

TIDALLY LOCKED

The fiery red sun was where it had always been and where it would always be: just above the western horizon. From there it would forever shine through the bedroom window of Sheldon's house. Hoping to get a few hours' sleep before receiving the fateful message from the Space Academy on his computer, he drew the curtains to shut out the sunlight and went to bed. But he was too excited to sleep. In a few hours he would know the mark he had obtained on the celestial mechanics exam. The Space Academy had deemed him fit enough to travel in space; if, in addition, he got the highest mark among those who took the exam, he would probably be selected to navigate the upcoming mission to find out what life, if any, existed on the planet Veron.

This was one of the two questions that most intrigued the scientific community, the other one being the origin of the human species. There were no animals that remotely resembled people – the most advanced animals, either extinct or extant, were quadrupeds whose genes differed much more from humans' than from each others'. The Government's initial position was that God had created all life forms. Once the evidence that the other life forms had evolved from single-celled plants and animals became incontrovertible, the Government reluctantly accepted this fact but continued to insist that God had created the first people in His own image, and they went so far as to ban the expression of any dissenting opinion. Sheldon had always been skeptical of any theory for which there was insufficient supporting evidence, but he had also been prudent enough to hold his tongue, especially now: he didn't want to risk being excluded from the mission that could possibly decide the question that interested him even more.

After a couple of hours, Sheldon gave up on sleeping. He got up, opened the curtains, turned on his computer and, without much hope, checked his messages. There were a few of them, most of them spam, but not the one for which he was hoping. To distract himself, he clicked on the icon for his favourite movie and watched it for what must have been at least the tenth time. The movie had been banned by the Government, but after a long and exhaustive search he had found it on a web site and downloaded it, and not a moment too soon: the next time he looked for the site, it had been closed down. The movie wasn't violent or pornographic; those sorts of films were freely available, but they held no interest for him. No, it was a romantic film about a man who managed to win the heart of a woman more powerful than he was by being more attentive to her needs than his stronger rivals.

The heroine of that movie reminded Sheldon of his high school sweetheart Abby, a tomboy who had refused to compensate by wearing makeup. He had been attentive to the only need she had at her tender age – tutoring in mathematics and physics – and in return she had protected him against the bullies. All too soon she had complained to him ruefully that all the other girls in their class were disgusted by the thought of a girl so much as touching a boy who was weaker than she was. For a while she had found the courage to resist their constant demands that she drop him, but when the only boy in their class who was stronger than she was offered to become her boyfriend on condition that she pretty herself up and abandon her tomboyish ways, she had reluctantly agreed – on condition that he not bully Sheldon. He had had a few girlfriends after Abby, but while most of them were nice, none of them could quite measure up to her in his eyes.

When the movie was over, he checked his messages again, and his heart raced when he saw that among the new messages was one from the Space Academy. Ignoring the other new messages, he opened it. His heart sank when he read the message. He had obtained a mark of 95% on the exam, which put him in second place, and he was being invited to go to the Space Academy. Evidently, he thought, he was being given a chance to dispute his grade, which would probably be an exercise in futility.

The receptionist directed him to an office, and there he saw two men smiling at him. The older of the two men extended his hand and said, "Congratulations, Mr. Richards! You have been selected to navigate the mission to Veron. I'm George Oates, Mission Captain, and this is the other member of the crew: David Bronstein, the exobiologist." Sheldon shook hands with both men. "Say now," said George, "you don't exactly look thrilled to have been selected. Are you having second thoughts about going? If you are, just say so. There are plenty of other men who would love to take your place."

"Of course not," said Sheldon hastily. "It's just that ... well, if I only stood second on the exam, why was I selected? Is the person who beat me too weak to travel in space?"

"Oh no, she's even stronger than you are!"

"Well then, why wasn't she selected instead of me?"

"I don't think you heard me clearly, Mr. Richards. I said 'she', not 'he'."

"I heard you, Captain Oates. I too said 'she', you know."

"But surely you know that women haven't traveled in space since the first voyage to Veron, when all the crew members were murdered by Marians."

"Yes, that much I do know. But I didn't think that this was a prohibition that was carved in stone. As much as I would love to go on this mission, I think it would have been fairer to select whoever stood first on the exam, man or woman, and as Mission Captain, you would surely want the best available navigator. Couldn't you have appealed to the higher-ups in the Space Academy to allow you to select her?"

"They'd never go for it. We're damned lucky that the Government didn't prohibit us from making the trip altogether. They disapproved of it so strongly that they refused to authorize funding for it. Fortunately Owen Roberts funded it out of his own pocket, and the Director of the Space Academy managed to persuade the Government not to prohibit it by appealing to their desire to beat the Marians. If we had included a woman on the trip, the Government would surely have banned it. I commend your sense of fairness, Mr. Richards, but if you withdraw from this mission, I'll just have to replace you with a man less competent than you, and all you'll have accomplished is to pass up the opportunity of a lifetime. Are you in?"

"Yes, I'm in. But could you give me the name and electronic address of the woman who beat me on the exam?"

"Aha!" laughed George, "so it isn't just fairness you care about, is it? You've got the hots for her, and you haven't even seen a picture of her! How do you know she isn't some plain Jane type?"

That wouldn't have mattered to Sheldon in the least: a plain woman would resemble the Abby who had once been his girlfriend. It was enough for him that she was stronger than he was – like Abby – and smarter as well. If he could just tell her that he'd been willing to step aside for her, he might stand a chance with her. But he didn't want to discuss his personal life with this man who had laughed at him; so instead he lied: "I just want to congratulate her for her success on the exam."

"Yeah, right!" laughed George, to David's amusement as well as his own. "But okay, let's get down to business. You're going to train for this mission in the Astronomical Research Centre on the dark side so that you can see the stars and the planets with your own eyes. Your training will last a year and the voyage a year and a half; so you'll be away from home for two and a half years. You have twenty days to get your affairs in order. Then come back here and you'll be driven to the airport and flown to the Research Centre. And remember to bring warm clothing. The telescopes have to be kept at the same temperature as the air, which is about fifty degrees below freezing, not to mention the constant howling wind."

On the way to the airport, the car passed through the poorest section of the city. Sheldon saw a well-dressed teenager toss a coin to a group of beggars and laugh as they fought over it. In the scuffle it got kicked onto the road directly in front of the car. A ragged little girl darted in front of the car to retrieve the coin, and the driver barely managed to stop in time. "That sort of thing happens often in this part of town," said the driver. "I've learned to be on the lookout." Shocked by what he had just seen and heard, Sheldon was greatly relieved when he finally arrived at the airport.

Looking through the window of the two-seater airplane, Sheldon saw, for the first time in his life, the sun gradually descend towards the horizon. As it did, the flora and fauna grew sparser and sparser, and by the time the sun disappeared below the horizon, there was no life, either plant or animal, to be seen – only snow. This scenery wasn't varied enough to interest him; so his mind began to wander to a book he had read as a child, the one that had sparked his consuming passion for astronomy.

People had become aware that the sun wasn't the only thing in space when a tiny black disk was seen transiting the sun. Driven by curiosity, some scientists had braved the frigid air to voyage just far enough from the sunlit side that the sky was dark, and there they had built an observatory that was to become part of the Astronomical Research Centre. Seeing for the first time points of light in the dark sky, they soon concluded that these were stars like the sun and that their own world orbited the sun in a period they called a year. A year turned out to be about fifty times as long as the average human sleep-wake cycle, which had previously been called a day

and divided into twenty hours; so they standardized the day to be exactly one fiftieth of a year and redefined the hour accordingly.

They also observed that some of the points of light moved relative to the others, and they soon concluded that these were other planets that also orbited the sun. Once they had built telescopes that were sufficiently powerful, they learned that the outer four planets were gas giants and that the other two inner planets were, like their own world, rocky and close enough to the sun to be tidally locked so that the same side of each planet always faced the sun. A planet close enough to an average star to be tidally locked would be roasted, but since their sun was a cool red dwarf, on each of the three inner planets there was a zone that was the right temperature for liquid water to exist. On their own world, which was later called Guyus, that zone was a ring encircling the planet a few degrees sunward of the terminator that separated the sunlit side from the dark side. On Marius, which was farther from the sun than Guyus, the liquid water zone was in the middle of the sunlit side; on Veron, the innermost planet, it was in the middle of the dark side, the atmosphere bringing just enough heat there from the scorched sunlit side.

Where there was liquid water, there could be life, possibly even intelligent life. Evidence of the existence of intelligent life outside of Guyus had come in the form of the first radio signals that were transmitted from Marius. This discovery had driven the Guyans to devote a considerable proportion of their resources to the development of space travel, with the initial intention of visiting Marius. But before long relations between Guyus and Marius had become hostile; so instead the Guyans had shifted their attention from Marius to Veron. When they discovered that the Marians too were developing space travel, the Guyans raced them to be the first to land on Veron. They had won that race, but before the window of opportunity for returning to Guyus had arrived, Marians had landed on Veron and murdered the entire Guyan crew. The Marians too had all been killed in the battle and neither team had sent out any signals before the battle took place; so nobody on either planet knew whether any life existed on Veron. For some reason, the Government hadn't authorized any further voyages to Veron, but now one was about to take place and the question about the existence of life on Veron was about to be answered.

As twilight gradually morphed into darkness, the stars Sheldon had seen only in pictures appeared one by one. Brighter than any of the stars were several planets: the two nearest gas giants as well as Veron, their destination, and Marius. He stared in total ecstasy at the beautiful star-studded black sky until two rows of coloured lights blinked on from below. These rows of lights bordered a runway leading to the Research Centre. The airplane landed on the runway and taxied to the end of it. A door opened, and the airplane entered a room just big enough for it. The outer door through which it had entered closed, the inner door opened, and the airplane taxied through it into a large room in which there were other small airplanes and also some cars. Upon entering the main lobby, Sheldon was greeted by Captain Oates himself and led to his room to unpack. It was small, but he didn't require much space. For the next year, almost every waking moment would be spent outside of this room, training for the mission on which he felt that he didn't deserve to go.

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The fiery red sun was where it had always been and where it would always be: directly overhead. Her work day over, Rachel hopped onto a tram to go home. After a few stops, she saw a man on the sidewalk carrying a net bag full of oranges. It had been over ten days since she had managed to find oranges. Apparently they had appeared in a store somewhere nearby and this man had been one of the lucky ones who had managed to buy some. She jumped off the tram at the next stop and sprinted towards him with the intention of asking him where he had found the oranges, followed by several other people with the same intention. He directed them to a store some six blocks away. The lineup stretched for half a block into the street, but she was undeterred. Nearly an hour later, when there were only two people in front of her, the saleswoman announced that there were no more oranges. Through an open door, Rachel saw two crates of oranges, apparently left there by the saleswoman for her own use. Rachel was sorely tempted to put up a fuss, but now that she had something to hide from the authorities, she dared not draw attention to herself.

"That sort of thing would never happen on Guyus, where ten percent of the work force is unemployed!" grumbled the man in front of her.

"Some of them have to beg on the streets to get anything at all to eat," retorted Rachel. "As much as I hate having to spend so much time waiting in line for food and sometimes not getting what I want, I wouldn't want to impose such hardship on other people just to improve my own life." He shot her a look of disgust and strode away.

Rachel took the next tram home and contented herself with the food she had managed to obtain. Hoping to get a few hours' sleep before receiving the fateful phone call from the Space Academy, she closed the curtains on all the windows of her one-room apartment to shut out the daylight and went to bed. But she was too excited to sleep. In a few hours she would know whether she had been selected to navigate the mission to Veron. She had passed all the tests with flying colours, but now that she was being considered for inclusion in the mission, the Government would be sure to do a thorough security check on her. If they discovered that she belonged to the underground Humanist Party, not only would she be excluded from the mission, but she would be expelled from the Space Academy and probably arrested as well.

After a couple of hours, Rachel gave up on sleeping. She got up, opened the curtains, sat down at her desk and opened her favourite book, the one that had sparked her consuming passion for politics. It had long been banned by the Government, but her high school sweetheart had secretly given her a copy and she had devoured it eagerly.

Like almost everyone in their class, Andy was smaller and weaker than Rachel, but she was sufficiently charmed by his passion for his cause – and for her – that she agreed to make love with him. He turned out to be a most attentive lover – until he was arrested for being a leading member of the Humanist Party's youth wing. She had had several other boyfriends after Andy, but while most of them were nice, none of them could quite measure up to him in her eyes. Fortunately she had this one souvenir to remember him by, and now she was going to reread it for what must have been at least the tenth time.

It was written by a Humanist scholar and it described the sort of society that the Humanists hoped to create: an egalitarian and democratic one in which poverty would be eliminated and freedom of expression encouraged. At that time the ruling Collectivists had grudgingly tolerated the Humanist Party – only the Entrepreneurial Party had been outlawed – but a scientific development seemingly unrelated to politics was to make the regime even more repressive.

It began when an observer decoded radio signals that contained voices speaking in an incomprehensible language. Everyone on this world spoke the same language, and it was inconceivable that there were any people living in other parts of the world: it was far too cold for any life to exist anywhere near the dark side. The signals were eventually traced to the nearer of the two black disks that occasionally transited the sun. Communication was quickly established between the two worlds. A common language was created that was a hybrid between the languages spoken on both worlds; in this language this world was called Marius, that one was called Guyus and the other disk that transited the sun was called Veron. Driven by curiosity, the Marians began to devote a considerable proportion of their resources to the development of space travel with the initial intention of visiting Guyus.

But relations between the two worlds turned hostile when it was discovered that Guyus was ruled by a political party similar to the Marian Entrepreneurs; so instead the Marians shifted their attention from Guyus to Veron to see what life, if any, existed there. That was one of the two questions that most intrigued the scientific community, the other one being the origin of the human species. There were no animals that remotely resembled people – the most advanced animals, either extinct or extant, were quadrupeds whose genes differed much more from humans' than from each others'. The Government's official position was that genes are not the only driving force behind evolution and that humans evolved quickly from the most advanced of the quadrupeds because each generation passed on to their offspring the traits they had acquired during their lifetime. All the evidence pointed against this theory, but the Government effectively silenced the doubters – by arresting them. Rachel had always been skeptical of anything the Government said, but she had also been prudent enough to hold her tongue: she didn't want to blow her cover, especially now that she had a chance of being included in the mission to Veron.

When it was discovered that the Guyans too were developing space travel, the Marians raced them to be the first to land on Veron. According to the Government, the Marians had won that race, but before the window of opportunity for returning to Marius had arrived, Guyans had landed on Veron and murdered the entire Marian crew. The Guyans too had all been killed in the battle and neither team had sent out any signals before the battle took place; so nobody on either planet knew whether any life existed on Veron. The Guyan Government put out the same story with the roles of the two civilizations reversed.

Both Governments took advantage of this turn of events to tighten their control over their respective populations. On Marius, the Humanist Party was outlawed, ostensibly for continuing to advocate the legalization of the Entrepreneurial Party, which was accused of being a subversive agent of their Guyan counterparts, who would surely invade Marius as soon as they developed the technology to do so. On Guyus, the tiny Collectivist Party was similarly accused

and similarly outlawed and even its former members were banned from any employment that would give them any influence unless they cleared their names by informing on their friends in public show trials, while the Humanist Party, which used to enjoy the occasional electoral victory against the Entrepreneurs, was consigned to the political wilderness from which it never emerged. Free from any serious opposition, each Government proceeded to impose its political and economic agenda. On Marius, all the means of production were nationalized, resulting in a stagnant economy, complete with shortages of consumer goods, in which only the political elite prospered. On Guyus, the economy continued to grow, but so did the gap between rich and poor, to the extent that the poor grew poorer even in absolute terms. In addition, women there were subject to increasing discrimination in employment and encouraged to be weak and dependent appendages to strong and dominant men, something that the Collectivists here, to their credit, did not do, or at least not to the same extent. And on each world an army was created to prepare for war with the other one.

Now the Humanists had always been skeptical of both versions of the story about the death of the two crews that landed on Veron. To prevent anyone from learning the truth, the Government hadn't authorized any further voyages to Veron, but when they discovered that the Guyans were preparing a second voyage there, they decided to get there first – again. To the Humanists, this was an opportunity to discover the truth – provided that one of their members managed to join the mission to Veron. They had held a contest to determine which of their members had the best chance to be included in the mission. Rachel had won the contest, and now she waited anxiously to see whether her application to join the mission was successful.

After what seemed like an eternity, the phone rang. "Hello Ms Canfield? This is Mark Cooper, Captain of the mission to Veron. Congratulations! You have been selected to navigate the mission. Come down to the Space Academy to meet me and the other member of the crew, Frank Stein, the mission's exobiologist, and to begin your training."

The receptionist directed her to an office, and there she saw two men smiling at her. The older one introduced himself as Captain Cooper and the younger as Mr. Stein. She shook hands with them both, and was immediately instructed about how the training was to proceed. It lasted a whole year, during which time she had intensive contact with Captain Cooper but saw Mr. Stein only rarely and only briefly. It was only shortly before the projected launch time that she managed to spend any length of time with him. "What sort of life do you expect to find on Veron?" she asked.

"I guess we'll find that out when we get there," he didn't answer.

"Of course," said Rachel, "but we know enough about conditions there for you to hazard a guess."

"I'm not at liberty to discuss it," he said with a nervous glance at Captain Cooper.

"Ms Canfield," said Captain Cooper icily, "your job is to navigate the mission, not to pry into the assignments given to the other members of the crew!"

Thoroughly taken aback, Rachel apologized, and from then on she remained silent. Something about this mission didn't feel right to her. And her suspicion grew when she saw the space ship in which the three of them would be traveling. At the end of the nose cone there was a hollow tube of the kind she had seen in science fiction movies. In those movies, space ships of that sort were flown by Guyans, who shot torpedoes through those tubes at defenseless Marians. For a moment, Rachel considered withdrawing from the mission, but she immediately dismissed that thought. The most important consideration was the mission on which her fellow Humanists had sent her: to discover the truth.

The positions of the planets and stars were known only from pictures taken from artificial satellites, but that was enough for Rachel to plot the most fuel-efficient trajectory to Veron. She entered that trajectory into the ship's computer and then awaited the countdown from Mission Control. As the ship cleared the atmosphere, the sky darkened until she could see the stars and planets with her own eyes for the first time in her life. But her mind was not on astronomy; it was on hidden agendas – Captain Cooper's and her own – and this is what she thought about when she wasn't busy entering course corrections into the computer.

After half a year, the space ship entered orbit around Veron. Mr. Stein took up his position near the nose of the ship, and Captain Cooper gave the command that Rachel had been half expecting: "The Guyan ship should be in orbit here too. Search for it."

"I thought we were supposed to land on Veron before the Guyans," said Rachel. "If we waste time searching for them, they're more likely to get there first."

Captain Cooper laughed. "Of course we said that, to fool the Guyans, and it seems that we fooled you as well. Our mission is to prevent them from accomplishing theirs, by any means necessary. And your orders are to ... "

Suddenly a loud bang came from the rear of the space ship. Captain Cooper ordered Mr. Stein to help him investigate the cause of the noise. After a few minutes Mr. Stein yelled, "A meteoroid struck the ship and ruptured the fuel tank! We're leaking fuel!" The two men raced feverishly to repair the leak. Finally Mr. Stein said, "We've patched up the leak, but we've lost over half our fuel. We don't have enough to chase the Guyan ship even if we find it."

"Send out a distress signal," commanded Captain Cooper. "The Guyan ship will receive it and come to our rescue."

Mr. Stein sent out the signal and then said, "Surely you don't intend to destroy their ship when they come to rescue us. If you do, we'll never get back home."

"Oh, we won't destroy it. We'll just hijack it."

"After they save our lives? I will not be a party to any such undertaking!"

"Need I remind you, Corporal Stein, that we are both in the Army and that I outrank you? If you refuse to obey my orders, I shall see to it that you get court-martialed."

Corporal Stein saluted his commanding officer and grumbled, "Aye aye, Sir."

It was now obvious to Rachel why Mr. Stein had refused to discuss possible Veronian life with her and why Captain Cooper had scolded her for prying. Mr. Stein was no exobiologist; he was just a soldier, and he had been sent on a mission for which he had no enthusiasm. If Rachel was to accomplish her own mission, she would have to prevail upon him to find the courage to abandon his.

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The ship was about to enter orbit around Veron, and David was filling a probe with the instruments that were to search for life there. "What sort of life do you expect to find?" asked Sheldon.

"Nothing too advanced, I'm afraid," replied David. "There's no oxygen in the atmosphere here, but that's to be expected. Any atmospheric oxygen gets rapidly depleted when it combines with other elements and it has to be constantly replenished or it would disappear in a few hundred years. Only photosynthesis can do that, but plants need sunlight to do photosynthesis and liquid water to survive, and the only place on this planet cool enough for liquid water to exist is the middle of the dark side. On our own world we discovered some primitive forms of life that can live without oxygen, mainly bacteria and a few other creatures that feed on them, including in places that are either too hot or too cold for more advanced life forms. It's possible that we'll find them here too, but if you hope to see little green men, forget it!"

"Thanks," said Sheldon, and then watched intently until David had finished his preparation.

"Okay, George, the probe is ready," announced David. "You can launch it whenever you want."

"Not quite yet," replied George. "First we have another mission to accomplish. Mr. Roberts, who funded this trip, wants us to find the remains of the first expedition that landed here. You see, he's not convinced that they were murdered by Marians, and he wants us to investigate to satisfy his curiosity. Personally I think it would be a waste of time, not to mention fuel, but I'm prepared to go along with his request. We may need to tap his deep pockets in the future and I'd like to stay on his good side. The coordinates of the landing site are on the computer, Sheldon, and I want you to take us into an orbit that passes over ... "

Suddenly he was interrupted by a series of beeps. "It's a distress signal!" said George. "Change of plans, Sheldon. Search for the source."

Sheldon programmed the computer to search for the source of the signal and guide the ship towards it. Before long a tiny image of another ship appeared on the monitor. "It's a Marian ship, and it has a torpedo tube!" shouted George in alarm. "The distress signal must be a fake to lure us into range so that they can destroy us! I'm getting us out of here!"

Sheldon took a look at the monitor. "That signal's no fake," he said. "Look more closely at their ship. It's leaking fuel. Whatever their original intentions may have been, their distress is real. If we don't rescue them, they'll be marooned in space and they'll all die as soon as their supplies run out."

"We can't trust them. They could still decide to destroy us."

"If they do, they'll be marooned. They may be our enemies, but they're not suicidal."

"What do you say to this, David?" asked George.

"It's a rule of space protocol that you never ignore a distress signal," answered David.

"As Mission Captain I could overrule both of you, but I'm prepared to entertain the possibility that you may be right. I'll put the ship on manual control and guide us into docking position."

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Both men were carrying handguns as they entered the Guyan ship that had docked with their own ship. Rachel followed them, her mind racing. The three Guyans who greeted them looked surprising like Marians, with one major exception: they were much shorter and a little stockier than most adult Marians. One of them – the youngest – looked cute to her, but her first priority was to prevent the hijacking – if she could.

"Greetings!" said the oldest of the three Guyans in Hybrid. "You won't need those guns here. We came to rescue you, not to fight with you."

"And we came to hijack you, not to thank you," answered Captain Cooper, also in Hybrid, as he pointed his gun at the oldest Guyan. "Leave orbit immediately and fly straight to Guyus!"

"We don't have enough fuel to fly there now. The window of opportunity for flying to Guyus in the most fuel-efficient manner won't open for nearly a year."

"We still have some fuel left. We patched up the leak before all the fuel could escape. If you add our fuel to yours, you'll have enough to fly to Guyus right now."

Rachel thought it strange that Cooper, a Marian Army Captain who was following his Government's order to sabotage the Guyan mission, would want to fly to Guyus instead of Marius. And then a sudden epiphany came to her: the Captain's strange decision had given her just what she needed to encourage Frank to disobey him. "Frank, you don't have to do this," she whispered to him in Marian. "Whether or not Cooper succeeds in hijacking this ship without your help, we will be going to Guyus. You can jump ship as soon as we land. The Guyans will welcome you as a defector instead of court-martialing you."

Frank hesitated for a moment, and then his jaw muscles tensed as he dropped his gun; it fell to the floor in the ship's artificial gravity. "I refuse to obey your orders any longer, Mister Cooper. From now on I obey only the orders of the Captain of the ship we just boarded."

"Aren't you forgetting the court-martial?" growled Cooper.

"On Guyus?"

"As one of our former Premiers once said, political power flows out of the barrel of a gun," said Cooper, pointing his gun at Frank. "I can do this without you if you'd rather die than obey my orders, Corporal, but I'd rather have you on board. Now pick up your gun like a good little soldier and I'll forget that you once had a notion of being insubordinate." Frank hesitated again, and then, with a look of sullen resignation, he bent down to pick up his gun.

Seeing that Cooper's back was turned to her, Rachel dived at him and tackled him to the floor. Frank and the three Guyans immediately rushed over to Cooper and disarmed him.

The oldest Guyan shook Rachel's hand and said, "That was a very brave and noble thing you just did, Miss ... er, what is your name?"

"Canfield, but you can call me Rachel. I was the navigator of our ship. The guy who tried to hijack you used to be Captain Cooper, but you can call him Mark, and the other guy used to be Corporal Stein, but you can call him Frank. Oh, and thank you for rescuing us. That too was a very brave and noble thing to do."

"It's our navigator you should be thanking," said the oldest Guyan, indicating the youngest one. "He's the one who persuaded me to rescue you. His name is Mr. Richards, but you can call him Sheldon. The other guy is Mr. Bronstein, our exobiologist, but you can call him David. And I'm still Captain Oates, but you can call me George. And as Captain, my orders are that we revert to our plan to search for the landing site of our first voyage to Veron and that we lock Mark up so that he doesn't make any more mischief."

The three Guyans shook hands with Rachel and Frank. The last handshake was between Rachel and Sheldon. "Thank you, Sheldon, for persuading your Captain to rescue us," said Rachel. "You were taking a big chance there, and I'm glad to have been able to return the favour."

Yes, thought Rachel, Sheldon definitely was cute. He reminded her of Andy, from his appearance to his bravery and nobility in having persuaded his Captain to rescue her and her shipmates. From the way he looked at her, it seemed to her that the attraction was mutual, but for some reason he wasn't make any advances to her. If he had been a Marian, she would have had no qualms about propositioning him – on Marius it was accepted that women had as much right as men to take the initiative. But sexual role reversal of any kind was taboo on Guyus, and Sheldon would no doubt be offended by any initiative on her part. To her relief, George interrupted her train of thought by saying, "I have an assignment for you, Rachel. You can see to our prisoner."

"It will be a pleasure," said Rachel, thinking to herself about another pleasure for which she hadn't dared to ask.

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Sheldon had been attracted to Rachel from the moment he laid eyes on her – her superior height, the boldness with which she had tackled her Captain, the size of her hands and the firmness with which she had shaken his hand all reminded him of Abby. But he dared not proposition her – she would undoubtedly reject him because he was smaller than she was. Aside from Abby, only one woman who was taller than he was had ever agreed to go out with him. Marcia wasn't at all pretty and she walked with a stoop. Her looks had bothered him not at all – Abby too had been plain while she was his girlfriend. He had persuaded her to stand up straight, telling her that he was attracted by her superior height and that she should be proud of it. Once she did, she started attracting other men, and as soon as she had attracted one who was taller than she was, she had dropped Sheldon without a word of explanation. Perhaps she, like Abby, had caved in under peer pressure but, unlike Abby, she had been ashamed to admit it. Unlike Marcia, Rachel would have no trouble attracting men who were taller than she was; so she would have no motivation to even consider Sheldon. With relief he heard George order her to take Mark to the brig. He stared at her longingly until she disappeared from his sight, and then proceeded to obey his Captain's orders to search for the landing site of the first voyage to Veron.

It didn't look anything like a battle zone. There were two spaceships, two rovers and a transparent dome, none of which were damaged. Inside the dome there were other artifacts, also undamaged, and a number of skeletons, some the size and shape of average adult Guyans and some considerably taller and proportionally thinner. The latter must have been the Marian voyagers, thought Sheldon. The Marians were taller and thinner than the Guyans, probably because the surface gravity on Marius was much weaker than it was on Guyus; it was only the greater distance from the sun that allowed Marius to retain an atmosphere dense enough to support life.

Sheldon took some photographs of the landing site and showed them to the others. "There wasn't any battle," he concluded.

"I didn't think so," said Rachel. "The scientists on our two worlds continued to cooperate long after their Governments had started quarreling. And the space travelers too must have been cooperating – to build the dome, among other things – until they were all killed. I'd sure like to know what it was that killed them, though."

"Possibly some Veronian life form," replied David. "The instruments in the probe will sample the air, the water and the soil and take close-up photos. You can launch it at any time, George, only don't bring it back to the ship. It could contain deadly microbes."

As David had predicted, there was life on Veron: microbes that could live without oxygen and some slightly more advanced creatures that fed on them, but no little green men. "It was probably the microbes that did them in," he announced, "but there's only one way to find out for

sure. I'm going to land and expose myself to the microbes. If I get sick, leave me there to die. If you bring me back, you'll expose yourselves to the microbes, and when you return to your home worlds you'll expose the people there too."

"You don't have to do this," George objected. "Our original mission was to find out whether life exists on Veron and we now know that it does. And Mr. Roberts will be satisfied to know that there was no battle. We've done what we were supposed to do. Let's just wait until the time comes and then go home. I don't want to lose a member of my crew, let alone a good friend."

"We need to find out whether the microbes are dangerous so that future voyagers will be prepared," David insisted.

"Well then, why don't we send Mark down?" said George. "He's our enemy and he's of no use to us – he's just another mouth to feed."

"If we do that, and if he dies there, we'll become even worse than he is – we'll become murderers," Sheldon objected. "Besides, we can't trust Mark to tell us the truth about what he sees down there. I'll go instead."

"No!" yelled Rachel, and then quickly put her hand to her mouth.

"No, I will," said David. "I've done everything I can do for this mission, whereas you, Sheldon, are needed to navigate back to Guyus. I'll land where the first voyagers did – they may have left some information about those microbes that I can pass on to you."

George sighed. "As Mission Captain I could overrule you, but once again I defer to your opinion. You're a brave man, David, and I hope to hell you're wrong about those microbes."

Shortly after the lander had been launched, David's voice was heard over the loudspeaker: "I've landed near the dome. I'm going to put on my space suit, exit the lander and explore the dome." The next time his voice was heard, it sounded alarmingly feeble. "I'm in the dome. To conserve the air in my space suit, I turned on the oxygen generator in the dome and removed my space suit. I can now say with certainty that it was the microbes that killed the voyagers from both worlds. They sent a message to their Governments before they died, and I read it on their computers. After they landed, they picked up a signal and followed it in their rovers until they came to another space ship. In the ship they found a message written in two languages, one resembling Marian and the other resembling Guyan, and they included it in the messages they sent.

"The one in Guyan says, 'We are your ancestors, and we came from a planet that orbits an average star. Unlike your planets, ours is not tidally locked to its sun; so we were able to live everywhere on our world. Our world was divided into countries, each speaking a different language. The two space-faring countries each lived under a different political system: in one, the means of production were privately owned, and in the other, they were owned by the state. When we discovered planets outside our solar system that had zones in which liquid water could

exist, we organized a joint mission to explore them, with several people, both men and women, from each of the space-faring countries and one person – me – from a third country with a mixed economy and a comprehensive social safety net. While we were traveling, the two space-faring countries went to war and destroyed all human life on our planet. We decided that the best chance for the human race to survive would be if we set up two colonies, one on each of the habitable planets. Since they couldn't agree on which political system to implement, the people who preferred state ownership all went to the outer habitable planet and those who preferred private ownership all went to the inner one. What they did agree upon is that the surest way to prevent a war between the two colonies would be if none of their descendants ever found out about existence of the other colony or about their origin on our home world. When I objected to their plan, they exiled me to this planet to prevent me from sabotaging it. They provided our ship with enough equipment to enable me to live off the land here, but I was immediately infected by the local microbes and will soon die. You too will die, but before you do, tell the people on your worlds not to land here and not to go to war with each other either. You might also mention that in my country we managed to eliminate poverty, something that no other country was able to do, and that the Government that presided over this development never outlawed any political party or started a war.' From my knowledge of Hybrid I can understand enough of the message written in Marian to know that it says the same thing.

"So now we know for sure what kind of life there is on Veron and what killed those voyagers and, as a bonus, we also know where we came from. I'm sure that the folks on both worlds will want to know too. You send them the message, George: I'm already too sick. Over and out."

"Please keep talking, David!" begged George, but his plea was met with deathly silence. After a decent waiting period, he said, "Now that we know the truth, we should send a message to our two worlds. I'll prepare one in Guyan and send it to our Government and to Mr. Roberts, and you translate it into Marian, Rachel, and send it to your Government."

"Okay," said Rachel.

Rachel motioned for Sheldon to follow her, led him into her quarters and started typing on the keyboard of her computer. "The Governments suppressed the messages the first voyagers sent them; so they're sure to suppress any messages we send them as well," she said. "I'll obey your Captain's orders, but I'll also write my own message and send it to all the people on Marius. And I want you to translate it into Guyan and send it to all the people on Guyus." Her message included a passionate plea for political change on both worlds, and as he translated it, her passion for her cause increased his passion for her. He still didn't dare proposition her, but he thought of a way in which he could at least get to hold her hand once more.

After the messages had been sent, he said, "I'm curious about something about you Marians. You're much taller than we are, but you're also proportionally thinner. I wonder whether the lighter gravity on Marius means that you're also weaker than we are. I'm about as strong as the average Guyan man and you look at least as strong as your two shipmates; so we could serve as typical examples. Let's have an arm wrestle to see who's stronger!" She beat him easily. The experience increased his fear of propositioning her, but it increased his desire for her

even more. Summoning up all his courage, he said, "You know, Rachel, your superior size and strength and your sense of purpose turn me on, and I've been thinking ..."

"You too?" she interrupted him. "I've been thinking how cute you are since I first saw you, but I didn't think that any Guyan man would want a woman to take the initiative."

"I'm not your average Guyan man."

"Well, I'm not your average Marian woman either. But enough talk! Let's do it, only let's take it nice and slow. I want to enjoy it for a while!"

By now Sheldon was so excited that he could barely restrain himself from satisfying his desire immediately, but he remembered the movie he had watched so often: the hero had won the heart of his beloved by being attentive to her needs. Of course, he had no idea what he should do to satisfy her; so he simply asked her. She was not shy about telling him, and he managed, albeit with great difficulty, to postpone his own gratification until she was satisfied. And he was duly rewarded for his patience: she invited him into her quarters every time she went to bed.

Before each tryst she would cut short conversation, but afterwards she couldn't stop talking, mainly about politics. Her intelligence and her passion for social justice so charmed him that his feelings for her gradually rose above the merely physical. But he dared not let her know how he felt: if her feelings for him were still only physical, a declaration of love would probably frighten her into terminating their relationship immediately, and then her continued proximity would be a source of intolerable pain. He resolved to wait until they landed on Guyus and then declare his love for her and ask her to stay with him. If she rejected him then, at least it would be a clean break.

But he let it slip out in spite of himself. After their thirteenth tryst, she ended her usual monologue, in which she compared the reality of life on their two worlds unfavourably with her vision of a better one, on an upbeat note: "I'm hoping that our revelation will some day initiate a change for the better on at least one of our worlds, or preferably both of them."

"If that happens, there'll be a place where we can live happily together," he blurted out, and then, aghast the horrible blunder he had just committed, he awaited the inevitable rejection. But before she could react, Captain Oates shouted in a hard-edged voice over the intercom: "Ensign Richards, report to the bridge immediately! And bring that mistress of yours with you!" Sheldon and Rachel quickly got dressed and hurried to the bridge.

Captain Oates and Mr. Stein were waiting for them, scowling furiously. "We just picked up television signals from both Guyus and Marius," growled Captain Oates. "There were huge demonstrations on both worlds denouncing us as liars and agitators and telling us to stay on Veron. To find out why they were so upset with us, I read the message you sent to them. You were supposed to restrict yourselves to my message, not send out an inflammatory political diatribe!"

"Those were Government-organized demonstrations," said Rachel. "Don't you see why those Governments spread those ridiculous stories about the voyagers from their world being murdered by those from the other world and suppressed all evidence to the contrary, including the messages the voyagers sent to them? The Governments needed a perceived enemy to keep their populations tidally locked to their ideologies. People will rally behind their leaders in the face of an enemy, and the people on both worlds did just that, allowing their Governments to impose their political and economic agendas virtually unopposed. We just told them the whole truth."

"A fat lot of good you did! You just made us all into pariahs. If your Captain Cooper had succeeded in hijacking us, none of this would have happened – including David Bronstein's death. I have half a mind to release him and let him send out a rebuttal."

"Captain Cooper had been planning to torpedo your ship until the meteoroid hit us and ruptured our fuel tank. The only reason he didn't do it was that he realized that if he did, he would have been marooned in space."

"So you say!"

Frank stopped scowling and said, "She's telling the truth, Sir."

Captain Oates hesitated for a while and then said, "All right, I guess I can't trust him either; so I won't release him. But from now on you two are to cease and desist from sending out any more messages. And now, if you'll excuse us, Miss Canfield, I want to speak to Ensign Richards in private."

Captain Oates' expression softened. "I'm sorry I spoke so harshly to you, Sheldon. I let my temper get the better of me and I shouldn't have done that. You acted improperly, but your motives were pure. You're so fully of puppy love for that political fanatic that you let her use you. You must understand that she's only using you, Sheldon. No woman could ever be attracted to a man who's so much smaller and weaker than she is. Take the advice of a man who's older, wiser and more experienced than you. Forget her, and forget the woman who beat you on that exam too. She'll either reject you out of hand or use you for just as long as she considers it necessary. Find yourself a woman who's small and weak enough to be attracted to you. There are plenty of them back home, and you'll be much happier if you do, believe me."

Sheldon weighed his Captain's words and realized that there was some truth to them. Both Abby and Marcia had dropped him as soon as they found a boyfriend who had their peers' seal of approval. Would Rachel do the same thing? Sheldon decided to find out. He returned to Rachel's quarters. "You know, your Captain does have a point," she said. "I could very well be a pariah, and so could you unless you go alone to your home world and claim that I made you translate my message and send it to everyone. Are you prepared to take that risk just to be with me?"

So Captain Oates was right after all! Rachel obviously enjoyed having good sex with an obedient lover – as a temporary arrangement while there were no other women around to

disapprove of it – but now that he had inadvertently raised the ugly spectre of permanence, she wanted to end their relationship. But, like Marcia, she didn't want to admit the truth; so instead of breaking up with him, she was trying to scare him into initiating the breakup himself. Very well, then, he would go along. "I'm sorry, but I guess I'm just not brave enough," he said.

"For a while there you had me fooled," she said with the same hard edge to her voice that he had just heard from George. "But as it is, you'd better not come here any more. You wouldn't want to be contaminated any more than you already are by your association with me!"

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Rachel lay down on her bed and cried into her pillow. Nobody on the ship would associate with her, whether out of genuine hatred, like Cooper, or out of fear, like Sheldon. And things would only get even worse for her once she returned home. She would almost certainly be arrested and, if she was ever released, her fellow Humanists would probably disown her to avoid suffering the same fate. With only a faint hope that her fears were unfounded, she tried to tune in to both planets, but their signals were being blocked by the sun. And now there was nothing for her to do except to keep to herself as much as possible and wallow in her misery.

A few days later, Rachel heard Captain Oates' voice over the intercom: "Take us out of orbit, Sheldon, and set a course for Guyus." With a deep sense of foreboding, she considered her options, and concluded that the least bad choice would be to stay on Guyus. There she would be subject to stronger gravity than her body was used to and probably ostracized as well, but at least she wouldn't be arrested – unless her revelation motivated the Government there to become as repressive as its Marian counterpart.

After what seemed an eternity, she began to receive signals, first from Guyus and then from Marius. With each signal she watched, her mood brightened. Finally she felt confident enough to gather everyone together, including Captain Cooper, to make an announcement.

"I've been following developments on Guyus and Marius. As I said, those demonstrations you saw were Government-organized. They didn't represent the feelings of the people. Most of the people were so outraged at their Governments for having lied to them that they staged much bigger demonstrations demanding the legalization of all opposition parties and free elections. At first both Governments tried to repress the demonstrations, but they grew so big that the police eventually refused to fire on them. At this point, both Governments realized that they had no choice but to agree to the demonstrators' demands rather than face a revolution they couldn't defeat. On both planets the elections will be held before we get there and on both planets the Humanists have a huge lead in the polls. We won't be pariahs – we'll be welcomed as heroes!"

Everyone cheered and shook hands all around - everyone, that is, except for Captain Cooper; he looked morose. "Why so glum, Captain?" asked Rachel. "Is it because your beloved Collectivists will no longer be in power?"

"Beloved Collectivists?" he sneered. "I hate them with a passion! I was planning to go to Guyus, not to Marius, remember? My grandfather used to own a farm in the days when people

were allowed to own small farms and businesses. He was a very successful farmer and his farm would have grown much bigger had such a thing been allowed. After the first voyage to Veron, the Government turned his farm into a coop to be owned jointly by him and all the people who used to work for him, but he moved to the city rather than work as an equal with his former employees. Those ignoramuses had neither the knowledge nor the motivation to manage the farm as well as he had; so food production dropped on that farm as it did all over the world. And these are the sort of people whose interests the Collectivists are trying to promote – at the expense of more deserving people, like my grandfather! But as much as I hate the Collectivists, I did have an interest in the success of their mission – it would have preserved the status quo on Guyus. Now that you Humanists are going to control both worlds, there will be no place for me to go to escape from you. I feel as if I'm tidally locked!"

"How so? You're free to join the Entrepreneurs if you wish, and who knows? They might even win an election some day."

"But until they do, I won't be free to choose whether or not to spend any of my earnings to benefit those poor weaklings who can't make it in a free-market economy by donating voluntarily to privately run charities. Instead I'll have it extorted from me by you damned Humanists through excessive taxation!"

Everyone laughed at him, but they decided not to lock him up again; he could no longer do them any harm.

And then, her voice dripping with scorn, she said, "So now, Sheldon, you see what we could have had together if only you'd had more guts!"

To her surprise, instead of withering under her contempt, Sheldon broke out into a broad grin and said, "Could we talk – in private?"

Rachel hesitated for a moment. If he was coming around only because there was no longer any risk involved in resuming their relationship, she had no intention of doing so. On the other hand, it wouldn't hurt to hear what he had to say.

"All right, come into my quarters, but just to talk."

"I lied to you when I said that I wasn't brave enough to risk becoming a pariah just to be with you," he said as soon as they entered her quarters. "I broke up with you because I thought you wanted me to."

"What made you think such a thing?"

"Only two women who were either taller or stronger than I was ever dared to risk the disapproval of their peers to be my girlfriend, and only because neither of them had ever had a boyfriend before me. Each of them broke up with me as soon as she found a boyfriend who measured up to her peers' standards; so, once I let it slip that I wanted a permanent relationship with you and you said that I might become a pariah unless I broke up with you, I thought you ..."

"You know, you and I have the same sort of hang-ups!" she interrupted him. "My first boyfriend got arrested for Humanist activities; so I started dating men who weren't Humanists. My second boyfriend, with whom I had fallen in love, broke up with me as soon as he found out that I was a Humanist. He was afraid that the authorities would punish him for associating with me and that his friends and family would disown him for fear of being punished too. To avoid being hurt again, I started testing the loyalty of all my subsequent boyfriends before allowing myself to get too attached to them, and they all failed. And then I went and got mad at you because I thought you had failed my loyalty test after I had already fallen in love with you! We were both guilty of failing to communicate our true feelings to each other. Let's not ever make that mistake again!"

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The fiery red sun was where it had always been and where it would always be: directly overhead. This is where Sheldon had seen it for almost two thirds of his life, but there was a chance that he would soon see it where he remembered having seen it in his childhood and youth: a few degrees above the western horizon.

He hopped onto his bicycle and set off for work. He always enjoyed riding his bicycle around the city and seeing the sights. But what he enjoyed most was that there was one sight he hadn't seen since a few years after his arrival – beggars on the streets – and he had been pleased to learn that they had disappeared from his own world as well.

He entered the university campus where he had taught astronomy since his arrival so many years ago. He passed by a large group of students, and he took great pleasure from observing that, although most of them towered over him, some of them were of about his size and some of various intermediate sizes, and that they were all chatting together in Hybrid. He locked his bike to the bike rack just outside the Physics and Astronomy Building and walked up the four flights of stairs to his office. There he finished marking the Astronomy 101 exams, entered the final grades onto the mark sheets and handed the exams as well as the mark sheets to the Secretary of the Astronomy Department in case he didn't return. And then he rode his bicycle back home.

Rachel wasn't home and there were no messages from her either. Marking the exams had tired him; so he closed the curtains to shut out the daylight and went to bed, hoping to sleep until he received word from her. But he was too excited to sleep. He soon gave up, opened the curtains and began watching the Marian remake of his favourite movie. It was faithful to the original with two significant exceptions: it was in 3D and all the characters except the hero were Marians.

The movie had about half an hour left to run when he received a message on his computer. He paused the movie and read the message: "Dear Shel, we won by one vote! Details when I get home. Love, Rachel." He immediately sent out three messages. The first was to Rachel, congratulating her. The second was to the Chairman of the Astronomy Department, announcing his decision to retire. The third was to his old friend George Oates, Director of the

David Bronstein Space Academy, accepting at long last the Academy's long-standing offer of employment there. And then he watched the rest of the movie.

After what seemed like an eternity, he heard Rachel's key in the door. As was his wont, he rushed to the door to greet her. As was her wont, she lifted him up by his underarms to kiss him. And then, bubbling with enthusiasm, she said, "I was afraid it wouldn't happen. Thanks to our new system of proportional representation, the Entrepreneurs and the Collectivists had between them one more seat than we do."

"Had?"

"Wait for it! So far they've been unable to bring down our Government or even defeat any of our bills because they were too far apart politically to form a united front, but now they finally found an issue on which they could agree: that the Marian Ambassador to Guyus shouldn't belong to any political party. And they would have defeated the Government's proposal to appoint me to that position to reward me for my past service to the country as Premier were it not for a single dissenting vote from the ranks of the Opposition. Guess whose vote it was!"

"How can I? I don't know all the Members of Parliament."

"But you do know the guy who voted with us even if you didn't know that he was a Member of Parliament. After all, you spent over a year with him in a space ship!"

Sheldon thought for a moment and then said, "Well, surely it wasn't Captain Cooper; so I guess it was Corporal Stein. Am I right?"

"Partly. He hasn't been a corporal since the armies on both worlds were disbanded, but he's the one, all right. You do remember how reluctant he was to obey Cooper's orders when he didn't agree with them, don't you?"

"Yeah, Cooper had to threaten him with a gun, if I remember correctly."

"Well, now that Cooper is only the Leader of the Official Opposition instead of Frank's commanding officer, he couldn't even threaten him with a court-martial any more, only with expulsion from the Entrepreneurial Party. But Frank didn't wait to be expelled: he ripped up his party card, tossed the pieces onto Cooper's desk and crossed the floor of the House to sit as an Independent. He told me later that he had voted with us to thank me for having spared him the indignity of having to obey Cooper's order to help him hijack Oates' space ship. He also said that he would support any Government bill he agreed with; so as long as we can stay on his good side, we won't have any trouble getting our bills passed, at least until the next election.

"But enough talk!" she continued as she closed the curtains and began getting ready for bed. "I want to celebrate and I want you to help me. Do your stuff!"