rovers' human operators. Evasive maneuvers had been enough to save most of Freddy's exoskeleton, but he took a hit and lost part of his left front paw.

2500 miles away in a sensory deprivation tank in Fort Irwin, Kaia had felt the flaring pain of claws lost. Having a linked relationship with Freddy – sharing quasi-nerve endings – made her a more effective operator. But it made her vulnerable to his injuries as well.

Kaia's unit had taken multiple casualties that day before wiping out the PLA recon team. A triage unit had handled rover repairs and they were back up and running in a day, but Kaia had resented de-link rules all the same. It was something she and Mike had agreed on when they first met. They had agreed about a lot of things then. Now it was 2049, the shelves were full, and Mike's views on de-link were nowhere near her own.

Kaia found balloons, plates, cups, hats, and party favors all in Aisle 24. The classic characters of her childhood seemed to be making a comeback. But Emily had no interest in Batgirl or Disney. She had declared her intentions months earlier, before Mike had redeployed.

“For my birthday, I want a puppy!” Emily had announced at dinner.

“We can't have a dog on-base,” Mike had said around a mouthful of synth-chicken stew. His response had been so automatic, Kaia wasn't sure he'd heard the question. He had stared at a spot above her head for the whole meal. The fingers not grasping his fork had been twitching. She knew the signs. Emily had deflated. “But, mom...”

“We'll do the best we can for your birthday, Em,” Kaia had said with a long look at Mike.

Now Mike was deployed, and the party planning was all in Kaia's hands. She looked at the balloons and sure enough, there were some vaguely dog-shaped ones

with lolling red tongues. She thought of Freddy and her heart clenched. Then she exhaled slowly, praying Nurse Ellen hadn't noticed.

Impossible, of course. It notices everything.

Kaia checked her wrist. It was nearly noon. She led her bot-ful of puppy-themed birthday supplies to the register. The pale man behind the check-out looked hollow-eyed. He blinked convulsively.

"Have you found everything you needed in your visit to Walmart today?" he asked. His voice was almost as off-putting as Nurse Ellen.

Kaia nodded, eager to leave for once. She tapped her wrist to the screen and winced at the debit balance.

The buzz in her ear didn't come until she swiped Joe's doorframe. "Six new pathogens have entered your system in the last thirty minutes, Kaia," Nurse Ellen said. "How do you feel?"

"Fine," Kaia said, settling into Joe's driver seat. "I feel fine." She was relieved. Nurse Ellen would be so preoccupied with her immune system that the markers of a potential panic attack would probably go unnoticed.

"I have informed Army Medical and activated the decontamination sequence in your vehicle," Nurse Ellen said. "I am also compounding a supplement for you to take with your next meal."

"Okay, fine, whatever." It was times like this that Kaia could almost feel the nanoparticles swimming in her body feeding data to Nurse Ellen.

Joe's interior filled with an intense lemon-scented haze. "Kaia, please close your eyes," Nurse Ellen said. Joe's emergency UV system bathed the interior of the cabin. "Kaia, please open your eyes now."

Kaia checked her wrist again. Ten minutes wasted. The party was supposed to start at three. She had to hurry, but there was still enough time.

"Joe, we need to go to 1281 Starlight Street."

Joe slid out of the parking lot and navigated the right-angles of Barstow's planned community layout. He stopped in front of a pre-fab house in shades of desert brown. Its door was bright purple.

"Your destination is on the right," Joe said.

Kaia got out of the Jeep and knocked on the purple door.

A woman burnt by sun and wrinkled with age answered. She wore a flowing, polyester dress and rubber flip-flops. "Right on time," she said with a smile broken by several missing teeth. "Have you got the cash?"

Kaia nodded and patted her pocket. "I want to see it first." That's what her mother had told her to say.

The old woman nodded and disappeared into the gloom of the house. A breeze caught from somewhere and sent a whiff of something that reminded Kaia of her childhood. Burnt sugar.

"Here it is," the old woman said. Her arms sagged slightly under the weight of the cake, already resting inside a pink cardboard box. "Real sugar, real flour, real

eggs. All clean and inspected. Not exactly legal, but there's nothing synth about this cake or my name ain't Ethel Brown."

Kaia looked at the white-yellow frosting two layers high, with "Happy Birthday, Emily!" printed across the top in bright green letters. Then she noticed the dusting of brown powder around the edge of the cake.

"Is that cocoa powder? Real chocolate?" Kaia breathed.

The old woman nodded. "No charge. Tell your mama, Ethel sends her regards. Grace Martin looked out for me when things was lean during the war. A little bit of chocolate for her gran-baby's birthday cake ain't nothing."

Kaia pulled out the fold of twenty-dollar bills from her jeans and handed it over. She took the cakebox in both arms. It was the single most expensive piece of food she had ever bought. Mike was never going know how much it cost.

She laid the cakebox down on the passenger side floor. "Home, Joe," she said. "Nice and easy."

Kaia's wrist beeped. A voice in her ear announced: "Message from Lieutenant Colonel Garcia. Asset decommissioning request approved."

Kaia chewed her lip as Joe sped towards Highway 15. Her CO's approval was not expected. Not this soon. But his timing was perfect.

Kaia had put in the request months ago, after she and Mike had fought about his going on another tour. Mike had said it was for the pay. Just like he'd said every year since the end of the war. But this time, Kaia had called him a liar. And she was right. She'd seen that long look in her own eyes, once upon a time.

Mike had called her jealous. And he was right. He'd told her to request another tour herself, if she missed linking so much. She had been on the verge of saying, "Fine. I will!" when a wail had risen from Emily's bedroom: "Nooo!"

The cry was also a reminder that there was no such thing as a fight that stayed between the two of them. So Kaia had decided to find another way. For her, and for Mike, because both of them needed to let the war be over. The good and the bad of it.

Kaia was quietly thanking Lt. Col. Garcia as Joe took the exit from 15 towards Fort Irwin Road. It took several moments for her to realize that Joe was speeding beyond the limits his systems should have allowed.

"Joe? Joe!" Kaia tilted forward and tapped the brake. No response. In less than a mile they would hit the twisting downslope of Fort Irwin Road. "Override, Joe!"

A tinny, un-Joe voice responded, "Hail to the PLA, motherfucker."

Malware, probably picked up over some infected network Joe grazed in Barstow. Goddammit.

"I'm so sorry, Joe." Kaia held down the brake, the start button and hit the horn twice. It was Joe's master reset sequence. His basic AI wiped, the engine cut out. Inertia carried him another quarter mile.

Kaia glanced at her wrist. Thankfully she was outside range of the jammers. "Dial mom."

"Kaia, honey?" her mother's voice came through her implant. "What's the matter?"

“I need your help, mom.”

Grace picked up Kaia on the side of the road in her combustible Ford F-170. She'd kept the truck over a decade in her Las Vegas garage after the country went electric. For rainy days, she'd said. It had rained a lot during the war. Grace had smuggled everything from wheat flour to refugees in that truck.

Kaia locked Joe and left him where he'd died. He'd need a full re-build before his engine could start. If she could even bring him back. After a master reset, there was no guarantee. Kaia tossed the decorations in the back of the cab, then carefully set the cake on her lap.

“Don't worry,” her mother said before shifting the truck into gear. “You'll get him back tomorrow.”

“Yeah.” But Kaia watched Joe in the rear-view mirror until he vanished. She hoped he'd be there tomorrow. That leaving him wouldn't be like leaving Freddy.

Freddy had been left, not because he had become useless but because Kaia had. Women serving in forward combat roles were no problem after rovers came online. Some evaluations concluded they were better remote operators than men. Something to do with a higher innate capacity for empathy.

But accidental pregnancy voided Kaia's qualifications. The drug cocktail she was on to support linking to Freddy would never be tolerated by a fetus. Nurse Ellen ratted her out to Army Medical at the exact same time as it informed Kaia.

“Congratulations, Kaia!” the AI had said. “You're pregnant!” Kaia had been on her way to PT during a forced-24. By the time she reached the gym, her CO had already been informed. Twenty-four turned into forever.

They'd told her Freddy would be taken care of. But she knew what that meant. No one bothered to evac rovers. Another rover in her unit would put a bullet in his dog-hybrid brain, then dismantle and destroy every single one of his parts. The organics would burn so there was no DNA left for anyone to collect. The carbon fiber and metals would be scattered across the Panamanian jungle.

Kaia had lost Freddy and gained Emily on the same day. Gone from war-fighter to expectant mother in hours.

The switch from forward combat to an assignment in the rover kennel happened fast because the Army was running at its highest tempo and needed more rover trainers. Trainers took time to develop. But in Kaia, the Army had a pre-trained trainer. It also had an operator going through withdrawal. The breakdown that came in the weeks that followed should have been anticipated. Instead, Nurse Ellen triaged. Three years later, Kaia still felt like an alien was baby-sitting her.

She told herself Joe would be okay. He would be there tomorrow. Today there were more important things.

Kaia left her mother to set up the decorations at home and went to pick up Emily from day-care. Her wrist said 14:32 when she pulled up in the combustible.

"Where's Joe, mom?" Emily asked. She bounded into the truck, pigtails flying.

"Joe got sick, kiddo," Kaia said. "We'll try to fix him tomorrow. But you know what it is today, don't you?"

"My birthday!" Emily cried.

"Yes it is! Should we go get your special present?" Kaia asked.

"Yes!" Emily said. "What is it?"

“You’ll have to wait and see.”

Kaia took a set of familiar turns around the base, finally pulling up in front of a low, cinder-block building.

She held Emily’s hand as they walked inside.

“Where are we?” Emily asked.

“Didn’t think I’d see you in here on your day off, Captain,” the Warrant Officer said.

“Just picking up my daughter’s birthday present,” Kaia said. “Here’s the req order. An asset’s being decommissioned.” She tapped her wrist to the reader on the desk.

The Warrant Officer read it and nodded. “Yes, ma’am.”

“Em, stay here.” Kaia disappeared behind a beige metal door and emerged five minutes later holding a leash. “Em, this is Maisy,” she said as a graying Labrador wagged its tail and licked Emily across the face.

Emily’s arms were already around the dog. “She’s my present?” Maisy took another thoughtful lick.

Kaia nodded. “Maisy is a really special dog, Em, but she’s getting pretty old so the Army is decommissioning her. What do you think? Should she come live with us?”

“Yes!” Emily squeaked.

As they walked back to the truck, Emily kept one hand on Maisy. “How’s she special, mom?” Emily asked, looking at Maisy for signs.

Kaia smiled. “Maisy’s one of the dogs who breeds rovers.” She helped Emily and Maisy into the truck. “We raise her puppies to become rovers, like the one I used to fight with. Freddy. Freddy started out as one of Maisy’s pups. Now she’s getting old and the war is over, so it’s time for her to have a home.”

Emily looked at Maisy again, impressed. “Our home is the best one for her,” Emily declared, as if concerned about competition.

“I think so too. Are you ready for your birthday party now?” Kaia asked.

“Yes!”

The afternoon was a blur of small children trailing balloons, fueled by contraband sugar. The other parents were equal parts impressed with Kaia’s illicit cake procurement and glad that they could just pretend it was normal. That this is what a four-year old’s birthday party looked and tasted like. That the world was starting to feel the way it once had.

Kaia’s mother was smiling later as they cleaned up the wreckage left by a dozen four-year olds and one aging Labrador.

“What is it, mom?” Kaia asked as she washed the stickiness off of their kitchen table. Synth sugar didn’t stick.

Grace smiled. “Aw, it’s nothin’, honey. It’s just good to see Em like that. Happy, you know? I worried she was gettin’ her daddy’s thousand-yard stare from time to time. Hated that look in your eyes and I couldn’t bear it in hers. None of you was here, you know?”

Before Kaia could answer, the front door opened and Mike walked in. Kaia checked her wrist. He was a little early for his forced-24. He stumbled the way operators do in the first few hours of de-link. His eyes wouldn't focus. Kaia could still see the hunt going on behind them. She knew his brain was searching for sensory input that wasn't there. Smells, sounds, the feeling of jungle under paw.

Kaia guided Mike over to the table. They had saved him a slice of cake. No amount of calories on a forced-24 would offset the emaciation and atrophy endemic to remote operators. But it was a start.

Emily ran into the kitchen. Maisy followed, wagging.

"Daddy!" Em whispered. She knew better than to shout when Mike had just de-linked. She hugged him hard. Mike stayed where he was, staring long, jaw working, fingers twitching. Emily hugged him again.

Then Maisy nuzzled Mike's hand. The hand stopped twitching. It found Maisy's head, rested there.

"Daddy, we got a dog," Emily said. "Like your rover. See?"

Mike's eyes focused and he saw Emily. Recognition washed over his face. "I see." Then he smiled. "Happy birthday, baby girl."

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