

# *THE MARS FRONTIER*

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*The Cinnamon Revolution*

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1.

## Ground Rules

April 21, 2050

The image of the caravel *Rigel* filled the main wall screen in conference room number 1, across the hall from Mars Control. Will Elliott, the 63-year old head of the Mars Commission, sat there with other senior staff of the Mars Commission. They interrupted their regular weekly meeting to watch the first spacecraft from Earth arrive.

The image had not changed noticeably for thirty minutes. The *Rigel*, racing toward Mars at almost ten kilometers per second, was a large, round, flying-saucer shaped vehicle balanced at the end of a long truss like a rotating plate on the end of a juggler's stick. The far end of the truss had three solid-core nuclear thermal rocket engines blasting out parallel plumes of superheated water vapor, which glowed a faint blue on the tv screen; a cluster of tanks formed a ring around the truss not far from the engines, supplying them with hydrogen propellant, oxygen for thrust augmentation, and providing the caravel with shielding from their intense neutron radiation.

The three plumes of superheated steam began to weaken in thickness and length as the engines throttled back. Banter between the crew and Mars Control reviewed the data, which was all nominal. Over five minutes, the engines gradually shut down completely. Finally a burst of explosive bolts separated the truss from the caravel and the latter fired a brief burst of weak chemical engines, moving the caravel away from the truss with its still-glowing engine radiators. A burst of applause could be heard from the Control Room, both through the air and, a second later, over the television screen's speakers.

“Congratulations, *Rigel*, for a successful burn,” said Rostam Khan, Mars Control’s chief communicator. “We look forward to seeing you in orbit around Mars tomorrow.”

“Roger, we copy, Mars Control,” replied the *Rigel*. “We’re starting preparation for the aerocapture maneuver in twelve hours. Mars is looking big and bright, and growing by the minute. See you soon.”

The scene abruptly shifted and the fuzzy, over-magnified image from long-range telescopic cameras on Phobos was replaced by a news studio. Two news anchors sat behind a desk: Miranda Bytown and Jacaranda Chamberlain. The staffers glanced at Will, but he made no indication that the transmission should be turned off. He was curious to see what *Mars This Sol* would say about it.

“Well, Miranda, we’ve just watched the *Rigel* complete its approach deceleration burn,” said Jacquie. “Perhaps we should recap for any late viewers what has just happened.”

“Sure, Jacquie. The *Rigel* left Earth almost four months ago with 150 passengers on a high-speed trajectory that would have brought it to Mars tomorrow, but at a velocity too high for safe aerobraking. Its three LOX-augmented NTRs have just safely completed a deceleration burn that slowed the spacecraft by over five thousand meters per second. They have separated from the *Rigel* and in twelve hours, as the NTRs and their support trusses are flying past Mars just above the atmosphere, the engines will fire again to insert them into orbit. The *Rigel* will hit the Martian atmosphere at some eight thousand meters per second and burn off about forty percent of that velocity in five minutes, subjecting its passengers to as much as 2.5 gees of deceleration; if for some reason all the

engines had failed, they would have raced through the atmosphere too fast for it to slow them into orbit. The *Rigel* will then rendezvous with Embarcadero Station, where shuttles are waiting to bring the passengers to Aurorae outpost over the next week. The nuclear engines will fly to Deimos and dock under remote control for a six-month cool-off period, then they will be refurbished robotically and their tanks refilled with hydrogen. The *Rigel* will fly back to Earth in five weeks using a different set of NTRs for propulsion.”

“And the flight’s important, Miranda, for several reasons,” continued Jacquie. “Probably the most significant asset on the *Rigel* are five representatives of the Mars Commission Board, who have been sent to evaluate the condition of the Martian settlements and to understand the drive toward independence that many are now calling for. In the upcoming sols we plan to interview as many of them as possible. The ship is also carrying thirty tourists, a record number; they’ve spent about twenty million redbacks each for the nine-month excursion through space to visit Dusty Red. They’ll visit four different outposts, will travel along much of Valles Marineris, see the summit of Olympus Mons, fly to the North Polar Station in small groups, and visit both moons. Some will stay until November and will catch a ride back to Earth on the *Aldebaran*, which will conduct a flyby of Mercury on its way across the solar system to catch up with Earth.”

“That’s right, Jacquie, and there are 115 other passengers,” continued Miranda. “Six are specialists visiting Mars for six months, returning to Earth on the *Aldebaran*. Three of them are bringing specialized medical knowledge to Mariner Hospital to improve the skills of its physicians. The other three are exobiologists who have arrived to

reinforce the efforts of our teams at Elysium, studying the newly discovered Martian life forms there. Most of the other passengers are construction specialists or will do construction for the next few months but are here to do other tasks later. Mars will see a record level of immigration in 2050; over a thousand new residents will arrive in seven caravels, flying here in four waves. We need construction workers now to complete the housing and work space.”

“It’s going to be an interesting year, Miranda,” said Jacquie, nodding. “Stay tuned to *Mars This Sol*, your all-Mars multimedia website, for video, audio, and print reporting of the breaking news. In the next few weeks we’ll interview most of the tourists, many of whom are businessmen visiting their investments or considering new investments in Mars, or prize-winning journalists, or award-winning film makers. They’re a fascinating bunch. Then there’s the buzz over independence that will dominate the next five weeks, if not the entire year. The Independence Club has just launched a new petition on their website, Independence.Mars, calling on the Mars Commonwealth Authority to start negotiations immediately with the five Commission representatives over independence. Lyle Quincy, the club’s spokesman, says they think independence should be sought over a one to two year transition timeframe. The last petition, which was more broadly worded, garnered signatures from twenty percent of Mars’s voters. It has now been taken off the website in favor of the new one.”

“It’ll be interesting to see what happens with it,” said Miranda.

Ramesh Pradhan, director of the Commission’s Fabrication and Construction Departments, turned away from the screen and toward Will while the program continued. “A new petition!” he exclaimed. “Will, did you know about that?”

“No, not until this minute. It must be new.”

“Don’t you think you should do something about it?”

Will looked at Ramesh. “Like what? They’re not doing anything illegal.”

“You’ve got a bully pulpit; people listen to you. You can discourage this sort of thing.”

“Why shouldn’t we let people express their views?” asked Louise Tremblay, director of their Spacecraft Division. “Independence will happen eventually. It should come when people are ready.”

“Because it’s a one-sided argument. ‘Independence Now’; it’s flashy, newsworthy, sexy. ‘Independence Someday’ can’t compete for attention. A small number of folks can generate a lot of interest and dominate the discussion.”

“I don’t know about that,” said Lisa Kok, Director of Terrestrial Environments. “The opposite argument can easily be made; the average person is apathetic and is quite content with the idea of independence someday, even if it is soon, like five years. It isn’t easy to persuade people to take the plunge *now*.”

“Look, *Mars This Sol* isn’t completely neutral,” persisted Ramesh. “The reporters are biased in favor of independence; or maybe they’re just biased in favor of new news stories. How will we balance that?”

“You should tune into the high school’s multimedia site,” replied Louise. “Alex does a radio broadcast every Wednesol afternoon and he starts the program with ‘Revolution’ by the Beatles. The kids are all in favor of independence. Or more accurately, they take the idea for granted.”

“And a revolution is just what we don’t need,” replied Ramesh. “The environmental management system is not set up to filter tear gas from the air.”

“Don’t be ridiculous,” replied Lisa. “We don’t have to worry about that.”

“We hope,” injected Will. “Ramesh is right; we do have an obligation to make sure this debate doesn’t get out of hand.”

“Ramesh, don’t you think we should be independent eventually?” asked Louise, frowning.

He shrugged. “I think it’s a non-issue. Our purpose—the purpose of the Mars Commission—is to develop this world. To do that, we need money, human resources, equipment, and political support. Independence undermines all these crucial resources. Maybe the time will come when it won’t. Sure, we have tens of billions of income every columbiad, and we’ll soon have almost five thousand people up here. But we have a world able to accommodate billions of people, and we’ll need trillions of redbacks to get there.”

“You don’t think we’ll also need an identity and self-determination to get there?” asked Louise. “And why will those things drive away money and people?”

“They’ll drive away government subsidies, if the governments lose their voice in our development.”

“And an independent nation may attract more private investment if it’s set up right,” replied Lisa, not willing to leave the debate to Louise.

“Not now,” replied Will. “This is the debate that has been raging throughout the community for almost a year, and it’ll continue. And it won’t get resolved soon. We’ve watched the *Rigel* arrive; now let’s get back to work. Any reports?”

“The *Rigel* had our four lion cubs,” said Lisa Kok. “They’re the first African wild animals we’re getting as part of the African savanna bioarchive we’re setting up. Apparently the male has been getting rather big, bored in the confined space, and dangerous, so everyone’s glad the voyage is over.”

“It’s an interesting way to spend a lot of money, isn’t it?” commented Will, referring to the one hundred by three hundred meter African ecology dome they had committed to build over the next three years, thanks to a fifty million redback contribution by an African businessman.

“It’s good biological research, and will strengthen our plant diversity,” replied Lisa.

Will nodded and looked at Ramesh, who said, “Housing for everyone arriving in the next week is available, and we’ve made good progress on the housing for over a thousand arrivals needed by the end of the year. The hundred extra construction workers will help a lot. The master transportation plan is being implemented on schedule; the North and South Main Tunnels will be extended in their widened forms this columbiad and three new north/south connectors will be finished. Toward the end of the columbiad we’ll break ground on Niger, our next big residential dome west of Baltic, and on Serengeti, the African bioarchive dome north of Niger. The new thirty-five by seventy-five meter bubbles started in production last month and demand is quite high, especially for private farms. Uzboi Outpost expands to over six hundred people and will use ten of the bubbles to raise agricultural output enough to feed them all. The Elysium and Tyrrhena Outposts will consist of three and four of such bubbles respectively. Phobos will add ten of the bubbles to its agricultural area. The new highway to Uzboi is

completed and the upgrade of the Meridiani Highway will extend to Aram this columbiad and to Thymiamata, Meridiani, and Kalgoorlie next, then Dawes the columbiad after that. A lesser upgrade of the Circumnavigational Highway all the way around to Elysium is also underway. So we're quite busy."

"What about the football field?" asked Louise. She was referring to what Americans called soccer; Marsians used the same term as the rest of humanity.

"Everyone asks about that! The situation here is simplest; Andalus Northeast is being converted from agriculture to football and recreation. Seventy meters is rather narrow, but it'll work. Uzboi has reallocated part of a hundred-meter wide dome for football; their field will be ready by the end of the summer. But at Cassini, Dawes, and now Meridiani, it'll be very expensive and take a few years to build football fields."

"So a good interborough league will take a few years," concluded Will. "Louise?"

"We've completed a third caravel to house people on Phobos and just launched the materials to build a fourth caravel there. One caravel is on its way to Earth and another will be launched shortly; both are for Magellan Station, Venus orbit, or for flights between Earth and Venus. Our third caravel for China's Jupiter flights will begin shakedown cruises to Mars-crossing asteroids early next year. The design for the galleon-class spacecraft is complete and we will start production early next year; tentatively, the vehicle will be contracted for the first flight of humans to the Saturnian system in 2055. The second galleon will be for flights to Mars and will probably carry 650 passengers. The third, which we plan to complete late in 2052, will be the main unit of the new LEO Hyatt."

“Really impressive,” said Will. “Thanks for the reports. Let’s get to our offices, now.” He rose from the desk and walked back to his office. There he sat at his desk and looked out the window at Andalus Square, their main public space. The mini-debate among his heads of staff reflected the strong feelings felt by the population; he had prayed for months that the situation would not get out of hand and lead to a breakdown of civil order. It seemed unlikely—Marsians were disciplined and patient people, used to working toward a consensus—but national feelings were strong on Mars and could indeed precipitate a riot of some sort. And after months of prayer, it occurred to him that there was something he could do.

He called Érico Lopes and Lyle Quincy, two of the leaders of the Independence Club, and asked them to bring a few friends and rendezvous at his house at suppertime. Then he hurried home—it was already the beginning of suppertime—to prepare some snacks and finger foods. He checked the websites of three food outlets before leaving his office and ordered various dishes from all three of them.

He barely got home ahead of the robotic carts bearing the food he had ordered. He laid out the food in the house’s magnificent garden that opened onto the living room and added to it some desserts he whipped up quickly. As he was finishing Érico and Lyle arrived, accompanied by Zach Hersey, an old timer, and Suzanne van de Velde. Will was surprised to see both of them; he hadn’t realized they, too, were involved in the independence movement. Lyle and Zach were wearing reddish-brown arm bands—cinnamon colored, the color of Father Mars, they explained—a new gimmick of the Independence Club.

His four guests were delighted to see the supper choices Will had selected for them. He poured tea and coffee and asked everyone about their lives. Zach and his life-partner, Thierry, had moved into a new flat; Érico was working on a short book about the evolution of Mars's core; Suzanne was very pleased by the grades that her son, Guillaume, was getting in high school; and Lyle had nothing to mention other than the development of the Independence Club, which consumed almost his entire life.

“But you didn't invite us here to talk about our lives,” said Lyle with a smile.

“When he takes the time to make desserts, you know it's important,” commented Érico.

“Am I that predictable?” asked Will, dismayed, and Érico nodded. Will sighed. “Okay. The national representatives arrive here at Aurorae in two sols. We can predict that the next five weeks will crank up the discourse about independence. We all know that this issue is becoming more and more emotional for more and more people. That means it will be harder and harder for anyone to manage or control the situation. Mars can't afford riots, looting, and violence.”

There was a pause, then Lyle said, with some anger in his voice, “So, are you asking us to drop the campaign?”

“No, not at all! I'm not sure what I'm asking. Frankly, I've been praying about the situation for months. If you think about my public comments, you'll note that I have not discouraged independence talk, but I have discouraged extremism. Mars will be independent. The question is when; is sovereignty months, years, or decades away? I think we all agree it isn't centuries away; in fact, I doubt anyone thinks it's more than a

decade away. We have to resolve the timetable issue, and we have to resolve it peacefully. Those are my concerns.”

“What we need is a peaceful revolution,” said Érico. “Like the ones that toppled the old Communist governments last century.”

“Yes and no,” replied Will. “The Velvet Revolution, the Orange Revolution, the Kyrgyz Revolution, and all the other revolutions were largely peaceful, but not totally. There was some tear gas, some bullets, or at least the threat of them. We can’t afford even that up here.”

“Perhaps the struggles for independence in Slovakia and Quebec are better models,” said Suzanne. “They used referenda.”

“They were democracies and were not throwing off oppressive governments,” agreed Will. “They had grievances. Some Marsians have grievances, too.”

“I think we’ve always had a Slovakia-like situation in mind,” said Lyle.

“Have you?” asked Will, looked at Lyle closely.

“Of course!” he replied, almost defensively. “We certainly have never advocated violence, or even non-violent civil disobedience! We’ve always been an organization oriented around informing the public! The proof’s our petition!”

“Good,” said Will. “The Commission has no secret plan for using violence, either, no secret cache of tear gas or guns. The Aurorae Constabulary is small and is not equipped for riots.”

“I don’t see anything like that happening,” said Érico.

“Will, what will you do if the majority of Marsians vote in favor of independence?” asked Zach.

Will considered. “What could anyone do, but support the will of the people? But the vote would have to be clear and unambiguous, and the majority would have to be verifiable.”

“What about the new question on our website?” asked Lyle. “It is very simple and clear: ‘I ask my representatives in the Mars Residents Council to commence negotiations immediately with the national representatives coming to Mars to achieve Marsian independence.’”

Will thought about the wording; Lyle read it again. “What will we do with the Landowners Assembly?”

“Look, we can’t reach them as easily; they’re scattered all over Earth,” replied Lyle. “And it’s very hard to predict how corporations, who own lots of land and have lots of votes, will vote. How does one influence them?”

“Besides, we live here and they don’t,” added Zach. “The Basic Law gives the Landowners Assembly a much narrower range of power and responsibility than the Residents Council for that reason.”

“That’s true,” agreed Will.

“Look, Will, requiring their support is unreasonable,” added Érico. “We haven’t made any direct effort to reach them yet, but I could make some quiet telephone calls to large companies. The small landowners all follow *Mars This Sol* anyway; they’re aware of the issues.”

“Someone should poll them,” suggested Will.

“I bet I can arrange that,” said Érico. “But not yet. We need to let the petition garner signatures first, so we have some momentum. The last petition had signatures

from twenty percent of the voters up here. This new petition should get to that level in a few sols.”

“Fair enough,” agreed Will. “I agree that the Residents Council is the logical body for this effort. They could authorize a committee to do the negotiations, and it could include Chief Minister Alexandra. But the signatures have to be verified; we have to be sure there’s a majority.”

“That’s easy because the signatories are public,” said Lyle. “Anyone can verify them.”

“I think you need to state the ground rules publicly,” added Will. “No violence or even non-violent civil disobedience; just non-violent civil *obedience* to bring about independence. We have a responsive government and I hope the Commission is perceived as responsive. If asked by a reporter, I will state in public that I feel the will of the majority of residents must be respected.”

“What about the national representatives?”

“I can’t vouch for them, but I will tell them what the ground rules are,” pledged Will. “I don’t think they’ll have any choice but to follow them; they don’t have an army backing them, and the television cameras will be watching.”

## The Representatives

April 23, 2050

Twelve hours after the *Rigel's* solid-core nuclear thermal engines had slowed the ship to a velocity low enough for safe aerobraking, the caravel encountered the Martian atmosphere. For five minutes it streaked through the upper atmosphere, burning off another three thousand meters per second of energy. When it emerged, it was on course to rendezvous with Embarcadero Station, Mars's interplanetary transit facility.

Two shuttles awaited it at the space station; two more were soon on their way. Another ten hours were sufficient for the ship to dock to the station. Twenty-four passengers transferred to one shuttle and another twenty-four transferred into the other; the rest would wait for shuttles the next sol or the sol after. Brief one-minute burns were sufficient to send both shuttles toward the Martian atmosphere. One skimmed the outer atmosphere, burned off much of its speed, and entered a lower orbit, so it could land that afternoon; the other, the *Simud*, made a direct descent to Aurorae Outpost, landing without incident at 8 a.m.

Will Elliott, dressed in his best suit, waited at Andalus Square for the Conestoga carrying the national representatives. A small crowd of the curious gathered as well, possibly attracted by the musical band. A small group of journalists was present, most sent by *Mars This Sol* and the terrestrial media.

“Dr. Elliott, have you time to answer a few questions?” asked Pete Song, a Korean journalist who provided articles to various Korean-, Japanese-, and English-language media outlets.

“Sure,” replied Will.

“What do you hope this visit will accomplish?”

“Understanding. Mars is developing its own culture, social norms and ways of doing things. Naturally, this will produce misunderstandings. Members of the Mars Commission Board have some important and ultimate responsibilities in charting the direction of the development of this world, so they have to understand it.”

“Is independence one of those misunderstandings?”

“No, but it might be in the future. It’s important to understand the aspirations of the Marsian people, aspirations that are just now developing and taking form.”

“Dr. Elliott, what should we do if a majority of Marsians clearly comes out in favor of independence?” asked Jacquie Chamberlain. Will looked at his niece in law, surprised that she fed to him the question he had told the Independence Club he would answer.

“Ask me that later, Jacquie, after I’ve been able to greet the representatives,” he replied.

A moment later a Conestoga entered the square from a tunnel on its southeast side. It approached the podium, then stopped. The door opened and out stepped the five national representatives: Mr. Benigno Melos from Brazil; Dr. Cheng Weiming from China; Dr. Helene Dupont from France; Dr. Rama Singh from India; and Mr. Peter Zubko from the United States of America. Will knew them all. Helene was the only astronaut among them, though Cheng had an engineering doctorate and Singh a Ph.D. in physics; Melos and Zubko were retired politicians. Dupont essentially represented the European Union and Melos the Latin American Union. While the Mars Commission had

twenty-six member nations, the five present represented over half the world's population and two thirds of Earth's economic output.

The band immediately began to play a welcoming tune. Will stepped forward and shook hands with all five of them, accompanied by his four leading heads of staff on Mars: Ramesh Pradhan, Lisa Kok, Yevgeny Lescov, and Louisa Tremblay, from India, Netherlands, Russia, and Canada respectively, running the Construction Department, the Ecology Department, the Export Department, and the Spacecraft Department. Also joining the welcoming party was Alexandra Lescov, Chief Minister of the Mars Commonwealth Authority. Finally, the eleven of them walked onto the stage just steps away and sat.

Everyone had to make a speech. Fortunately they were relatively short, and of course they were all upbeat. Forty-five minutes later the ceremony was over and the national representatives were taken to the Aurorae Marriott Hotel to unpack and rest. Two hours later Will returned to the hotel to meet with them all.

Four of the five representatives were already in the meeting room, which was more like a lounge or living room. A table had two thick, rich, soups and a big fruit bowl. Zubko was busy eating an orange; Cheng was sitting next to him sipping soup. "How are you all doing?" asked Will. "Are you settling in alright?"

"The rooms are pretty comfortable," replied Cheng. "The soup is perfect, after twelve hours of zero-gee and sipping tea or juice through bottles."

"And your Martian oranges are *really* good," added Zubko.

"They're the *maranja* genetically modified variety, and have growing conditions that are perfect for them," replied Will. "Media coverage of the welcoming ceremony

was pretty good. I would have gotten here a bit sooner, but the *Shalbatana* has a minor glitch in one of its pumps.”

Melos was alarmed. “Can they still land?”

“Yes. They’re making an extra orbital pass so we can assess the data. It’s probably a faulty sensor, but they can always land on four engines later this afternoon.”

Just then Helene Dupont entered. “This is quite a nice hotel,” she said. “And the domes between here and Andalus are nicely laid out.”

“The hotel is nice,” agreed Will. “And this columbiad they’ll probably finally cover their expenses. It’s small; only forty rooms.”

“It must be bigger than that!” exclaimed Dupont, surprised.

Will shook his head. “It looks bigger, but one hundred of its rooms are actually fifty apartments.”

“Did you walk the Riverwalk?” asked Cheng.

“No; where’s that?”

“Cathay Dome. The buildings are arranged along a canal; they even meander along it a bit. It’s very attractive.”

“Well, let’s get down to business,” said Zubko, pushing his plate of orange rinds away. “We’re here five weeks, long enough for someone to visit every borough and see some of the more interesting stations. We have a schedule. And I know some of us have concerns.” Zubko pulled out his attaché and glanced at the itinerary.

“I’m surprised we’re going from Aurorae so quickly,” commented Dupont.

“Personally, I’m looking forward to getting to a smaller outpost,” said Zubko.

“This place is big and unpredictable to me.”

“I think it’s great,” said Singh.

“And I’m looking forward to seeing Dawes and visiting the Chinese facility there,” commented Cheng.

“One reason for the flights early in the visit is to accommodate my schedule,” replied Will. “This weekend, I’m tied up with an important religious event; we’re having a Mars-wide convention of Bahá’ís to elect a spiritual assembly for the entire planet.”

“Now?” asked Zubko, irritated.

“The timing is mandated by our authoritative texts; it’s the same for Bahá’í communities all across Earth as well.”

“But did you say this is to elect a planet-wide body? That’s my concern.”

“That timing has nothing to do with me, I assure you. There are impartial criteria for determining when a body is elected for coordinating a national region, and Mars met the criteria last year.”

“Oh, God, another *national* body,” groaned Zubko. He looked at Will. “I think our strategy needs to be a very simple one: if anyone asks about the issue of independence, we say we aren’t here to talk about that, just to see the conditions and collect facts.”

“You can try that, but I doubt it’ll work,” said Will. “And it could backfire; you’ll look aloof and uncaring.”

“That reminds me; you have an afternoon borough meeting scheduled with us on May 7,” said Cheng. He shook his head. “Bad idea. I certainly don’t want to face a thousand voters.”

“How else will we put a human side on the Board of Representatives?” asked Dupont.

“Do you want a thousand people mad at you and demanding something?” replied Cheng.

“Look, Marsian voters are pretty polite,” replied Will. “No one will throw things. They are intelligent and articulate, but sensitive to insults. The five of you traveled a hundred million kilometers. You can’t refuse to meet with the public.”

“We have to face them,” agreed Dupont.

“Then you do it,” replied Cheng.

“Elliott, I think you engineered this,” exclaimed Zubko. “You suggested we travel here two years ago to see the conditions. Well, here we are, and we find that we have parachuted into a populace demanding independence.”

“No, that’s not true,” replied Will, raising his voice slightly. “This is not a population demanding independence. The last petition requesting the Mars Residents Council to negotiate independence received signatures from only twenty percent of the population. As for my role, it hasn’t changed in two years. Mars will need independence eventually, but I don’t see that as a short-term thing. I could see it in five years when we have ten thousand people.”

“Independence for ten thousand!” Zubko scoffed.

“Pete, these are not ordinary people,” said Melos. “They are highly educated, highly trained, and team-oriented. They have a stable, progressive society. And they have an army of slave-machines and slave-robots that produces wealth that few nations can dream of.”

“Not to mention isolation and a distinct environment, which produce a distinct culture,” added Will.

“And they have a myth that possessing one hundred forty million square kilometers of wasteland makes up for their miniscule numbers,” said Zubko. “Let’s be honest: all this is myth and fancy.”

“That’s what most nationalism is,” replied Dupont. “Without myth and fancy, your proud American flag is just a piece of colorful cloth.”

“That piece of ‘colorful cloth,’ as you put it, has almost three hundred years of history behind it, and is backed up by 400 million people and a fifty trillion dollar economy.”

“Which can’t be said of most of the flags on Earth,” noted Will. “Nor was it true of the first American flag almost three hundred years ago.”

“And the Marsians are seeking the independence of the equivalent of Boston in 1676, not the thirteen colonies in 1776.”

“And right now it’s April 23, 2050, not 1676 or 1776. Things move a lot faster nowadays.”

Zubko pointed at him. “You see, Elliott, I knew you were on the other side!”

“No, Pete, I’m trying to make you appreciate the other side’s point of view. Otherwise you will not be effective in responding to it. If you want to see the Commission survive beyond 2050, you have to listen to them and deal with them, not ignore them.”

There was silence for a moment. Zubko stared at Will. Then finally he said, “Okay, what’s the plan?”

“Haven’t you read the talking points?” responded Dupont in disgust. “Will, maybe he should stay in the hotel here for the entire five weeks. Wei-ming can sit and drink tea with him the whole time. Benigno understands, and I think Rama can be brought around.” She stood up and faced Zubko. “It’s simple. Repeat after me.” She paused to put a forced smile on her face. “We’re delighted to be here. This place is absolutely incredible. It represents the most successful partnership of nations ever attempted. A whole new world has been settled. The partnership of nations and of the Marsian people has built the caravel and now it’s building the galleon and will open the entire outer solar system to humanity. The partnership together found life on Mars last year and now we’re funding a massive expansion in exobiology to study it. The partnership of the nations and the Marsian people is expanding study of the recent Martian past and may find the keys to terraforming, if we ever decide to go that route. We must continue and deepen this partnership, for the sake of building up this world as quickly and effectively as possible. Together we can build a new human civilization.”

“Bravo,” added Melos.

“That’s what we all said at the welcoming ceremony,” replied Zubko. “And it ain’t gonna work, simply because once something like this gets into people’s consciousness you can’t fight it.”

“Then are *you* advocating independence?” asked Dupont.

“Of course not! No, my gut says that the carrot won’t work by itself, not without the stick as well.”

“And did you bring a stick along?” asked Singh. “One revolver might be enough, actually.”

“No, but we have access to various means, like an embargo.”

“That’s slipping away fast,” replied Dupont. “Because in a week or two all the cargo Mars will receive over the next two years will have departed Earth orbit, and with it being the best opposition in 47 years, the quantity of stuff shipped will keep this place going five or six years. Meanwhile, Earth will be deprived of two thousand tonnes of gold and an even large quantity of platinum-group metals.”

“I suspect there are ways pressure can be brought to bear,” Zubko replied cryptically.

“My advice is to drop such thoughts, because they will lose you Mars,” exclaimed Will. “The percentage of people signing the petition will zoom upward to over fifty percent, and if that happens the game is over. The people will have spoken. That isn’t something I can ignore.”

“Why not?” asked Zubko, outraged. “A mob won’t come and hang you, surely?”

“It’s a question of legitimacy. One can’t govern if one loses legitimacy, and if more than half want independence I won’t have legitimacy.”

“We’ll order you to ignore them,” replied Cheng.

“And I will resign.”

Zubko stared at him. “God, this is a mess,” he finally said.

“So, our goal over the next five weeks is to keep the percentage signing the petition below fifty percent,” Dupont finally said. She nodded. “That’s concrete and clear. That’s something rhetoric may be able to accomplish, Pete.”

“Maybe. There’s still a long-term problem.”

“We can’t deal with a long-term problem,” she replied. “Once we’re on our way back to Earth, there won’t be independence for two years. That gets us past the transition next year when Dr. Elliott completes his third term as Commissioner and retires.”

“That’s a big moment,” agreed Cheng. “Yes, Helene, you are right. That should be our goal.”

Zubko nodded. “Yes, that makes sense. Okay.”

3.

## Arrivals

late April, 2050

The sun was westering before Mars Control cleared the *Shalbatana* for landing. After two extra orbits the shuttle fired its engines over Elysium and dipped into the upper atmosphere. After screaming through the upper atmosphere, sheathed in excited atoms, the shuttle slowed as it dipped into the lower atmosphere and popped out its drogue parachutes. A minute later a trio of huge, orange ‘chutes opened, slowing the shuttle to five hundred kilometers per hour. The engine ports in the conical heat shield opened, the parachutes detached, and four of the five engines roared alive, burning off the shuttle’s remaining velocity. With a slight bounce, the vehicle settled into the center of the bulls eye of pad 8.

Forty minutes later, a Mobilhab bore the *Shalbatana*’s twenty-four passengers to Arrival Hall. A crowd of guides for the tourists, “buddies” for the migrants, friends, and the idle curious gathered to greet them. Colonel Brian Stark waited for his friend Skip Carson to disembark.

He was surprised to see how much older Skip, now 54, looked. He was completely bald except for a fringe of snow-white hair around the sides of his head; there were more lines on his face; he walked with a very slight stoop. But the flash in his eyes was just as dazzling as it had been seventeen years earlier when they both had arrived on Mars for the first time, and the energy in his step seemed just as undiminished.

“Hey, Brian, good sol.” Skip dropped his bags to embrace his old friend.

“Welcome back, Skip,” said Brian, surprised that his voice had a bit of emotion in it. They were an odd couple: Skip was flamingly liberal in his politics, Brian ploddingly conservative; Skip was a Hollywood producer, Brian a naval officer; Skip was an internationalist, Brian an American patriot. But they shared love of good drink, beautiful women, and some rather unexpected circumstances that had thrown them together and made them friends.

“Thanks, Colonel,” replied Skip, using false formality. He pounded his friend on his back. “God, it’s good to see you again.”

“It’s been just two years.”

“Yeah, but you didn’t have much time; you were busy saving Project Odyssey.”

“Sorry about that, but it was worth it.”

“Oh, it was.” Skip looked around. “Let’s get out of here and go somewhere we can talk, preferably my hotel room. I’ve been floating an extra five hours on an empty stomach and worrying whether I would be dashed into atoms.”

“Let’s go. Do you want to walk or ride?”

“Ride, I think. I can explore the outpost later.”

Brian nodded. He grabbed Skip’s bags and put them in the back of a robotic vehicle about the size of a golf cart. They jumped in the front. “Marriott Hotel, Liberty Dome,” said Brian, and the cart took off.

“Wow, when did you get these?”

“Six months ago they arrived on a solar sailer, but they were just put together and tested last month. They’re for the tourists right now, but we’ll probably get more of them. They’ll serve as a robotic taxi service.”

“Nice.” Skip watched the large door of Arrival Hall slide open. The cart drove down a short tunnel, then turned left—west—into Main Tunnel South, which had clearly marked pedestrian and vehicle lanes. “I can’t believe this.”

“When you left fourteen years ago, this place had what? A hundred or a hundred fifty people? Aurorae alone is now over 2,000 and Mars is 4,000; by the end of the year, with migrants and births, we’ll be at 5,000.”

“I know the numbers, but they don’t have the emotional impact of. . . this.” He pointed a long, arrow-straight tunnel whose end was not even clearly visible.

“So, what was the flight like?”

“Pretty tense. I’ll have to take some notes tonight; they could help with a script I’ve been playing with. Picture a passenger vehicle full of people most of whom paid between fifteen and twenty million redbacks of their own money, who have rearranged a year of their own lives, to make this odyssey, this adventure. . .they’re worth about ten times that, too. . . and now they’re stuck in a little can and facing the possibility of falling to their deaths. They held up pretty well. Now I appreciate the feeling people had on the *Titanic*.”

“You’re making *another* movie about that disaster, I understand.”

“Sure, the *Titanic* has to be done again by every generation, it’s a classic situation.”

“And when are you leaving? The fall?”

“January. Almost everyone who arrived on the *Rigel* will leave on it on June 30<sup>th</sup>. But the *Aldebaran* will leave Mars on January 20<sup>th</sup>, fly past Mercury on July 10<sup>th</sup>, then head on to Earth, aerobraking there October 25, 2051. I’ll be away from Earth almost two

years, but I'll get plenty of work done en route, I'll see Mercury—I think there's only two other people who have been past Mercury and Venus and been to Mars, and I don't know whether they've been to Phobos and Deimos as well—and I get to be here during what might be the most exciting half year in its history.”

“Possibly. There won't be a revolution or anything.”

“You don't think so?” Skip sounded disappointed.

“Not in the riots and bombs sense, no, but the independence movement might culminate and achieve victory. I suppose that's possible.” Brian looked at his friend.

“Liberal romantic that you are, I'm sure you're in favor of independence.”

“Of course, and as a conservative patriot, I suppose you aren't! It's inevitable. This world is humanity's future. It is the image of future human civilization.”

“Well, I'm not sure I'd go that far, and I can't imagine how some of our achievements could ever be copied on Earth. In fact, many of our 'achievements' will probably go away as we get larger, like full employment and negligible crime. They're more a function of small size than utopian social arrangements.”

“I'm sure there are a lot of changes already.”

“Of course. Everyone doesn't eat together any more, for one. Mars has forty eateries and lots of packaged meals are available in our two grocery outlets. All the eateries have robotic food delivery service, too, though it can be pretty slow. And all condos come with real kitchens.”

“Really? Electric stoves, microwaves, sinks, and refrigerators?”

Brian nodded. “Those developments alone have changed our social arrangements quite a lot. There's the beginning of the development of more prosperous and less

prosperous neighborhoods; the latter are older or less well planned. There's a lot more ethnic separation; most Japanese live up on the escarpment, the Mormons are in Cochabamba and now in Liberty, the Nigerians are in Andalus near their church, the Indians are in Punjab, the Chinese are moving into Cathay. We've got an American hangout near the university, in Colorado Dome. Every weekend of the year has an ethnic festival of some sort."

"Do you think the presence of the national representatives will bring things to a head?"

"It's pretty likely, I think. So you are here at an exciting time."

"And what's your role?"

Brian hesitated. "I'm in an awkward position. I've lived here fourteen of the last seventeen years, so I'm pretty much a Martian, but I run the United States nuclear facility, and it is essential to future space exploration as well as being important to the future of this place. If we get independence—and I am conscious I said 'we'—New Hanford will almost certainly continue, but the treaty obligations will fall on a Martian government instead of on the Commission. I think I'd rather protect that likely relationship. So you won't see me doing anything against independence."

"Interesting. But you aren't working for it?"

"No, that would be inappropriate considering I'm the ranking American employee up here. I'll be happy either way. I see no reason to rush independence; we're not being repressed."

"True, unless you consider denial of self-determination 'repression.'"

“But that isn’t being denied either, because the Marsian public has not yet demanded the right of self-determination.”

“I see your point. At any rate, I plan to film everything I can. How’s the night life up here?”

“Better than ever; the percentage of singles stays about the same, but the number grows! There are a lot of available women. And they’re from all ages, too; not everyone here gets married, settles down, and has kids. Some people are comparing this place with McMurdo.”

“No, that’s impossible!”

“Well, McMurdo in the winter compares to this place on a weekend.” Brian smiled. “Don’t worry, I can link you up with some women.”

“Good. There are one or two tourists who were hoping to benefit from your contacts.”

“Alright, I can invite them over for a few drinks as well. Are they the sort that would like to smoke some Acapulco Gold?”

“Sure.” Skip considered the statement and became more and more surprised. “How in God’s name did you get that here, through the quarantine?”

Brian smiled. “I have a little farm at my condo at New Hanford. Let’s just say that neither the U.S. government’s inspectors nor the Commission’s are very thorough when an item is labeled ‘radioactive.’”

Skip smiled slightly, contemplating his friend’s unexpected actions. “I suppose there’s no law against marijuana here, either. I guess some would call that progress.”

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The next sol, two more shuttles descended to Aurorae bearing construction workers. The sol after two more descended with the last passengers of the *Rigel*. Waiting anxiously in Arrival Hall was Liz Elliott.

She was surprised to meet two women awaiting their husbands; she didn't know that sometimes couples flew to Mars in different columbiads. Their feelings of anticipation and excitement were identical to hers, which gave her pause for thought.

The inner door of the airlock opened and the Conestoga drove into the hall. Its door opened and out came passengers, one at a time. Mike Tobin was near the end of the line. She didn't recognize him instantly; he had aged a bit in the two years since she had met him at M.I.T. He was now 24, a year and a half older than her 22. His baby face had matured, filled out, especially with the addition of a moustache, which she had anticipated since she videomailed him almost daily. His muscular legs seemed to have diminished, perhaps because of the low gravity. But when he saw her his eyes lit up and he flashed his winning smile. "Lizzie," he said, using the nickname that only her parents and her brother—who had shared it with him—used.

"Good sol, Mike," she said from the three meters distance still separating them.

He came over to her, dropped his bags, and put his two arms around her in a hug. Then he leaned back to see her. "You're a sight for sore eyes, Liz."

"Thanks, so are you."

He leaned in and kissed her quickly on the cheek. She felt an electric thrill run down her spine and smiled. He laughed a bit. "You're not going to say 'welcome to Mars?'"

"Welcome to Mars. How do you like it?"

“So far, I’ve seen Arrival Hall, and it looks a bit like a bus station. But I barely noticed it anyway.”

She smiled. “It’s been a long time.”

“Two years. I came as fast as I could.”

“Yeah, you got on the first flight this opposition.”

“I didn’t really have a choice; the first flight is for the VIPs and the gophers who will do anything for seventy hours a week. So I’m here to work my tail off in construction for nine months. Geophysicists who haven’t written their dissertations don’t have much clout.”

“No, but at least you got a berth. For a while, I wasn’t sure you’d make it.”

“Me too.” He looked for the exit. “Let’s get out of here.”

“We can get a robotic transporter for us, or a robotic luggage cart.”

“Let’s walk and I’ll carry my bags; I’ve been crammed into a tiny, weightless space twelve hours.”

“I’ll carry one.” Liz reached down and grabbed one of his two bags and he grabbed the other. They were easy to sling over one’s shoulder, in Martian gravity. They headed for the exit. “Do you want the scenic route or the fast route?”

“Scenic. I haven’t seen any vegetation bigger than an oregano plant for four months.”

“Okay.” She led him out of Arrival Hall, across South Main Tunnel, and into Yalta, their oldest biome, forty meters in diameter, which had been completed twenty-one years earlier. Mike was astonished that the yard between the north and south buildings was completely overshadowed by a canopy of leaves; the oaks and palms had grown

three stories high and now competed with the gardens on the rooftops for sunlight. Under the trees, the ground had a scant cover of grass, with large blocks of impatiens and other shadow-loving flowers. The buildings' vinyl siding was covered with ivy.

“Wow, this is what I need!” They stopped while Mike drank in the greenery.

“When I was a toddler, we moved into this biome. Those windows were ours.” She pointed to some windows at ground level. “We had the garden flat. It's a Martech classroom now. This place had orange, lemon, and banana trees across the courtyard and lots of grass that we kids would run on, with a swimming pool at the far end that could be covered with a hard surface so it could serve as a basketball court.” She pointed to the far end where the trees were smaller. “But they also had these little oak seedlings planted at regular intervals, and we sometimes tripped over them. I remember we broke one of them and it had to be replaced. But within ten years the citrus and bananas had to be removed. Now there's a fight between those who want to cut down some of the trees and make this place a sunnier university quadrangle, and those who want to preserve it as forest.”

“Yes, definitely!”

“But we have some pretty impressive forests developing in a few spots, and two of them are Mediterranean oak forests like this one. Its sols are numbered, I think. The wood's worth a hundred thousand redbacks, and this place would look better with a bit more sun.”

“I suppose. Who would get the money? Martech?”

“No, the borough owns the courtyard.”

They crossed the forest and exited through the west airlock. The ten-meter tunnel led them into Riviera, which was sunnier, with richer stands of bushes and tall flowers.

Liz stopped by a big tree stump—Mike could see why Riviera had more sun—and explained how her family had lived in the second-story flat here as well, when Mars Control and the Commission offices occupied the third floor and the rooftop annex.

They crossed through another ten-meter tunnel and emerged into a more humid environment and a larger, fifty-meter dome. “This feels like New England in summer,” exclaimed Mike, saying “summa” rather than “summer” in his Yankee accent. She nodded.

“This is Huron; the climate’s modeled on Michigan and Ontario.”

“That’s about the same.” He inhaled. “It even smells like summer.”

“It’s early summer here, right now, and summer will last until early September—six months of summer!—then the reflective insulating blanket will no longer be kept up over the western half of the dome until midmorning or over the eastern half after mid-afternoon to bounce sunlight downward onto the vegetation. So sunlight will drop by thirty percent and it’ll start to cool off. Then they’ll start to keep the eastern blanket up in the morning to prevent sunlight from entering, and will raise the western blanket to block entering sunlight at 6 p.m., then 5 p.m., then 4 p.m. . . by mid October there will be frost at night and the leaves will turn color, then drop. There will be snow most of November, which is also the time the sun gets the farthest south of the equator. Depending on how bad the dust storm season is, winter will last four to sixteen weeks. . . then when the sun heads back to passing overhead every sol they’ll increase the amount entering the biome and spring will come. Vernal equinox is next May, so it’ll be summer in here by then.”

“Clever. Do they do that in Yalta and Riviera?”

“Yes, but Mediterranean climates have damp, cool winters, so they can’t bury the vegetation in snow and let it sleep until the dust storm season ends, so winter there is a predictable eight weeks.”

Mike nodded and they followed a trail across the middle of Huron, past clusters of four-story cylinders of housing with agriculture on terraces over their roofs, into another twenty-meter tunnel. It brought them into Colorado, a sixty-meter biome: fairly hot, low humidity, scattered ponderosa pines and aspen along a small northward-flowing creek, with a verdant wheat field along one side. Clusters of four-story cylinders with terrace-gardens on top filled about half the space. The gardens overhung the cylinders by two meters, providing wide, low-radiation areas for people to congregate; the other biomes had had overhangs, but not as wide.

“I’m surprised the wheat field is still green.”

“This would be the second or third crop. Right now the sun’s over the northern hemisphere; when that happens we keep the winter short and make the summer long! We run two complete terrestrial seasonal cycles per Martian year for the sake of the plants. You’ll see that even with all the housing in here, we still do a lot of agriculture. It helps maintain the balance of oxygen and carbon dioxide and reduces the strain on the life support equipment.”

“I read about that.”

They continued across the dome and into another twenty-meter tunnel leading to Columbia, the dome where Mike had his flat. He was excited when they opened the airlock door and entered, but was surprised to see a sixty-meter dome filled cheek and jowl with four-story cylinders. Liz saw his disappointment. “This is generally regarded as

one of our less successful designs. It has twenty cylinders that take up two thirds of the floor space.”

“No wonder the condo was so cheap.”

“Yeah, most of the units in here will belong to the people arriving this year, though a few will be time-shares or second houses of people living in other outposts, or very large houses of large families.”

“Well, I have Unit 18C2. What’s the climate in here?”

“It was supposed to be Columbia Plateau of eastern Washington state, but that’s hot desert in the summer and cold with blizzards in the winter. I think they’ve moderated it.”

“There’s not much ecology in here to effect; some flowers and a few trees.”

“That’s why this is called Columbia Dome rather than Columbia Biome.” Liz steered them north toward a cluster of cylinders occupying the northern end of the dome. They passed through an entrance and into a small court formed by four cylinders; the center of the courtyard had a small flower garden illuminated by sunlight that shone through a skylight in the overhead garden terrace. Unit 18 was the second one on the right. They entered and walked up a spiral ramp.

“Wow! Steep.”

“Low gravity. Robotic vehicles can climb them, too.”

They stopped at the third floor where two doors stood side by side. Mike looked at door 2 and said “Mike Tobin. Please open,” and the right-hand door clicked. He pushed it open and they walked into a small living room.

“Oh, you got the larger size starter unit.”

“I wanted a living room.”

“Yes, that’s the larger size. These cylinders are ten meters in diameter. Each floor is either divided into two units or three. The two-unit version has a living room and a bedroom; the three-unit version is a one-room efficiency.”

“They’re really cramped, but more affordable. I figure I’ll be paying an interest-only mortgage for at least two years before my salary goes up enough to pay principal as well.”

“That’s common up here. But why get a living room when you don’t know enough people to need it?”

He put down his luggage. “I should be frank, shouldn’t I? Liz, I’m crazy about you and I want to marry you, so I got a place big enough for two, not one.”

She smiled. “Oh, how sweet!” She leaned over and kissed him on the cheek, then he put a hand on her shoulder and pulled them together for a long and passionate kiss on the lips. She giggled; he laughed a bit, as he often did.

“I love your little laugh,” she said. “I missed it. Sometimes I saw it in the videomails, but not the emails of course!”

“And I missed watching you walk. Every step proclaims that you’re a dancer, and you were never walking in the videomails! I had to picture it.”

“I’m sorry, you should have said something.”

“No, I couldn’t say that. We were pretty frank in our exchanges, but I couldn’t ask you to walk for me!”

“I’m going to be dancing tonight in the welcoming program, you know.”

“I know, and I can’t wait to see you.” He was still holding her in his arms. “Liz, I . . . I love you. I love you so much, seeing you is driving me crazy.”

“And I love you, too. I guess that’s what happens when you exchange close to a thousand videomails!”

“I guess.” He laughed a bit, then leaned in and kissed her again, and she kissed him back.

“Look, I have to rehearse this afternoon, and I can’t get too distracted; dancing well takes a lot of mental preparation. So I have a few hours with you at most this sol. I’ll have more tomorrow. That reminds me, you’re invited to our house for supper tomorrow.”

“Oh, nice. But speaking of distractions; I must have distracted you a lot!”

She rolled her eyes. “Totally! But once I start rehearsing this afternoon, everything will be fine.” She looked around. “You have the bare minimum here.”

“I got the cheapest package: double bed mattress, but no bed; table, two chairs; the simple kitchen set; the simple linen set. I need to buy the rest. Do you want to show me around, then help me shop?”

“Sure.”

4.

## Discoveries

early May 2050

Will came out of the Deseret Department Store with a new pair of shoes. He looked around the Gallerie; it was mostly deserted, as it usually would be Thursol at 10 a.m. He had chosen the time carefully to minimize contact with people. Too many might ask him questions he didn't want to deal with.

He walked out of the Gallerie mall and into the bright sunlight of Andalus Square when he saw Father Greg Harris walking toward him with his friend John Hunter. They waved casually. "Good sol, Will. How are you?"

"Pretty good. What are you guys doing?"

"John just got back from Elysium and we're getting some coffee," replied Greg.

"So, they finally found a living photosynthesizer," said Will to John, who smiled.

"Yes, finally. We now have a balanced two-species ecosystem!"

"The survival of Martian life is assured. Vanessa must be thrilled."

"Of course. She's still down there making sure the species is nursed back to significant numbers. The ecologists think the sedimentary stratum they're excavating has a high chance of holding other viable species, too, so they're working around the clock. But you know what surprises us? This story dropped off the headlines in only twenty-four hours."

Will nodded. "Yes, the Commission's media relations office did its best, but people have other interests right now."

“That reminds me, Will; did you see the interview on *Mars This Sol* with Dupont and Zubko?” asked Greg.

“I didn’t watch, but I skimmed the transcript.”

Greg shook his head. “No, watch it. They need to work on delivery. Their approach to independence—ignoring it whenever they can or referring to it tangentially—is making people mad. All five national representatives have been interviewed or their speeches have been broadcast. They’re all basically ignoring the idea of independence and saying that the current partnership arrangement is the best one for the future.”

“Yeah, some people I’ve talked to even felt patronized,” agreed John.

“I know,” agreed Will. “This is not a group of efficient communicators, though Dupont does pretty well, don’t you think?”

“Yes, but even she wants to pretend independence is decades away, so all the talk is just idle speculation.”

“Greg, Zubko came to mass a week or so ago; why don’t you talk to him yourself?”

“Maybe I will,” he replied.

“Where do you guys stand?” asked Will.

“Independence,” replied John. “Why not? I signed the petition this morning. It’s up to twenty-three percent of voters, now.”

“Twenty-three?” asked Will. “Last night it was twenty-two.”

“I haven’t signed, but I might,” replied Greg. “This is gradually feeling like an ‘either/or’ decision. We’re all moderates up here; we have to be in order to be good team

players. We are not naturally a population that commits itself to radical ideas. But I sense a movement of the people.”

John nodded. “To some extent, it’s in two directions: there’s a growing group of people in favor of independence and a growing group that thinks it’s premature or unimportant.”

Greg shook his head. “Not many are out-and-out opposed, so it isn’t polarization. Some people just don’t care.”

“I’m rather insulated from all this,” noted Will. “A lot of people won’t express their opinions to me, for obvious reasons. They won’t talk frankly to Ethel either. Marshall and Liz’s peers are almost uniformly in favor of independence. But my vague impression is that we used to be a population that hadn’t thought about and didn’t care about the issue of independence, and that we’re gradually becoming a population committed to it.”

John nodded. “Yes, though a few are becoming committed the other way. There is some polarization.”

“This must put you in a very difficult position,” noted Greg.

Will shrugged. “That’s my job. My position has always been the same: Mars will become an independent nation someday.”

“But that ‘someday’ has to come, Will, and then your position has to change,” said John.

“That’s true.”

Greg looked at Will, wondering whether that was concession, but decided it wasn't. "By the way, congratulations on being elected to the new National Spiritual Assembly of the Bahá'ís of Mars."

"Oh, thank you! That was a surprise. But please call it the 'Spiritual Assembly of the Bahá'ís of Mars.' We're not using the word 'national,' for obvious reasons. We don't want to stir up feelings."

"*Mars This Sol* has called it a 'National Spiritual Assembly' several times."

"Yes, but now they've stopped. We were careful not to use the term, we asked them to make the correction, and now we have to deal with the misunderstandings."

"That could be a problem; I know how carefully Bahá'ís avoid partisan issues. I have to tell you that Father Miller is jealous that you Bahá'ís beat us Catholics."

"When will he be consecrated bishop?"

"The laying on of hands takes place in Rome next month, but we'll have a formal installation in January, after he returns and Father Conrad arrives. At that point, we'll be the Diocese of Mars."

"That'll be an important milestone in the religious history of this place." Will looked at his watch. "I have an appointment, so I have to hurry. It's good to see both of you. I'd appreciate your frank comments to me from time to time; it'll help me stay in touch."

"I'll do that, and I'll talk to Zubko," promised Greg.

Will hurried home. He put on the new shoes, grabbed his attaché, then ran back to the Gallerie building and his office on the top floor. He had just enough time to glance at

*Mars This Sol* and check out the petition, which still had support of twenty-three percent of the voters. Roughly a quarter of the voters: even that couldn't be ignored.

Right at 10:30 there came a knock on the door. Will looked up; it was Gus Sobczak, an entrepreneur who was one of the tourists currently visiting Mars. He was an interesting man; 65, a year older than Will; slightly balding; but with a ponytail and a lavender suede vest that belied an unconventional life. Will rose from his seat and stepped forward. "Mr. Gus, come in. Good sol."

"Good sol, Commissioner Will. Thanks for finding time to meet with me."

"I'm always happy to meet investors, especially when they spend their own time and money to come all the way here." Will shook Gus's hand, then pointed to his meeting table. "Please sit with me. Tea or coffee?"

"What sort of tea?"

"I can make mint or marjeeling; the water has just heated up."

"I'll try the mint. That's all you had for years, I understand."

"Yes, before tea plants were imported and we figured out how to breed them to grow well. That was a struggle, for some reason." Will spooned out mint leaves into the tea pot and added hot water. "It'll take a minute. How was your trip to Cassini and Dawes?"

"Oh, very interesting. I wish I had stayed at Dawes longer; it proved to be more than just a repeat of Cassini. The manager of the various stores there—Cassandra Fuller—was able to explain all sorts of things to me."

"Like what?"

“Why almost no one sells brushes and everyone has combs; the latter are made here and the former must be imported. Very inconvenient. Why substances that are sold in bottles come in only three or four standard sizes and the shapes are all the same; those are the plastic bottles that are made here. No distinctive packaging or product appearance; it’s strange. Why clothes are so loose fitting; there are fewer sizes made here and clothes are designed to accommodate radiation-absorbing pads. Practical, but it’s hard to appreciate the shapes of your women up here.”

“The Muslim women appreciate it, though.”

“I suppose. Shoes are surprisingly ugly up here.”

“Our clothing stylist, Maryam Salih, is getting to them this year. If you don’t like women’s and men’s clothing now, you should have seen them four years ago, before she arrived.”

“She told me she’s made a nice little fortune, too, and she denied to me that Islam influenced her designs. I’m not so sure, after your comment. Electronic products are very diverse, ubiquitous, and expensive; but then, they’re all imported.”

“We won’t be making attachés and such for a long time. We are expanding our share of the work in vehicle manufacturing and assembly this columbiad, however.” Will poured some tea, liked the color and nodded, poured it back into the pot and brought it over to Gus. “Watch out,” he said, then he began to pour tea into the glass, raising the spout higher and higher until the stream of liquid was nearly a meter long.

“You’re good at that.”

“It’s a Moroccan custom in pouring mint tea. My friend David Alaoui was on Columbus 1 and taught it to us. It’s now Marsian custom as well.” He placed a bowl of

sugar cubes between them and sat with his steaming cup. “Are you finding business opportunities?”

“Maybe. The fundamental problem with this place, from the point of view of investing, is that it’s a collection of villages with a total of four thousand people, soon to be five thousand. There are a lot of franchises already and they’re all struggling financially; they exist because the franchise can cover its losses on its Mars operation through the dubious terrestrial marketing advantages the Mars outlet creates.”

“There’s also the idea of getting in on the ground floor; we’re growing.”

“Oh, sure, but even in a few decades, how many MacDonalds or Cinq-à-Sec outlets will you have? They simply can’t make more than thousands in profit; certainly not millions.”

“True, that’s only available through export-related investments.”

Gus nodded. “That’s one reason I just had breakfast with the head of your new Mars Chamber of Commerce, Henry Smith; they need to target their marketing of this place more effectively.”

“They’re a new operation; just six months old.”

“I know. That’s the Commission’s error in my opinion, Will. You have never been effective at encouraging the business sector up here. It’s dominated by ethnic and religious groups: the Mormons, the Nigerians, and the Japanese especially. Where are the former astronauts? Still doing their science or engineering and making hand crafts in their living rooms for sale at the monthly flea market. Pitiful, if I may be frank.”

“Well. . . I agree. We have been ineffective finding someone here to set up and carry out a program to stimulate business. We’ve had no shortage of advice; I can show

you several reports from consulting firms. We've imported two people who had business development as part of their portfolio, and it proved to be the part they completed least. The Chamber, however, will be effective; Henry's been here over ten years and knows the place well, and he's made a lot of money. That said, we do have successful businesspeople here who arrived with other skills and purposes. Silvio Diponte's the classic example, but my wife, who is Vice President of Mars Metals, is another."

Gus considered, then nodded. "Point well taken." He sipped his tea. "I appreciate it when an executive can take criticism."

"I wouldn't have remained the person in charge up here, in various capacities, for twenty-six years otherwise. You get better advice when you can listen to the bad news."

"What do you think will happen with this independence movement?"

Will considered. "Mars will be independent, and it will achieve its independence nonviolently. But I don't know whether that will happen in 2050, 2051, 2055, or 2060. I doubt 2060."

"What odds would you put on 2050?"

Will shook his head. "I'm not in a position to speculate. I'm sure you can appreciate that."

"Yes, definitely. You said non-violently; what makes you so sure of that?"

"Go talk to Érico Lopes and Lyle Quincy who run the Independence Club. They're not interested in riots and burning things down, and they don't hate the Commission. People don't hate me, as Commissioner. This place is not angry."

"True, but it could become angry."

"We're not going to let it get that angry."

“Hum.” Gus considered that statement. “I guess you’ve reassured me, then. Henry and I have been talking about opening a new bank up here; there’s only one up here now, and there’s money to be made on import-export financing.”

“And a lot more than could be made on our domestic consumer market.” Will nodded. “That’s an area needing some development.”

“We thought so.” Gus sipped his tea. It seemed that he had finished with his business, but he made no move to leave.

“Are you scheduling some sight-seeing?” asked Will.

“Oh, yes. I’ll be heading to Tithonium next week for the Marineris tour, then I’ll fly to the base of Olympus Mons for a drive to the summit. I’ll get to Uzboi after that and will take the drive southward through the Argyre Rim Mountains. I’m skipping the North Pole—snow doesn’t interest me—and Elysium with its microscopic bugs.”

Will nodded. “You’ll see some of the more interesting parts of this world, then, plus Phobos.”

“And I’ve sampled the culture. Your daughter’s dance at the welcoming dinner still impresses me.”

“She’s very good, and it looks like we can come up with a way for her to do it professionally, thanks to the Mars Arts Council.”

“And I hear she’s getting married?”

“It looks like it. My son’s wedding is next week. They’re both flying from the nest and setting out on their own.”

“Congratulations to you and Ethel.” He paused; hesitated. “There is another matter I want to ask you about; or maybe tell you about. I talked to Henry about it this

morning and he was quite upset. He said I should talk to you about it. Last week, before I headed for Cassini and Dawes, my good friend Skip Carson invited me to a private party at Colonel Stark's residence. I must say, we had a very good time; there were some very interesting and attractive women there, excellent food, and very good drink as well. But there was a bit more that I never thought I'd experience here. The good Colonel offered us some of the highest quality marijuana I've ever smoked."

Will was very startled by that. "Marijuana?"

"Yes. I am a connoisseur of various things, and that's one of them. As someone has observed, Mars can provide the perfect growing conditions for anything. At the time I considered the evening the acme of hospitality; it certainly was one of the high points of this trip. But since then, thinking about it, I felt some qualms; and I'm not someone to feel guilty easily. I was told that marijuana was secret, but legal up here."

"Legal? No, that's not correct. Everyone likes to say that with our de facto Earth headquarters in Paris, we have to follow French law, but in fact Houston is still considered the Commission's legal headquarters, so we have to follow Texas law. I don't know how Texas law might have changed in the last few decades, but I doubt it allows the production and consumption of marijuana. Then there's the issue of quarantine; one can't just import plants or species here without notifying the Commission. There are also issues of mental impairment; we have strict regulations about alcohol consumption because of the risks to the common good that could result."

"I wondered about the first, suspected the second, and the third didn't occur to me. What will you do?"

“Have a talk with Colonel Brian, referring to ‘anonymous sources’ of course. After that. . . we’ll see.”

“Good luck.” Gus rose. “I am very attracted to the idea of a society where children are not tempted by drugs, even though they may be drugs I enjoy myself. That’s a lesson your daughter’s dance taught me.”

“Thank you. You should see our high school, then. Most of the kids are bright, well-behaved, and serious about their future. We try to combine Japanese discipline, European competence at teaching, and American creativity.”

“I hope you can continue to succeed. Ciao, Will.”

“Ciao.” Will shook Gus’s hand with a friendly nod and walked him to the door. Then Will closed the door, sat at his desk, and thought.

The conversation made him more and more angry. Gus was right; production and consumption of recreational drugs had the potential to do considerable damage to Marsian society. There already were plenty of ways to have fun without them. That worried him more than anything else.

But there was always the possibility Gus was wrong or even deliberately lying. With the independence movement raising emotions, one never knew what plots were being hatched. Talking to Brian first was best; but in his position, he would have to talk to Constable Kent Bytown eventually.

He turned to his attaché to find out where Brian was. It ran through the usual public sources of information, including Brian’s own daily planner, some of which was available to Will and other frequent contacts. Colonel Stark was at Uzboi with Pete Zubko, but they were both due at Aurorae on the 1:30 p.m. flight. Will already had a

meeting with Zubko at 2, so he asked Brian's electronic secretary for a 3:30 p.m. appointment, which was approved a few seconds later. That gave him time to think how he would approach the matter delicately and persuasively, if that was possible at all.

His videophone beeped, startling him from his thoughts. He glanced at his attaché; it was Dr. Hun-jai Park, chairman of the Economics Department of Martech, who was also the Commission's economist. Will opened the line and Park's face appeared on the screen.

"Good sol, Hun-jai."

"Good sol, Will. I just got a call from a reporter at *Mars This Sol* asking me about my confidential report to the Commission estimating the market prices of platinum group metals and gold over the next five years. Someone has leaked it."

"Oh, God. Who do you think leaked it?"

"Two sols ago at lunch there was a loud argument between two of my colleagues about independence; one was in favor of it right away—he was even wearing a cinnamon colored cloth patch on his shirt—and the other was ridiculing the idea. The report is pretty ambiguous, but generally it would be seen as bad news for independence; if the Grand Union really does expand as much as it might, the world economy would stabilize quite a bit, and that would reduce demand for gold. Gold prices would fall to as little as half its current level. Better coordination of energy policy at the international level would probably reduce the cost of PGMs as well."

"Do you feel comfortable asking your colleague whether he or she leaked the report? I suggest this because this is a matter of breach of confidence and trust, and if

trust erodes up here we'll be in serious trouble. We have to trust each other, regardless how we feel."

"I . . . suppose I could."

"If I hear many more reports of this sort, I'll have to speak up in public," exclaimed Will.

"Could you possibly talk to the journalists and see if she can be persuaded to respect the report's confidentiality? It's your niece in law, Jacaranda."

Will shook his head. "No, I won't interfere. That could backfire anyway."

"What about the issue of political involvement? You Bahá'ís aren't supposed to get involved in partisanship, but it seems to me Jacaranda's noticeably pro-independence."

"She is, but she isn't a Bahá'í any more; she withdrew from Bahá'í membership about six months ago because of personal uncertainties. Maybe she'll come back, maybe she won't; it's up to her."

"I see." Park considered. "Well, what should I do; ignore her request for comments?"

"I'd offer her comments on background only, since you're the author of the report; you can't argue that you're just speaking as an econ prof if asked to comment about your report. They can always ask your colleagues or economists on Earth for opinions."

"That's true. Okay, I'll call her back. Thanks."

They exchanged ciao's and Will closed the line. It grieved him even more than Gus's call. Things were definitely getting polarized; perhaps a revolution of some sort

was possible. Furthermore, he hated to think that his religion was getting dragged into the fight, and he didn't like admitting that a family member had withdrawn her membership.

It was hard to get anything done the rest of the morning. He read email and listened to videomail. Journalists were besieging him for statements and he ignored them. The routine business was too mundane to distract him from his worries. He did manage to pay close attention to the flight rosters; solar sailers were still departing medium Earth orbit or Gateway for Mars at the rate of three per week, though they were the slower models that carried only fifteen tonnes of cargo. The newer, forty-tonne models had all left Earth six months earlier in order to arrive at Mars in the fall, when it was at perihelion, and they had the most vital cargo.

At 12:30 he hurried downstairs to the Gallerie to eat lunch; it was his one daily appearance in the public and people knew they could approach him at his table, but they also knew not to ask him about politics. He was back upstairs at 1:15 and did more routine business until Zubko knocked on his door promptly at 2 p.m.

“Come in, Pete. How was the trip to Uzboi?”

“A mix of fascination and frustration. Brian Stark gave me a tour of the breeder reactor, which will almost triple our production of plutonium. It's quite a facility. But the workers there are even more fanatical about Mars than the people here.”

“They're recent immigrants, young, they're working long hours and making money—almost twice as much as the people here—and they're aiming to save, move here, get married, and start a family. Mars is their future.”

“I am amazed that the people who arrived just two years ago are more pro-independent than the people who've been here twenty years. I guess it's a testimony to

the Commission's myth-making about this place, which is driving settlement in the first place."

"The newest immigrants were in favor of Marsian independence as dreaming undergraduates at Stanford and Colorado School of Mines."

"I see that, now. I'm going to propose a major overhaul of our marketing and recruitment strategies. Even the flight out was unpleasant; I was constantly buttonholed by migrants wanting to know why the U.S. opposes independence."

"What do you think the main reason is?" asked Will.

Pete peered at him suspiciously. "Besides the idiocy of the idea? There's the possibility that Mars could become a competitor with the United States in space, which is already demonstrated by the requests that the Mars Commission join other efforts, like exploration of Jupiter and Saturn. And there's the question of the future of American nuclear facilities here; we don't want to turn them over to a Marsian government. I'd argue that we should shut them down first. Would you want five thousand people to possess larger plutonium production facilities than all the nations of Earth combined? That's scary."

"It is, I agree, though so far I've never heard anyone suggest that the treaties with the United States and China be voided. Mars is dependent on the electricity produced by two American and two Chinese reactors, and no one would be foolish enough to jeopardize that."

Zubko waved a hand. "This is all speculation. That's part of the problem; everyone wants to speculate. If we even talk to people about the idea of independence, we keep the idea alive and make it sound more serious."

Will shook his head. “I’d argue the opposite; your silence about the issue of independence is drawing criticism. This morning I was talking to two people in the Gallerie and they spontaneously volunteered their opinions that the Commission representatives were angering Marsian public opinion. One even said your approach came off as patronizing. They felt you had to tackle the case for independence rather than pretending it doesn’t exist.”

“That’s ridiculous. The case for independence is not rational, it’s emotional, and that’s hard to fight effectively. Discussing it will just fan the flames.”

“In a sense, Pete, you can’t fan the flames much more. Your mere presence raises the issue. And almost one quarter of Marsian voters have made up their mind, which is a pretty big bloc of voters. I wouldn’t pretend that the other three quarters are unaware of the issue.”

“Oh, they’re aware; I agree about that. But I don’t want to start a debate that will move them to the independence camp.” Zubko shrugged with an air of finality.

Will saw that the American was not going to change his mind. “Well, all the representatives get back later this sol or tomorrow, and we have a Board meeting by video the next sol and dinner at my house, then a week of sight seeing.”

“I’m looking forward to the trip down Marineris and to the top of Olympus Mons. They will be spectacular.”

“Both excursions have incredible scenery; some of the best in the solar system. There are no words to describe it. It’s good to see you, Pete; thanks for coming by.”

Zubko was startled their meeting was now drawing to a close, but he had no other items to discuss. “Yes, good to see you, too, Will. I’ll be at the hotel if you have any

other ideas.” He rose, so Will stood as well. They shook hands again and then the United States representative left.

Will sat at his desk, considering what he could do. He was tempted to invite the national representatives and the officers of the Independence Club to his house for a private dinner, but the potential consequences were too serious, and he knew the national representatives would turn down such an invitation. He’d have to brainstorm with Ethel; she’d have some ideas.

He tried to read emails, but he was too upset by the way the sol was going. He turned to his attaché and outlined arguments he could make to Brian. By the time he had to leave, he had some ideas that might work. Five minutes before the appointment was scheduled he rose and headed for Brian’s office in Liberty Dome. Its windows faced the south end of the square, offering a choice view of the miniature replica of the Statue of Liberty. Brian was waiting for him.

“I should have blocked this time in my calendar, Will; I just got back from Uzboi and I’m tired,” said Brian. “But come in.”

“Okay. Thanks.” Will sat in a comfortable chair and Brian pulled his chair over to join him. “How was the trip?” Will asked.

“Oh, alright. I was. . . well, never mind. What can I do for you?”

“This is a time of rumors and leaks. People who trust each other and know confidential things can’t be counted on to keep their secrets from sol to sol. I just heard this sol about a fight between two colleagues at Martech over the pace of independence that resulted in a leak to *Mars This Sol* of a confidential report to the Commission. I may need to give a speech of some sort about civility.”

Brian looked uneasy. “Some leaks have the capacity to be devastating, too.”

“Yes, exactly. Under those circumstances, the best thing is to do is come clean in public; one maximizes one’s control over when and how the information comes out.”

Brian nodded. “I’m not sure why you’re talking to me, though. Do you want me to talk to Pete? I doubt they’ll really send troops. And he’ll deny the rumor anyway.”

Will looked down at the floor to conceal his shock. He and Brian had been participating in two different conversations. “Excuse me, this is difficult,” he said, which was true. He took a long, slow breath to compose his thoughts. “I don’t know who knows what, or how much they know,” he continued. “Depending on who talks, and how many people talk, the ‘rumor’ will be hard or impossible to deny. We’re talking about an operation that’s hard to conceal. People will know about it at each end.”

“That’s true. I think it’s crazy, and I told him to his face. That’s why the Uzboi trip was so hard.”

“Brian, what’s he thinking?” Will tapped his own head for emphasis.

“I don’t know. I think he’s convinced that an independent Mars ultimately will nationalize the American and Chinese nuclear facilities, converting itself into a major nuclear power. That, obviously, is an immense change in the balance of power among nations. As long as the anti-nuclear lobby opposes the launch of nuclear materials into space it will be very hard to ship uranium and plutonium from the Earth, and that means Mars will be the main source, from Mercury to Pluto. Conclusion: this place has immense strategic importance.”

“That’s true, but using force will not solve the problem. Why do they assume violence will work? Non-violent resistance can be very effective, especially with a television camera present.”

“I know. I can’t imagine the Commission Board will go along, even with the idea of securing the nuclear facilities only. It would be a public relations disaster. Will, you can’t allow this plan to proceed.”

“It’s the sort of plan I would oppose, if it ever comes to a full meeting of the Board.”

I think this will blow over as a crazy, speculative idea.”

“That depends on what governments think, though, and it’s hard to gage that reliably from here.”

“Haven’t you asked your contacts?”

“Not yet.”

“So, you want me to warn him?”

“I . . . thought I’d ask you about it. As I said, if the leak gets out, the story will be a huge disaster for him, for the Commission, even for me. Before I try to talk to Zubko, I was hoping you could talk to him. But I guess you already have.”

“I have, but maybe I should try again, especially if I tell him there’s been a leak and someone unnamed has come to me with the concern.”

“Yes, that might work.” Will pondered and tried to figure out whether he was saying the right thing, since he still had only a slight idea what Brian was talking about.

Brian considered, then nodded. “Okay, I’ll give it a try. How much time do I have?”

“As I said, I don’t know who has talked to whom. I wouldn’t wait too long.”

“No; I’d better talk to him this afternoon.”

“There’s another matter I want to talk to you about as well, Brian. Speaking of leaks and rumors. . . it’s very strange all these things come up at once, but like I said, this is a strange time. And this leak could hurt you very badly, considering how family-oriented this place is. It also impacts on quarantine and customs issues. The same principles of cleaning up ones act and disclosing at the right time apply. . . I refer to the rumor that you have marijuana.”

Brian was shocked by the statement; it was clear even though he tried to conceal it. “These are strange times.”

“They are. Again, how many people know, and how much do they know. . . only the good Lord knows who has told what to whom. I have no plan to report this rumor to either the media or the constabulary, but I am under a legal and ethical obligation to report it to the constabulary at some point. There’s the issue of making sure our high school students stay drug free. There’s the question of whether we have biological contamination. There’s the question of how the marijuana was imported. These are serious issues that won’t go away.”

“Will, I am a model resident of Mars in many ways and a loyal civil servant of my country, but I have my personal weaknesses. Some people know about the weaknesses, and I really don’t want the world to know.”

“We’re friends, and I feel terrible for you about all this. I don’t know how I’d deal with it. I don’t want to hurt you, Brian, and I’m not trying to bribe or blackmail you. But if we don’t follow ethical and legal principles, this place will collapse.”

“Will, if I destroy all the evidence—the plants, everything—then the rumors will be unprovable.”

“That’s true, and maybe that will work. Maybe Zubko can propose something similar to his higher-ups. I can’t predict what will come out; like I said, I don’t know who knows what and who might talk in this strange time.”

“Understood.” Brian nodded, though there was a funny look on his face like everything didn’t quite add up. Will focused on trying to look sad; it was a safe, easy, ambiguous emotion.

“Well, I guess I’ll go.” Will rose. “It’s good to see that you’re back. You’ve done some great things for Mars and for the U.S. at the same time.”

“Thanks. We’ve often been on opposite sides of issues, but I respect you.”

“Well, we tangle and then we tango, right? Have a good sol.”

“You, too. Ciao.”

Will nodded and headed out the doorway. He walked down the hall slowly, trying to digest what had happened, trying to review the conversation in his mind for anything suggesting that he had made any errors, with anxiety and anger growing every minute. He walked around the Outpost quite a while.

Troops. They’d have to fly them to Mars in a caravel; it was the only large vehicle available. The U.S. had two caravels, and the first was about to leave for Mars with a U.S. crew, along with the crew of their Jupiter mission and some Mars Commission employees. It would be impossible to ship troops on it secretly, with the Commission employees present. But the other caravel was scheduled to remain in Earth orbit for the next two years. Presumably, any movement of shuttles to low Earth orbit would leave a

public record. The ship would have to fly to Mars during an existing launch window that could be scrutinized. And any ship that arrived in Mars orbit would need a place to operate from and refuel; the United States and Chinese stations on Deimos were the only non-public choices.

So Will had ways of verifying Brian's information. He was amazed that such a blunder had happened; it made him feel like a spy hunted by an enemy power to know what he knew. He also was acutely aware that he was entering a realm where lying, falsifying information, creating false leads, and other dirty tricks were possible; furthermore, in a Revolution, one couldn't expect to win just by being right. His reputation could be a casualty.

Still, he was bound to do what was morally right; that was the commandment of his religion and his conscience. He wondered what the cost of truth would be.

He walked around the outpost, pondering all these things, then headed straight for the Commission's offices. He was lucky; Yevgeny Lescov, their director of exports, was in his office. Will walked into his office and closed the door.

"What is it?" asked Yevgeny, a bit alarmed.

"I'm about to tell you something that must be kept absolutely secret; even from the Chief Minister. And I have to count on your maximum discretion and tact in dealing with this information."

"Okay. . ." replied Yevgeny.

"There's a rumor that needs verification, and you have the contacts to verify it. The rumor is that the United States proposes to send troops to Mars to quell any drive to independence."

“What? That’s crazy!”

“I have it from a very reliable source, so it has to be verified. Too many lives are at stake.”

“I agree. And I have to verify the rumor without spreading it further, too. . .”

Yevgeny considered, then nodded. “I’ll see what I can do.”

5.

## The Accident

mid May 2050

Will heard a knock on his door and looked up. Yevgeny stood outside. “Have you a few minutes?”

“Sure.” Will pointed to the chairs in the front of his office and rose to join his friend. Yevgeny closed the office’s door.

“I’ve got some information for you,” he began. “I apologize it’s taken eight sols, but this hasn’t been easy or quick. I’ve worked some contacts in the Russian government, without asking questions that were too specific. Our folks at Gateway and in the Exports Office in Paris have been really helpful, too; they know what has been flying through the Gateway region, and what is scheduled to fly through in the next six months. The caravel *Abraham Lincoln* arrives from Mars in July. It has a bare-minimum life support system, but they’ve been shipping up parts to equip it for one hundred fifty people. We know this because the Paris Office issued a routine inventory request for several parts, claiming that one of our caravels scheduled to depart from Mars with 150 workers needed spares. The NASA station at Gateway said they had it available if we needed it.”

“Clever; you’re sure these are parts only needed if you’re flying that many people?”

“Yes, we were very careful. Also, we made discrete requests to Shackleton’s Spaceport about scheduled flights for liquid hydrogen and oxygen propellant. NASA has an order in for delivery of 250 tonnes early next year. That’s the right amount of fuel at

the right time for a launch to Mars via Mercury. They'd leave Earth in May 2051 and arrive here in January or February 2052."

"Interesting," said Will. "Talk to the folks in the Mercury-Venus Commission. They're interested in starting a Mars flight via Mercury in 2053. Let's see whether they're interested in accelerating it to 2051. Whether they are strongly interested or only weakly, we can make an announcement to *Mars This Sol* that the flight's being considered. I'll bet that will generate some queries from the American government. Have you had any luck finding information about troop training?"

"No; that's a needle in a haystack. I'm betting we'll find something eventually involving the moon, though, because they can add weights to spacesuits and simulate Martian gravity there in training exercises. You might want to call Rick Page."

"Not yet. I don't know where Rick stands on all this. But we have other people on the moon we can trust, I think. If departure would be May, they'd probably fly the troops up two or three months early, train them on the moon somewhere, then fly them to the *Abraham Lincoln*. Their transport plans would have to be finalized over the summer."

"Or later. Transportation to the moon has grown so routine, now, it's easy to schedule late in the game."

"Who's scheduled to set up the *Lincoln*?"

"A NASA team. I have a hunch if we look into it, we'll see it's supposed to be a big team with frequent scheduled crew rotations. If each crew stays when a new one is rotated in, you'd have 150 people up there in six months."

Will nodded. "Good work. Let's not contact anyone on the moon about this yet."

"Are you going to leak it?"

“No, not yet. We have to be absolutely sure, and we have to try to get this called off. If we leak it, it will precipitate Marsian independence and that may call this attack down on our heads.”

Yevgeny nodded. “True. Let me know if I can do anything else.”

“Thanks, I will, but it’ll be a few sols.”

“Yes, with the wedding coming up, you must be pretty busy with personal business. It should be a beautiful occasion.”

“It had better be; it’s costing a lot! I’m glad you and Alexandra are coming. You know, I invited the five national representatives last week when they had dinner with Ethel and me, and they accepted.”

“They knew Érico and some of the other independence leaders would be there?”

“Yes, but the wedding trumps those concerns. It’ll be interesting to see what sort of conversations people have.”

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Marshall pulled on his bow tie. “Does that look straight?”

“Yes,” replied Mike.

“No,” said Paul Nuri at almost the exact same time.

Mike looked more closely. “Good call,” he said, to Marshall’s cousin’s assessment. “Ties are not my thing.”

“We’ll be checking your tie pretty soon,” replied Paul. Mike and Liz had set a date of mid August for their wedding to take advantage of the best opposition in 47 years and the correspondingly short transmission times between Earth and Mars.

Marshall stood back from the mirror. “I guess I’m ready.”

“You look great,” said Mike.

“Thanks.” Marshall glanced at his watch. “Let’s walk over.” He headed out of his bedroom with Paul and Mike following. When they walked past the master bedroom, Will came out.

“Ready to go?” he said to his son. He was wearing a tuxedo as well, but it wasn’t rented; the Commissioner owned his own. He looked his twenty-five year old son up and down, top to bottom. “You look ready.”

“Thanks. We’re getting a bit bored.”

“Then let’s go. I know the bride’s just about ready as well; I stuck my head in a few minutes ago.” He fell in behind his son and the four men passed through the house’s “back door” airlock and into the tunnel beyond.

They followed the tunnel into Andalus Dome, then turned right and took another tunnel, past the house’s front door and into the Bahá’í gardens. It was a bright, sunny day and the gardens were lush with greenery and flowers. In the middle stood the House of Worship, a small, simple structure able to hold 200 people, with minimalist decorations and large windows opening on the gardens. The square, concrete wall three meters high along the outer edge of the dome was covered with vines or disguised by bushes except for nine spots where small waterfalls led water into nine pools surrounded by an oval of grass and flowers extending from the wall toward the temple in the middle. The oval closest to the main entrance to the dome was set up with chairs; part of the ceremony would be held there.

They waited and chatted with other guests until Amy arrived with Ethel and three close friends. Marshall almost gasped when he saw his bride in her gown, with veils and a long train; she was stunning. He hurried over to her. “Are you ready?”

She nodded. “Did you look at the train closely?”

“No.” He turned and looked behind her. One piece of cloth was old and rather unimpressive looking. “What is it?”

“Parachute material. Your mother’s wedding gown was made from it, so we incorporated some into this dress as a family tradition.”

He smiled. “Now it makes sense! Well, let’s get the ceremony started.”

She nodded and smiled at him. For a moment they stared into each other’s eyes, but there was no time for that now. They headed for the House of Worship, slowly, so that the rest of the wedding party and the guests could process in behind them.

They all entered and sat in their designated places. The program in the temple was simple and short, consisting of readings from Bahá’í and Christian scriptures, with passages from the Qur’án that Will had always liked. The entire assembly rose to sing on one occasion, led by the soloist who sang a piece at the very beginning. Bahá’í Houses of Worship were to have no musical instruments in them and no speeches, so the program was one of devotion only, with “Marriage, a Fortress for Wellbeing and Salvation” as the theme.

The devotional program over, they all processed back out to the garden where Will and Ethel spoke briefly, then the couple exchanged their vows. A closing prayer and another song by the soloist completed the simple ceremony. Then the entire party walked in procession to the reception in a function room in the Gallerie, where a reception line

formed. As it ended, Brian Stark, dressed in his naval uniform, approached Will. “Can you join Skip and me real quick?”

“Sure, but it has to be quick; we’re going back outside for more photographs before the lunch is served.”

“This won’t take long.” Brian led Will to a corner where Skip was nursing a glass of mineral water. Brian looked at Skip, who stared back at Brian. “They’re gone,” Brian finally said. “The marijuana. I destroyed all the plants. The only exception is one plant and a pouch of seeds that we gave to Mariner Hospital because one of the doctors there wanted access to medical marijuana.”

“Three of us helped,” added Skip. “It was one of the most painful days of my life.”

“So, it won’t resurface in the future?”

Brian shook his head. “No, it won’t, not from us at least. Don’t worry, the high school students are safe.”

Will nodded. “Thanks for telling me. And thanks for doing the right thing. I’m sure it was painful.”

“You don’t know the half of it, Will,” replied Brian, mournfully.

“I suppose not.” He looked around. “Looks like they’re just about ready to go.”

“It was a really nice ceremony, Will,” said Skip. “Really moving.”

“Thanks, Marshall and Amy planned it and did a great job.” Will sighed. “One married, one to go. We’ll have an empty nest in a matter of months.”

“And I gather they may even leave Mars?” asked Brian.

“Maybe. Amy wants to go to Saturn, so Marshall is applying as well. He can do a lot of things; he has a lot of skills and experience in spite of his age. And just the other sol Mike Tobin heard of a new opening for a geophysicist on Mercury, so now he and Liz are thinking about spending a few years there. In a few years, I could have no children left here at all, and for all I know I’ll have grandchildren literally scattered across the solar system!”

“We live in a new world,” said Brian.

“I better run. Thanks again.” Will headed across the room where Ethel and the bride and groom were waiting. But on the way he passed Martha Vickers, their chief psychologist, who was also Director of the hospital. He stopped and tapped her arm. “Be sure to get a few private minutes to talk to Brian Stark,” he whispered.

“Oh?”

Will nodded. “It’s important.”

“I . . . think I know why.”

“I think you do, also.” Then he turned and continued on his way.

Brian and Skip, meanwhile, watched Pete Zubko walk over to them. “The bar here doesn’t serve any booze,” he groused.

“That’s because they’re Bahá’ís,” replied Brian. “They don’t drink alcohol. If you want a drink, we can walk downstairs to get one and bring it back up.”

“Let’s do that later.” Zubko shook his head. “Doesn’t Elliott have any vices?”

“Workaholism for Mars,” replied Brian. “And sometimes he tries rather hard to clean up the rest of us as well.”

“He should stick to reforming organizations; people can’t be reformed,” replied Zubko. “Not after age twelve, anyway.”

Skip spotted John Hunter and Vanessa Smith nearby and beckoned them over. “Representative Zubko, allow me to introduce a fellow American, John Hunter. He’s a geochemist of Lakota background. This is his wife, Vanessa Smith. This is Pete Zubko from the United States.”

“Pleased to meet you both.” Pete smiled charmingly and shook hands with them both. “Vanessa Smith; you’re the one who found the Martian organisms?”

“Yes, that is correct,” replied Vanessa. “I’m also Chancellor of Martech, so I’m pretty busy.”

“And we have two boys, so we are *really* busy,” added John.

“I know how that is; I raised a son and a daughter. Conditions for raising children here must be difficult.”

“Yes and no,” replied Vanessa. “There are some things you just can’t provide, and you have to worry about radiation, dust, low gravity, and other hazards that have no equivalent for affluent families on Earth. On the other hand, though, we have a great community here; very supportive. The school system’s top quality, safe, and effective.”

“I wish the U.S. could say the same,” replied Pete.

“My cousins live on several of the Lakota reservations in South Dakota, and their quality of life is definitely lower than ours,” added John. “In fact, over the last fifty years, things have gotten worse on the reservations in many ways.”

Pete nodded. “The gap between rich and poor has been growing. It’s hard to believe that the wealthiest nation on Earth—still—has grinding poverty in the middle of the twenty-first century.”

“My people are the Maori of New Zealand, and they aren’t doing much better,” added Vanessa. “We really hope to do better up here. Mars has a labor shortage, and as long as we can engineer that into our economy we won’t have poverty. And we are so diverse we don’t have systematic prejudice or racism.”

“I have been impressed by the balance between religion and secularism,” noted Pete. “I’ve met one or two strong atheists, a few strong believers, and lots of folks who really don’t care about religion at all. The attitude seems to be ‘if you have a strong ethical position that is at variance with the standard, you educate people rather than demand.’ ”

“Yes, that’s true,” agreed John. “The Muslims don’t like the sale of alcohol and a bunch of other things. The Catholics don’t like the availability of birth control. But they can push those matters in public only so hard.”

“We have pretty good dialogue up here; that’s true about most things,” added Vanessa. “It’s even true about matters such as independence. People are beginning to develop strong opinions about the subject, but they are still very open to listening and talking. That window may close, though.”

Pete became uncomfortable. “I appreciate your view, but we didn’t come to Mars to debate independence. We’re a fact-finding task force to assess the general condition of this place.”

“I understand, Dr. Zubko,” persisted Vanessa. “But you can’t fight an idea by ignoring it. That has never worked in the entire history of humanity. The five of you have a golden opportunity to dialogue with Marsians, and you aren’t doing it.”

“You seem to be afraid of us,” added John, a note of sadness in his voice.

Pete was uncertain what to say. “Perhaps an idea can’t be fought by ignoring it, but we can’t always fight an idea effectively by engaging it, either. I’ve talked to plenty of Marsians in the last few weeks and it has made me realize that Mars is not parallel to the thirteen colonies in 1776 in some crucial ways. One way is that the colonists went from loyalty to king and kingdom to loyalty to America. But Marsians are not all loyal to the same nation; they are Americans, Chinese, Indians, Europeans, Latins, Africans, loyal to those countries and cultures, now developing a loyalty to something new. I can call on Americans to remain loyal to the United States, but how do I call on Nigerians to remain loyal to Nigeria? That has to be done by people up here in their internal dialogue.”

“Oh, I think the five of you can call on us to strengthen our loyalty to our home countries,” replied Vanessa. “You could even consider calling on us to be loyal to *Earth!* To humanity as a whole. I’ve heard that theme in Helene Dupont’s addresses. The theme of partnership is quite strong and good.”

“If you believe in it yourself,” added John. “If I may be frank, Dr. Zubko, Marsians already have more loyalty to the human species than the five of you do, singly or together. And this is for a simple reason: we are a cross section of humanity up here. We know humanity and its diversity far better than most people on Earth. Read *Mars This Sol* or watch its videoclips; they cover the entire Earth, not just one country or continent. And we’re trying to build something here from that diversity; something that’s

being resisted on Earth.” He turned to his wife. “That’s the problem with your argument, my dear. We’re already more loyal to humanity than people on Earth are. Such loyalty is built into Marsian culture and thus will be a part of independent Mars. An independent Mars will be pleased to partner with anyone and everyone on Earth, also.”

“But Earth may not be willing to partner with you,” replied Zubko.

John shook his head. “No, and do you know why? Because ‘Earth’ doesn’t exist as an entity. The United States and China might refuse to partner with us, but what about Europe, Latin America, Russia? Even India looks supportive.”

“I’d make an even stronger argument,” injected Skip. “In five years there may be an ‘Earth’ willing to partner with Mars: the Grand Union. The European Union has already completed negotiations to establish the G.U. with Russia and the various former Soviet Republics, Israel, Morocco, and Tunisia. Now Jordan is considering membership, which means Lebanon and Syria may also.”

“Half the planet will want in,” agreed Vanessa. “New Zealand newspapers are full of speculation that New Zealand and Australia will join. The Latin American Union probably will join.”

“And Canada, which means the United States will be surrounded by the G.U.,” added John. “India and Pakistan may view it as a framework for ending their disputes.”

“Alright, I get your point!” replied Pete, irritated. “The Earth is at one of those critical junctures right now. They happen every few decades. But it is not clear to me that Mars is at a similar juncture.”

“I concede that,” agreed John. “This year we grow from four thousand to five thousand; nothing crucial about that. In a few years we’ll hit ten thousand, and a decade

or so later we'll hit twenty thousand if the immigration continues. The changes here have been gradual. But they have been cumulative, and I think they have reached a tipping point. The big change is cultural; more and more people feel ready for formal independence.”

“A major factor has been the exports of PGMs,” added Brian matter-of-factly. “Mars now pays for itself and the nations of the Commission contribute little to the overall budget.”

“We're a partnership,” replied Pete. He looked at Brian, irritated that he had jumped into the conversation, seemingly on the wrong side. “And all the partners contribute something to the whole.”

“Indeed they do,” agreed John. “And they should have influence over the partnership in proportion to their contribution.”

That caused an uneasy silence. Skip jumped in. “Vanessa, you know the university scene well, and both of you have been here a long time. What's the attitude of the Marsian public toward the American and Chinese nuclear facilities?”

“What about them?” asked Vanessa. “They've been established by treaty, a treaty signed by many nations, not just the U.S. and China. Any Marsian government would inherit the commitments made by the Commission.”

“I don't see anyone saying the treaty should be changed, either,” added John. “The nuclear reservations and their facilities are property of the respective countries, just like Guantanamo Bay is a piece of Cuba over which the U.S. has sovereignty.”

“I’ve never felt the Marsians have resentment toward New Hanford,” added Brian. “Establishing it was controversial, but we’ve gotten over the controversy pretty well.”

“The folks at Dawes were delighted to get the Chinese facility,” added Vanessa. “It increased their population and brought about an upgrade of Dawes Spaceport.”

“Well, it’s easy to talk about these matters theoretically, but it’s hard to predict what would actually happen,” replied Pete. “And certainly we can’t take a chance; we have to protect those facilities at any cost. They could produce enough plutonium to kill millions of people.”

John scowled. “Who do you think the people calling for independence are? They aren’t crazies.”

“Well, their leadership can’t always be predicted.”

John stared at Pete, shocked. “Dr. Zubko, are you aware of the fact that I am on the governing board of the Independence Club? Three of the five of us are here at this reception. And my wife is a member of Residents Council. This is not a world of fanatics; the fanatics have been screened out!”

Pete looked at him, startled. “I apologize, Dr. Hunter,” he finally said. “I meant no offense.”

That seemed to end the conversation. Brian turned to Pete. “Perhaps this is a good time to get that drink?”

“Sure; good idea. It’s good to meet both of you,” exclaimed Pete. He turned and headed for the door, trying not to look like he was in a hurry.

“I wonder if we made an impression?” Vanessa said, watching him go.

“I don’t know, but we at least held our own,” said John.

“Thanks, Skip, for engineering this,” she said. She looked around the room and spotted Lal Shankaraman talking to the Indian representative, Rama Singh. “It looks like Lal is having some trouble.”

“Ramesh is there with them,” said John. “And he’s pretty opposed to independence.”

They walked back to the hors d’oeuvres and grabbed a bite. Then Érico walked over. “I had a good talk with Melos. We talked in Portuguese, which means we had really good privacy. He says he thinks independence for Mars ‘in the next few years’ is reasonable. I asked him whether his government would support that position and he said not only Brazil, but probably the entire Latin Union would, and that the European Union was the key party.”

Vanessa nodded. “They’re the main partner in the Grand Union and have the largest GDP on Earth.”

“I think the issue may come down to the Grand Union versus United States and China,” said John. “Nations that negotiate, build coalitions, and compromise, versus the superpowers with the nukes on Mars.”

“That’s the way it’s looking,” agreed Érico.

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Monsol morning started in a typical fashion: Will received and carefully reviewed a digest of the latest Mars news from across the Earth. The staff in Houston who ran the Mars Commission’s Public Information office was careful to keep the length of the file to about half an hour. From *The New York Times* to *Le Monde* to *Asahi Shimbun*, the issue

of independence dominated Mars newspaper articles. He could tell when the articles were completed because at some point in the last twenty-four hours support in the Independence Club's petition had risen from 29% to 30%; the older articles had the lower figure. At the current rate, support for independence would rise to perhaps 40% by the time the national representatives had to depart. Will had mixed feelings about that; he wanted independence, but he wasn't sure he wanted it now.

The file also contained a few television reports, which were similar to the print articles. Finished with the media digest, Will turned to *Mars This Sol*. He didn't have to read their lead article; it was the *Le Monde* article, translated quickly but adequately into English by computer. Their interviews with "ordinary Marsians," an every-sol feature, were interesting, as was the discussion on its moderated blog, which replaced a typical publication's "letters to the editor." He watched a television news article from the Canadian Broadcasting Corporation about Mars which was pretty good; as a "multi" or multimedia site, *Mars This Sol* was simultaneously Mars's daily newspaper, radio news source, and television news source.

Then he turned to the multi's international news, which was dominated by controversy over the Grand Union. The United States and China were waging an unofficial campaign against it; an article reprinted in English from a Moscow paper told of a Chinese offer to Mongolia of a large development loan in return for that country staying out of the Grand Union. Another article, from the *San Francisco Chronicle*, quoted an American State Department official defending the United Nations in unusually strong and positive language, the point of which was that if the Grand Union really took off, the United Nations would wither away and might die.

He clicked on several links to related newspaper articles; an op-ed piece in the Toronto *Globe and Mail* about how Canada should join the Grand Union and turn its back on the United States; a *Jerusalem Post* article about how the Grand Union might manage to “digest” the entire Arab world eventually and help normalize their relations with Israel; an editorial in the *Lagos Times* arguing that if Nigeria joined the Grand Union, with or without the rest of the African nations, the country would be forced to adopt tougher standards against corruption, to protect workers and the environment, would be in an economic partnership that would accelerate economic growth, and, if it joined soon, it might even get the privilege of hosting a major ministry.

Clearly, the Grand Union was becoming the talk of Earth. It probably would be for a decade or two, amid controversies and numerous political fights over the details. Will spent half an hour reading, skimming, and listening to video pieces; it clearly was relevant to the current struggle on Mars.

He turned to his electronic communications and read an email from Olaf Norlander, commander of Mercury operations. The Mercury-Venus Commission had two caravels for transporting people between Earth and Mercury; Olaf wanted to know whether Will was ready to commit the Mars Commission to 100 berths in 2051, when a caravel could fly to Mars via Mercury. Will emailed back that yes, the Mars Commission was serious about the commitment and that he would take it to the next meeting of the national representatives. He had already forwarded the idea to the national representatives and had been quite interested in Zubko’s response, which showed concern about the idea.

Will started to open another message when suddenly his attaché froze and the words “Emergency at Uzboi” appeared on the screen. He could also hear some urgent voices in Mars Control across the hall, so he jumped up and hurried over.

“What is it?”

“Details are just coming in,” replied Rostam Khan, who was in charge of Mars Control. He sat behind a console looking at the data on the screen, just like the five others in the control room. “Rapid depressurization in the Arrival Hall via the airlock. Thierry, get us video.”

“I’m working on it.”

“I’m inquiring about human occupation,” added Zach Hersey. “We’ve got five trapped in the hall.”

“There are six in the Conestoga entering the hall, and it has a leak as well,” added Rostam. He had pressure data from the Conestoga on-screen.

“We’ve got eleven personnel in jeopardy?” asked Will, alarmed. “Huma,” he exclaimed to his secretary-receptionist, who was always just a shout away, thanks to good software. “Contact Mariner Hospital, they need to scramble an emergency team, and contact the airport, they need to prepare a jetwing for immediate flight to Uzboi.”

“I’d prepare one jetwing for immediate flight and the other for a few hours later,” advised Rostam.

“Okay, make it so.” The software would do the rest, ideally. He turned to Rostam. “How rapid is the depressurization?”

“The hall’s lost ten percent of its pressure, the Conestoga half. They’re scrambling emergency personnel at Uzboi and calling in suited staff outside.”

Will was tempted to ask what happened, but it was too soon to distract his people with the question. He heard a beep in his ear; he was wearing his ear piece. “Will, this is Alexandra; should the Chief Minister be there?”

“It’s up to you, Alexandra, but you’re welcome. We’ve got eleven personnel in danger.”

“I’ve got video,” said Thierry Colmar. A second later a grainy black and white image appeared on one of the room’s wall screens. It was hard to tell what they were looking at; it appeared to be from behind the Conestoga. The camera was swaying, probably from the escaping air. They could see one person unconscious on the floor right in front of the airlock; the Conestoga couldn’t drive into the Hall without running him over.

“It’s not looking good,” commented Rostam, glancing up from his console.

“Three inhabitants of the Conestoga made it into the bathroom,” reported Zach. Since the bathroom was a separate airtight compartment, that meant they were safe.

“Uzboi Control is trying to close the inner airlock, but the pressure drop and air flow are interfering,” exclaimed Rostam.

“They should keep trying; those doors are supposed to be able to close under pretty difficult conditions,” exclaimed Will. “Wait a minute; where’s the air leak?”

“The outer airlock door.”

“If the Conestoga has a leak as well, there must have been some sort of collision,” deduced Will. “Otherwise either the airlock or the Conestoga would leak, but not both. If you close the outer lock, the Arrival Hall will stop leaking, but the Conestoga will depressurize even faster.”

“You’re right; they’ve got to get the Conestoga inside first,” agreed Rostam. He turned to his microphone and informed Uzboi Control. “Oh God, it’s too late,” he said a moment later. “The inner airlock has closed.”

“They’ll have to open the outer airlock door and drive the Conestoga out, then into the other airlock. Anyone at the wheel?”

“Negative,” replied Zach. “The three people in the depressurizing part of the Conestoga are incapacitated.”

“The outer airlock door won’t open,” added Rostam. “They’re trying; I see it on the console. It must be damaged.”

“Damn,” said Will. “They can’t flood the airlock with air? Even CO<sub>2</sub>?”

“They are!” exclaimed Rostam, exasperated. “The outer airlock door must have a very large tear in it!”

“That was a hard collision!” said Will. He thought about the situation. The driver must have engaged the reverse gear accidentally and the Conestoga’s autopilot must have been disengaged; a violation of safety rules. He pictured the outer airlock door; it probably had a gash, maybe as much as a meter long. Nothing less would let the air escape fast enough.

His earpiece beeped with another emergency call. “Will, what’s going on?” It was Pete Zubko.

“A serious emergency at Uzboi; a Conestoga was entering the arrival hall and apparently it backed up and gashed the outer airlock door. The arrival hall and the Conestoga are partially depressurized. We’ve got as many as eleven people in danger.”

“What are you doing?”

“Monitoring and advising. The folks at Uzboi are running the show.”

“They have to. This shows again why independence is a bad idea.”

“I wouldn’t draw any conclusions, Pete, and I have to get back to the situation. Bye.” He emphasized the last word so it would voice-activate the circuit closure.

Apparently it did; Pete was gone.

“A group of men in pressure suits are entering the hall now,” exclaimed Rostam.

“They were outside about one hundred meters away.”

“They ran over pretty fast,” noted Will. “Thank God.” Normally it took twenty to thirty minutes to get a suit on.

They watched the video screen. Three men with suits entered the hall and grabbed two unconscious staff lying on the floor; the others in the hall had made it into another Conestoga parked in the hall.

Uzboi Control ordered the arrival hall’s life support to depressurize it enough to match the pressure in the airlock. Then they opened the inner airlock door and Uzboi Control drove the Conestoga inside under remote control. They closed the inner airlock door and flooded the hall with air, but before it was fully pressurized the three men in pressure suits entered the Conestoga, grabbed the unconscious crew, and hauled them to an airlock, where they were transferred inside the outpost and to the clinic.

Just before the rescue was finished, Alexandra dashed in. “What’s the status?”

“Five casualties; they may be dead, we don’t know,” replied Will. “Rostam, have you finished checking the telemetry when the accident occurred?”

“No.”

“We do have the video, and I’ve got it,” injected Thierry.

“The telemetry indicates the Conestoga backed up when it should have moved forward into the Arrival Hall,” continued Rostam. “The autopilot was disengaged; it’s driver error, I think.”

“I thought so,” said Will. “Thierry, let’s take a look at the outer airlock door. I bet the gash is at least a meter long.”

“Okay.” Thierry pushed some buttons and an image appeared on the screen. They all nodded. “That’s at least a meter,” agreed Thierry.

“It had to be,” replied Will. He stood up. “I had better prepare a statement for the media because everyone knows about the accident by now. We won’t cast any blame on the driver until we’re sure; besides, he or she may be dead or injured. They did a pretty good job up at Uzboi, except possibly for closing the inner airlock door. We’ll have to figure out whether that was the best decision later; it benefited two injured people but may have harmed three others.” He turned to Alexandra. “Will the Chief Minister join me in making the statement?”

“Ah; I’d rather not.”

“You’re here, you might as well. You can express concern for the families and for the personnel at Uzboi.”

“Okay, I can do that.”

“Let’s go to my office and draft talking points. We’ve got five or ten minutes to prepare; we can’t wait very long.”

She nodded and looked at Will, impressed by how calm he was. When an emergency happened it seemed to make him calmer, somehow. “How do you do this?”

He shrugged. “I don’t know; I say a prayer and do it. I’ll get upset later.”

6.

## Implications

May 5-10, 2050

Three sols later, several jet loads of people converged on Uzboi Outpost for the funeral of four workers, three who had been on the Conestoga and one who had been in the Arrival Hall. Two other workers were still in the outpost's clinic, but recovering; one severely injured staffer had been moved to Mariner Hospital in Aurorae for treatment. After the funeral, Will went to Uzboi Control to comfort the workers there.

“You guys did a great job,” he said. “The emergency descended upon you suddenly and you found the resources to send in people immediately. And I think we’ll find that all your actions were justified. There was no way to move the Conestoga inside with Viktor’s body in the way.”

“We agonized,” said Yuri Severin, the Outpost Commander. “If we had left the inner airlock door open, maybe the pressure in the airlock would have dropped more slowly and some of the three in the Conestoga who died might have lived; but on the other hand, maybe some of the three of the people in the hospital wouldn’t have made it.”

“You don’t know,” agreed Will. “These are tough decisions and you do your best.”

“We’ve got to look at our safety standards again,” added Yuri. “Maybe Gary shouldn’t have been driving with a blood alcohol level of 0.04.”

“It may or may not have been a factor in his errors,” said Will. “We can’t interview him, since he was one of the victims. He was also upset about a lot of developments in his life. We need to remind everyone that the Conestoga’s autopilot

must be engaged when entering airlocks. We ran a study based on available telemetry from the last three months and found that here in Uzboi, ten percent of the time it hasn't been engaged. Driving vehicles in and out of airlocks may be the most dangerous phase of ground transportation up here. It has to be done according to safety standards."

"Will the Commission issue safety standards, or the Commonwealth?" asked one of the workers.

"Good question. The Commonwealth's Safety Office has the primary responsibility, but the office has been plagued with problems in recent years. The Commonwealth Authority may need to overhaul the office's procedures. If the Commission has to institute tougher standards than the Commonwealth's, we are in the position to do so. But we will let the Commonwealth take the lead."

"Rachel's already here and will be studying the sequence of events closely," said Yuri. "I think we can expect new safety procedures in a few months."

"We'll be appointing an accident commission in the next month, and they'll be authorized to look at everything. I will assure them of your full cooperation, and I expect it of all of you." He looked at the workers closely as if to emphasize his point. "This is a situation where safety and saving lives must be our highest priority. If we made mistakes, we admit them, learn from them, and move on. Any effort to protect reputations will probably ruin them instead. Understood?"

There was silence for a moment, then Yuri said "You can count on us, Will. Our priority is safety, also. But do you know who can be appointed to the accident review commission? Right now there's the potential for politicization of everything."

“I know, the question of independence is distorting many subjects, but I think this is important enough that we can avoid that. We have some good, neutral people up here. We could appoint many of the same people who investigated the accident at Aram ten years ago.”

Yuri nodded. “They did a good job.”

“By the way, Commissioner Will, your speech at the funeral was great,” commented one of the technicians.

“Thanks,” replied Will. “Overall, we did a good job of sending our friends on their journey, I think. I hope this place can recover from the shock pretty quickly.”

“We knew them all,” agreed Yuri. “And we know their spouses. It’ll take a while. But things are on the mend.”

“You all are doing a vital service for Mars and you’re building a pretty remarkable outpost as well; one that will remain even when the PGMs run out, decades from now. So don’t forget that. Life has risks, but it also has rewards, and the team here will receive a lot of gratitude from future generations.”

They all nodded. He walked around the room, shaking hands with everyone, then said goodbye.

Will headed out of Uzboi Control, an underground group of metal cylinders, and entered Yangtze Dome—all of Uzboi’s enclosures were named for terrestrial rivers, since Uzboi Valley itself was a gigantic Martian floodway—crossed it and entered Nile, the outpost’s largest enclosure. One hundred meters wide and three hundred meters long, it had almost half the outpost’s total pressurized space; the southern half of it was packed with condos. He followed the main path along the middle of the dome and entered a

building halfway down, where he and Ethel owned a very small flat; the one room had barely enough room for a double bed, a chest of drawers, and a kitchen table with two chairs. She was already there and packing for the flight back to Aurorae. She pointed to the television, where Jacaranda was interviewing an expert on Earth about airlock construction. “The funeral got good coverage. Everyone liked your speech, as usual.”

“I felt inspired.” He pointed to the expert on t.v. “What are people saying about the accident?”

“It was a type waiting to happen; people have been saying that for years. Airlocks are dangerous.”

“Let’s hope it doesn’t happen again and work to make sure it doesn’t.” Will reached down to grab his suitcase and began to pack his clothes; their flight was in four hours.

“Alexandra’s stiff on television,” observed Ethel. “She needs some pointers.”

“She won’t take them. I offered. *Mars This Sol* offered. Maybe if she sees herself on t.v. more, she’ll come around. Whenever this place gets independence, if she’s Chief Minister, she’ll have to improve her appearance.”

“So, you don’t think it’ll happen this time?”

Will shook his head. “The public support isn’t there.”

“Did you hear the survey *Mars This Sol* did? They started two sols before the accident and finished it two sols after. Thirty percent said they had signed the petition, which is correct; but thirty percent more said they were leaning toward signing it.”

“The problem is getting them to act. There’s nothing to push them over the edge.”

“I’m sure the Independence Club will be thinking about that, too.”

“Yes, but I hope they will remain restrained in their tactics.”

“They’ve done a good job of educating people so far.” Ethel glanced at the tv and noted that Pete Zubko had appeared on the screen.

“Oh, he’s being interviewed right here in this dome,” noted Will, recognizing the distinctive pattern of buildings behind the American representative. He turned back to his packing and kept one ear on Pete.

The reporter, Tina Hvitmer, asked him about the accident and Pete gave a very good reply about the tragedy and the need to support the spouses and families that had suffered a loss. But then Tina asked “What lessons can be learned from the accident?” Will turned instinctively to the television to see what Zubko had to say.

“I think there are various lessons the accident has taught us. One, of course, is that Mars remains a dangerous place to live and work; this has been emphasized repeatedly this sol. But behind that lesson is another one: that Mars will always need Earth. The accident shows how independence is the wrong way for Mars to go.”

Will stared at the screen in surprise. “The fool,” he said.

Tina was startled as well. “But Dr. Zubko, Mars handled the crisis quite well by itself. It consulted with a few experts on Earth, but that was after the accident happened and was resolved.”

Pete frowned. “Tina, the accident was handled by the Commission, not by Mars.”

“But Dr. Zubko, if Mars had been independent, the same people would have handled the accident on behalf of Mars,” she replied.

Pete realized he had placed himself in a trap of his own making. “Tina, we don’t know that.”

“I don’t understand, are you saying the Marsian public would hire or elect different people to solve the crisis? Then those people would have handled the crisis instead. Are you saying they couldn’t have done as well?”

“Tina, I won’t speculate about who might have done what differently,” Pete replied, leaving Tina befuddled by his answer.

“The fool,” repeated Will. “He doesn’t understand the Marsian public at all. To them, *Mars* refers to the people and other resources up here, whether in the Commission or not.”

“Well, too late now,” replied Ethel.

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The next morning Érico Lopes walked across Andalus Square, into the Gallerie, and entered Deseret Department Store. He walked through the displays to the offices in the back of the store’s third floor. There he found Henry Smith, the store manager, busily reviewing some new video clips for the store’s customer service software.

Henry looked up and smiled. “Good sol, Érico! How goes it!”

“Pretty well; how’s the family?”

“They’re doing fine. Jethro starts second grade in a few months, Delilah and Gideon will start kindergarten, and Sally and Ian are two years old and running around.”

“Is five enough?”

He shrugged. “Maybe; maybe not. We won’t use geminale any more! Sandra and I are now 40, so I doubt we’ll want many more. How are Carmen and the kids?”

“We’re all well. Carmen’s pretty busy with Marcomm, Corrie’s doing her thesis, and Paolo’s in eleventh grade. Pretty soon he’ll be in university as well.”

“Time flies. So, what can I do for you?”

“I don’t want to be a pest, Henry, but I check the petition every morning and I saw this morning that you had signed it. So I wanted to come and thank you for signing, and I wanted to ask you what we could do to encourage more businessmen to sign.”

Henry smiled. “Hum. Well, I’m not sure we can generalize businessmen very well. Most of them are members of an ethnic or religious group that arrived separately from the Commission staff: the Mormons, Nigerians, Japanese, and now Hindus and Chinese. Each group has its own concerns. As you know, we Mormons are still smarting from the last election.”

“I know. But Bruce admitted he had been secretly campaigning, and it had always been a value here that we don’t campaign. I think we all surprised ourselves to discover we really were serious about the no-campaigning policy. The vote wasn’t directed against Bruce as much as against his actions.”

“True, but he never regarded his actions to be wrong, and neither do many of us. How else will a small group get representation?”

Érico nodded and looked sympathetic. “I understand your point, Henry, but an environment where there’s unrestrained competition isn’t good for minorities, either. The bigger groups have more resources and can out-compete them. But I’m not here to debate our election system.”

“I know, but just remember that the LDS are not all that keen about independence because we feel a bit alienated from the current government. The Japanese don’t feel that way because Ichiro Otsu is now on the Borough and Residents Councils.”

“So, what made the difference for you?”

“I don’t know whether anyone else would feel the same way as me, Érico. Everyone has a different view, but the overriding concern in the business community is not to alienate customers. Some customers want independence and some don’t, so generally we stay neutral. Right now feelings aren’t intense, so that’s a good strategy. But there are other factors for me to consider.” He paused. “You probably don’t know that Deseret’s been negotiating with Walmart for four years over establishing a relationship. The outline of the agreement would be this: Deseret would continue as its own company with its own name; I’d continue as C.E.O.; Walmart would buy about a fifty percent share; they’d get publicity and marketing opportunities from being an interplanetary firm; they’d buy access to our labor-saving techniques, systems, and experience; we’d get cheaper access to retail goods, marketing and sales advice and support, and some subsidy.

“But the arrangement in practice has proved complicated. They soon found out that our labor-saving techniques are dependent on the Marsian customer culture; they’re pretty sure that on Earth, customers wouldn’t tolerate the low level of customer assistance, and the self-service approach here relies too much on the honesty of the customers. They’re no longer sure that marketing spots showing people shopping in our ‘Walmart’ store will be of much use to them; Cinq à Sec has not seen much marketing advantage come from television spots of Marsians doing their dry cleaning and laundry with the company. For that matter, Coke and Pepsi are no longer running Marsian marketing spots. But the nail in the coffin of our negotiations has been political uncertainty. Walmart has been saying that as long as an independence movement is bubbling along, everything is off. They don’t want video of a Walmart store looted in a Marsian riot and they don’t want Walmart marketing spots showing Marsian customers

when some of those customers are violent. Frankly, I don't want five years of this uncertainty. If Mars is going to become independent, let's get it over with."

"Ah," said Érico, nodding. "And I suppose that reason doesn't apply to a lot of businesses up here."

"It doesn't apply to a lot of small businesses that don't want to be franchised or already are: hair salons and restaurants, for example. The Japanese have very close ties with Japan and don't feel a need for independence; in fact, independence may weaken their ties with the homeland. The Nigerians are deeply biblical and evangelical and are alienated by the secular culture up here, and they have a lot of ties with the homeland. I feel pretty torn; the United States is rotting morally and this place is better in some ways, but not others."

"This is a better place for raising kids."

"Yes, it is, but the singles scene is fast and loose. On the other hand, it seems to be pretty fast and loose at a lot of churches in the U.S. I'm reminded of a college friend who said he couldn't become a Mormon because of our high moral standards where premarital sex is concerned, and then he became the President of an Intervarsity chapter of evangelicals instead! I suspect he was sleeping with half the female members of the chapter." Henry changed subjects. "Your cause—the cause—isn't doing so well right now, I think. You've got signatures of 35% of the voters and about two weeks to go before the national representatives leave."

Érico nodded. "We have a ways to go, but the new poll by *Mars This Sol* suggests that we could get another twenty to twenty-five percent of the electorate behind us. And

you probably heard Zubko's stupid remark yestersol about how the accident shows that independence is a bad idea."

"Yes, an insensitive comment. It didn't sway me, but I did wonder this morning whether the four percent increase in one sol wasn't caused by it."

"We think it was. We're calling for a big public debate over independence this Saturdaysol, and we're inviting the representatives to attend and speak. If they don't come, we'll invite other people to speak, like Ramesh Pradhan and Alexandra Lescov. Someone will debate the issue with us."

Henry nodded. "That's a good idea. As I said, I want the discussion to end. We're as ready for independence now as we will be in five or ten years, so let's just do it and get our seat at the United Nations."

"Will you say that to your fellow members on the Chamber of Commerce?"

"Yes, sure. Business can get involved in issues like this. We have to because they effect the bottom line. The United States is getting pushed into stronger and stronger international treaties and organizations against the desires of a growing fundamentalist population because it's in the country's best economic interests."

"We think independence will be in our best economic interests as well, in the long run. Not that anyone is independent any more; sovereignty is limited by the need to participate in the international economy and accept a myriad of international regulations. We may actually have more independence than most nations because we aren't on Earth. But it follows if we have our own voice and can determine our own affairs, we'll be more productive and active in the international system."

Henry shrugged. "Maybe. I hope you're right. But I will talk to the businessmen."

“Great; thanks.”

They exchanged a few more pleasantries, then Érico left, pleased with the visit. He stopped downstairs to pull out his attaché and check the Independence Club’s website; three more people had signed the petition. He closed his attaché and headed for Liberty Dome, where he walked through the Marriott quickly and slipped paper copies of a polite letter under the doors of the five national representatives, inviting them to attend the “Forum on Marsian Independence” on Saturo. Their electronic addresses had been kept a secret from everyone so the invitations couldn’t be emailed to them. Then Érico hurried to his office at Martech and posted the announcement of the Forum and the invitation letter to the website and copied them to *Mars This Sol*, so everyone would know.

It took the representatives only half an hour to hear about the Forum and the letter; *Mars This Sol* ran the story immediately. When they saw the letters under their doors the reaction ranged from surprise to outrage.

“This meeting must be stopped immediately,” exclaimed Pete Zubko to Will. He had convinced Cheng Weiming to accompany him to Will’s office; the other three reps were not upset.

Will looked at Pete and Weiming. “On what grounds? Andalus Square is property of the borough, not the Commission. The borough requires a permit, but they’ve never been denied to anyone before.”

“What about on the grounds that the crowd will be too large for the life support system?” asked Weiming.

“It won’t. We hold the ‘Future of Mars’ Forum in Andalus every columbiad and the Aurorae Fair every equinox. It’s designed to handle up to eight thousand people at a time. It could handle even more; the dome’s atmosphere has 250 tonnes of oxygen and it’s connected to three agricultural domes via conduits a meter across.”

“Elliott, if you don’t do something, I’ll personally contact a judge in Houston and get an injunction against the Forum.”

“Go ahead, Pete,” replied Will, raising his voice. “You’re just an ordinary American citizen. If you want to call a meeting of the five representatives, maybe you’ll have their backing and then the entire board will probably go along. I think it’s more likely they’ll advise against such a plan, because it’ll just inflame public opinion.”

“Inflame public opinion! All you do is counsel caution, rather than fighting this movement!”

“I suggest you review your memories because I have offered several very concrete suggestions for dealing with the independence movement. Face it, discuss it, support it for some indefinite time in the future. If you want to ignore Marsian public opinion, then you’ll have to deal with the consequences.”

“What do you advise?” asked Weiming.

“If Pete hadn’t said that the accident showed that independence was the wrong way to go, public support for the petition probably wouldn’t have broken the one third point, and the Independence Club probably wouldn’t have scheduled the Forum. They’ve seen the poll that shows up to sixty percent of public opinion could come around and they want to break the fifty percent point while the representatives are here. If they don’t hit fifty percent before you leave, the independence movement is postponed at least two

years, probably four or six. They only need to persuade another sixteen percent of the electorate to sign. They're in a strong position and we're in a weak position. If you ignore the Forum you'll look patronizing, condescending, and uncaring. The only chance is to appear in public and debate them."

"I won't do it," replied Pete.

"Pete, Will's right; we have to."

Pete looked at Will. "There's one condition I'll set for my support: that Will Elliott sit up there with us and oppose immediate independence in public. If there's anyone able to communicate with the Marsian public, it's you."

Will opened his mouth, surprised. "My role to date has been neutral."

"Not any more. What kind of Commissioner are you if you aren't willing to defend the Commission?"

"I am zealous at defending the Commission, but the Commission is not the ultimate goal: settling Mars is."

"Well, this is your moment of truth, Elliott: if anyone can stop or postpone independence, it is you. If you aren't willing to do that, then resign as Commissioner."

"You have no authority to tell me what to do or to make me resign, Peter."

"Will, this is the moment of truth. You have to defend the Commission," added Weiming. "And remember that meeting you told Pete to call of all national representatives: do you think they wouldn't order you to appear and defend the continued role of the Commission?"

Will nodded. "Alright, alright. I will appear at the Forum and argue against immediate independence. I have always been inclined to argue that independence should

wait another four years at least, when we have more people. Independence is inevitable, but immediate independence is not.”

“Then it’s agreed,” said Pete. “Let’s call a meeting of the full Board of Representatives and finalize it.”

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Andalus Square had never seen a crowd as large as the one that filled it on Saturisol afternoon, May 10. Everyone brought their children, even their babies, to witness the discussion; the result was a chaotic crowd that was almost half under the age of eighteen, because Aurorae had only half of Mars’s voters but eighty percent of its kids. The bulk of the voters were young as well; Mars’s average age was 33, which made some of the national representatives nervous. The Gallerie was emptied of all its chairs and there still weren’t enough. At the other outposts, all business stopped so everyone could watch the Forum.

On stage were the five national representatives, the five directors of the Independence Club, Will Elliott, and the master of ceremonies, Father Greg Harris, who was widely trusted for his fairness and integrity. At exactly the time they were scheduled to start, Father Greg walked to the podium.

“Good afternoon, and welcome to the Forum on Marsian Independence. After extensive discussions over the last five sols, it has been agreed that this Forum is planned and cosponsored by the Independence Club, the Mars Commission, and the Mars Commonwealth Authority. It is being broadcast live to Marsians all over the planet and on its moons, and all of them can ask questions by phone or email.

“Our format is very simple. To maximize questions from the residents, both sides will make very brief, two-minute statements. Érico Lopes will speak first on behalf of the Independence Club and Will Elliott will follow on behalf of the Commission. Questions can be directed to either side or can be designed for both to answer. They can be directed at any of the persons on stage except myself. We will alternate questions between the two sides for ninety minutes, unless both sides agree to an extension.

“In closing, let me remind all of us of the purpose of this forum. Human beings have lived on Mars for three decades. They have brought into existence over a thousand children here and have built a prosperous society with its own nascent institutions and Marsian cultures. At some point this society has to govern itself and join the family of nations as an equal partner. When will it have the population, economic output, political maturity, and cultural complexity to achieve nationhood? Will it be 2050, 2051, 2055, 2060, 2100? This is the question we are considering together this sol. Perhaps we will resolve the matter this sol, or maybe it’ll await a future debate. After the Forum ends, we will all have the opportunity to go to [independenceclub.org.mars](http://independenceclub.org.mars) and vote by signing a petition asking the Authority to begin immediate negotiations leading to independence, to remove our signature from the petition if we previously put it there and have changed our mind, or to ignore the whole thing. I urge everyone, however, not to ignore the question and remain apathetic, but to take a position.

“Without further ado, I now turn the floor over to former Chief Minister Érico Lopes.”

There was applause as Érico rose and came to the podium, a sheet of electronic paper in his hand with his notes. At 57, Érico still had black hair, though it was flecked

by gray. He stood straight and looked at the audience. “Almost exactly twenty-seven years ago I first set foot on this world. I was not quite 29 years old. I now look over this world with eyes that have experienced almost half their life on Mars and I marvel at what I see. All projections and plans originally called for Mars to grow gradually, columbiad by columbiad, attaining perhaps one hundred residents by 2050. Instead, this year will close with a Marsian population exceeding five thousand. Mars was expected to have one ‘McMurdo Base,’ a central facility for exploring the world; instead it has ten permanent outposts, four semipermanently inhabited stations, and almost one hundred oases. Mars was expected to have a limited network of roads and air fields allowing explorers to reach out to its far corners; instead it has almost one hundred thousand kilometers of developed trails, three thousand kilometers of graveled highways, two hundred air strips, and a fleet of sunwings and jetwings.

“Mars was expected to cost a steady several billion dollars per year; instead, reusable shuttles to low earth orbit slashed transportation costs, the birth of children changed the mindset from exploration to settlement, and the recovery and export of natural resources changed the balance of payments in a positive direction. Today, Mars produces forty billion redbacks of exports per columbiad, it feeds half the population of the moon, Venus, and Mercury, and it produces the spacecraft that perform the majority of interplanetary flights. It has a quality university and a quality hospital. Its arts are acquiring a high reputation. Its governing system is peaceful, free of corruption, and receiving increasing attention from political theorists. Its culture fascinates Earth’s youth and is influential on a wide cross-section of humanity.

“Is this the description of a colony? No, it is not. This is the description of a people, a nation, a distinct culture, and an emerging civilization. It defines an active, creative, confident, purposeful citizenry. This is a people who were central in sending spacecraft to five asteroids in the asteroid belt, are playing a role in the exploration of the Jovian system, are helping to plan the assault on the Saturnian system, and are providing significant support to all human populations in the inner solar system. This is the people who will probably take humanity to the stars in less than a century.

“A colony? Small, yes, but confident, capable, and courageous. A people fully able to govern themselves, as they have more or less been doing for twenty-five years now. This is a people who can play a key role in solving humanity’s serious social and cultural problems by virtue of the solutions they have had to pioneer.

“A colony? No, it is time for them to assume their rightful place as a sovereign nation. Why should we wait? For what? If we wait until we help settle the Saturnian system, do we then wait until we help settle Triton? If we wait until our economy hits fifty billion redbacks, do we wait until it hits one hundred billion? This is not a nascent culture, it is a sophisticated culture! It doesn’t have an immature government; *Earth* has the immature government! We will be the example, the leaven, as an independent sovereignty and fully equal partner, and we are ready. Let us march forward to our destiny!”

He turned and walked back to his seat to an explosion of applause. Will was stunned; he had never heard the mild-mannered, occasionally self-doubting Érico deliver such a powerful speech before. He smiled and looked to Will as if to say *I’ve learned a lot from you in the last three decades.*

Father Greg rose and introduced Will, who looked at the crowd and strode forward to the podium. Crowds never gave him butterflies; they jazzed him up. He felt a rush of energy and he flipped into communications mode.

“My congratulations to my friend and colleague for his brilliant review of the past, present, and future of our nation. He fills me with pride for being a Marsian. We are already a great people and we are on our way to becoming a great nation and civilization. In future centuries our population may exceed China’s and our economic output America’s. Our inhabitable land area may exceed all of Earth’s, thousands of years hence, if we terraform this world. We are a people facing an ultimate challenge—the taming of an entire planet—a challenge that will renew us and stimulate our creativity for millennia.

“So the question isn’t whether Mars will be an independent nation, but when. The question requires strategic thinking and planning on the part of all of us. Right now Earth is going through a series of enormous changes. A half century of terrorism, which destroyed several cities and killed millions of people, have shaken assumptions of national sovereignty. Peoples who tried to face the world on their own terms are beginning to realize that safety and peace can only be achieved collectively. At the same time, transportation has become so cheap and easy that goods made in one part of the Earth can easily and quickly be sold anywhere else, and persons born in one nation can move to almost any other nation if their skills are in demand, thanks to common languages, laws, and customs. Prices of some commodities are fluctuating wildly as hoarding is replaced by selling and then by hoarding again.

“As a result, the value of our exports is very unpredictable, but their price per tonne is projected to drop steadily over the next decade. At the same time the price of our imports have been and will remain unpredictable. For the last four years we have been solidly in the black, but we run the serious possibility of deficit in the next decade. This is not the time to throw off our lifeline, which the Commission provides.

“Our rate of expansion has slowed somewhat in the last few columbiads, from as much as fifty or sixty percent to thirty percent. Without the financial support of the Commission and its member nations, our growth rate would have dropped even more. Without their subsidies we would not be participating in Jupiter and Saturn exploration or building the galleon. Their total support for Martian scientific and engineering research has remained steady for decades and through our ties with them, we benefit from their research subsidies to other entities. Their help may prove essential if we decide to terraform this world, which will cost an unfathomable amount of money.

“When will be the right time for independence? It is hard to predict very far in advance. In five years the Grand Union will probably be far along and we will see whether it is bringing long-term stability to the terrestrial economy and politics. We will have a better idea whether we will remain in surplus or whether we will still need assistance. We will have twice the population and a larger economy. We’ll have even more political experience, a more influential culture, a civilization with even more momentum and history behind it. It will probably be a good time to move toward independence, for the uncertainties of our current situation may be resolved.”

He nodded to the crowd and headed to his seat as they applauded. The applause was not as strong as for Érico, though. Maybe that signaled that his rational approach was not as inspiring or appealing, or maybe it indicated that he had been less persuasive.

He turned to the national representatives after he sat and said in a low voice, “I’ve discharged my duty. I want to hear from the rest of you when we answer questions. The public will want to hear from you as well.”

Father Greg stepped forward. “You know the telephone number and email address of the forum, so give us your questions. I have a team of three people reviewing questions and choosing the ones to play. We will accept questions throughout the program. While we wait, I will ask the first question to both teams: So, you’ve made your case. What will happen to Mars if the public disagrees with you? Will first, then Érico.”

Will looked at the reps and it was clear that none of them wanted to tackle the question, so he responded. “The worst-case scenario would involve retaliation; some sort of attempt to embargo Mars or even to use force against it. These are highly unlikely, I think. Guaranteed would be the end of national subsidies, with no promise that they would be resumed as foreign aid or in another form. Problems purchasing some essentials are possible. A drop in foreign investment would be certain under those circumstances. All sorts of difficulties could follow, such as unemployment and declining wages.”

Érico picked up the microphone in front of him. “There’s no guarantee those problems won’t happen in 2055 or 2060; if the Commission insists on holding onto Mars when Mars doesn’t want to be held onto, there will be difficulties. There will also be a public relations disaster for anyone who opposes us, since the terrestrial public seems likely to support us. The public can’t be rushed; if they don’t want independence now, the

time will come later. Our greatness as a people might be postponed slightly, but it can't be stopped."

"Here's a question by email for each of the national representatives. 'What is your nation's position about Marsian independence?'"

Will handed the microphone to Helene Dupont, who was seated next to him. "The European Union and France do not have a specific position for or against Marsian independence, but we will support the Marsian residents in their own efforts to determine their future."

"Brazil and the Latin Union take basically the same position," agreed Benigno Melos. "We are democratic governments and institutions and we must support the rule of law and the position of the majority."

"The United States feels Marsian independence is seriously premature," replied Pete Zubko. "The time may come, but it has not come yet. Mars must grow much larger and develop far more history first."

"China also feels independence will come at some point in the future, but right now Mars is in a settlement phase," said Cheng Weiming. "The settlement phase is a phase of external guidance and advice. The Commission plays a crucial role in developing this place and will remain central for a decade or more."

He passed the microphone to Rama Singh. "India has no position about independence. I am here to listen, collect facts, and acquire a feel for the principles involved. No doubt Mars will achieve independence, probably in the near future."

Greg nodded and pushed a button to play a question. “This is for the Independence Club,” exclaimed Dharmapala Peres. “If subsidies end and commodity prices drop, could Mars handle the situation?”

Érico nodded. “Absolutely. If income dropped from forty billion to twenty billion, we could cut back on immigration and shift construction workers to exports. Our workers have a total salary of two billion redbucks per columbiad, so we can pay them regardless.”

“I have a question for the Commission, also. If income dropped from forty billion to thirty billion, could we expect a ten billion redbuck subsidy to compensate?”

Will looked at Helene Dupont. She nodded and took the microphone. “The Commission has never established a policy of matching shortfalls, but we do have a policy of helping Mars weather storms if any come.”

“An email question for the Commission,” said Father Greg. “There is a rumor going around that force will be considered if the Marsian population votes for independence. Can you guarantee us that force is not being considered?”

Will stared at Pete, who was upset about the question, but who took the microphone anyway. “There are absolutely no plans to attack Mars and none are conceivable,” he said quickly and succinctly. “However, there is an ongoing concern about the safety of the various nuclear power facilities up here.”

“Then allow me to ask a follow-up question,” said Father Greg. “To the Independence Club: what is your view of the status of the nuclear facilities on Mars?”

“The United States and China have nuclear reservations here and on Deimos, they have built nuclear reactors to power four of our boroughs, and they have refueled a dozen

smaller portable nuclear reactors used elsewhere on the surface,” replied Érico. “We are grateful to them for this service and advocate the continuation of the existing treaties that make them possible. We are not calling for nationalization of any nuclear facilities.”

“Let me ask a follow-up question as well, if I may,” added Will. “Does the Independence Club envision a time when Mars would have its own nuclear facilities?”

“We would not rule out the possibility of a sovereign Mars possessing nuclear facilities, because that is something a sovereign nation can do,” replied Érico. “But we advocate Mars signing all existing treaties about the use and regulation of nuclear power, the continued presence of a vigorous international inspection program, and we advocate the continuation of the existing Marsian democracy, which is one of the most powerful defenses against the abuse of nuclear power. We see no need for nuclear facilities in the possession of a Marsian government in the next few decades.”

That brought some discussion in the audience. Father Greg turned to the next question and pushed a button. “This is for both sides,” exclaimed Henry Smith. “Some of our businesses are suffering right now because the atmosphere of uncertainty surrounding independence is jeopardizing new financial ties with Earth. What solution do you see?”

“Very simple,” replied Érico. “If we get independence now, the uncertainty will end and financial arrangements with corporations will be made in the new context.”

Will handed the microphone to Cheng. “Peace and stability are essential for the business environment,” he agreed. “The uncertainty is caused by the independence movement. Reject it and there will be stability again.”

“If I may follow up on my question,” said Henry, “The instability is caused because the question has not been resolved and no one knows when it will be.”

“As I said, the independence movement is the cause of this,” repeated Cheng, which visibly irritated some of the audience.

“Another email question,” said Father Greg. “To both sides: Right now Mars contributes forty billion redbacks per columbiad to its own development while the nations of the Earth contribute about eight billion at most. Why not add Mars to the Commission and count its contribution to the total budget? That would give Mars a proportional voice over its future.”

Will took the microphone. “The various nations on the Board all have different views about that question, so I’ll answer it. I suppose some form of the suggestion might work to solve the question ‘what do we do with the Commission?’ But whenever Mars gets independence, the relationship between the Commission and the Authority will have to be examined because right now the Commission has a role in appointment of the Commonwealth Authority’s Chief Minister and it has veto power over tax rates and some other functions of the Authority. Presumably those responsibilities would be changed.”

Érico nodded. “Our position is that the Mars Commission could be abolished entirely and replaced by a Mars Space Agency, which would be a department of the Commonwealth government. It is also conceivable that the Mars Commission could be stripped of its role in the Marsian government and be reconstituted with Mars as one government on the board. That’s a major area of the negotiations that will be needed.”

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The debate continued the full ninety minutes and, by mutual consent, an additional forty-five minutes beyond. Then everyone on the stage shook hands with everyone else—

reluctantly—and the meeting broke up. Will and Ethel walked home, where Marshall and Amy, back from their honeymoon, soon arrived, with Liz and Mike in tow.

“That was a good debate, I think,” said Ethel. “It laid out the arguments quite well.”

“Pete Zubko was mad at me,” replied Will. “He said I conceded too much and I’ve just encouraged independence down the road.”

“That’s because he’s defending narrow interests!” replied Marshall, disgusted. “Dad, it was embarrassing to have you up there defending them. I don’t mean any offense, but. . . you lost.”

Will was startled. “Perhaps I did. It was a question of duty; I am Commissioner and I have to take the Commission’s side in arguments. But after I made the opening statement I told the reps that they had to answer the bulk of the questions.”

“I was wondering about that,” said Mike. “It wasn’t an effective communications strategy; Érico was consistent in tone and approach, but the Commission side wasn’t.”

“The five of them could have come to more consensus ahead of time,” replied Will. “We met for most of the last two sols to discuss our position and I tried hard to move them together. The public wanted to hear them; it did.”

“Zubko left the door open to using force on Mars,” said Ethel, shaking her head. “It was subtle, but I doubt people will miss it. That won’t buy votes.”

“And Dupont said if our income drops from exports, the Commission will provide a safety net of unspecified size and extent,” added Liz. “That doesn’t give anyone confidence that the Commission will be useful when it’s needed.”

“Yes, if you draw up a balance sheet, there’s uncertainty on both sides,” said Mike. “I don’t see immediate independence as any kind of disaster, and I don’t see clear advantages or disadvantages to waiting.”

“It’s very hard to predict the future,” conceded Will.

“Érico gave a great speech, too,” added Ethel. “He captured the sense of Marsian manifest destiny better than anyone ever has before.”

“I congratulated him afterward,” agreed Will.

“Can we see what the petition’s doing?” asked Marshall.

“Sure,” agreed Will, though there was a bit of hurt in his voice. He turned toward Marshall, who opened his attaché and typed in the address of the petition. The number of signers went up by two just as they began to look.

“Wow, people are signing!” said Marshall. “The total stands at forty-two percent already!”

“And it’s climbing,” added Mike.

“I bet there are scenes like this all over Mars right now,” said Ethel. “People gathered in living rooms or cafés watching the petition, debating independence, and sometimes signing up.”

Marshall looked at his father. “Dad, do you mind if I sign?”

Will looked at his son a moment. Marshall’s face simultaneously showed the independence of adulthood and the desire not to hurt his father. Seeing the expression on his son’s face, Will felt sympathy for the young man’s dilemma and love for him.

“All of you should feel free to sign. I can’t right now; it’ll look wrong and will stir controversy. But I will sign it as soon as it hits fifty percent, assuming it does of course.”

“I suspect it will,” exclaimed Ethel. “Whether it does or not, I want to sign.”

Will nodded. He watched as his wife, son, daughter in law, daughter, and future son in law signed, then shared their excitement to watch the petition advance.

7.

## The Morning After

11 May 2050

Will watched the petition very closely that evening as the percentage continued to climb. When it reached 49.5 percent he logged on and filled out the petition, but did not hit “send” yet; he watched the petition on another screen as Mars’s 2,730 voters signed on. At 11:20 p.m. the 1,865<sup>th</sup> voter signed on, exactly fifty percent of the vote. Will then hit “send” and became the 1,866<sup>th</sup> signer of the petition, pushing it into majority status. Then he and Ethel walked to Andalus Square, where a raucous celebration began.

“What are you doing here?” asked John Hunter when he saw Will.

“I signed, John.”

“You did?” John smiled. “Great, then join the celebration! Érico’s on his way down.”

The crowd was rapidly growing; *Mars This Sol* had started to broadcast the gathering live. When Érico arrived everyone applauded enthusiastically. He repeated his vision for Mars’s future and got a standing ovation. When he saw Will applauding in the front row he beckoned him up onto the platform. With hesitation, Will stepped up to the podium.

“I want to congratulate my dear friend and colleague Érico Lopes for a brilliant argument. The public found it persuasive, including my family, which signed the petition not long after the forum ended. I fully support the Marsian public and have signed the petition as well.”

There were cheers and some applause, though it wasn't very enthusiastic. Most people were still thinking of his argument against immediate independence and were cautious about his apparent change of heart. Will looked over the crowd. "We now move into the more difficult phase in our world's history; the phase of negotiating the nature and pace of its new powers. All of us must consider the relevant principles, educate ourselves, talk to our neighbors, and work hard to advance Mars's future. But tonight, let's celebrate that the will of the people has been expressed."

Then Érico came back over to the microphone and hugged Will. "Let's lead the song together," he suggested, and Will nodded. They began to sing the informal Marsian anthem, and everyone soon joined in:

*This land is your land, this land is my land,  
From the Hellas Basin, to the cratered highland,  
From Tharsis Montes to the Mariner valleys,  
This land was made for you and me.*

To the popular first stanza, Érico added a new one:

*Marsians are moving, Marsians are talking  
Calling for justice, voting for freedom  
And all around us the feeling's growing  
This land was made for you and me.*

-----  
"Will, it's now 56.3 percent."

"What?" he woke from a deep sleep with a start. Ethel stood before him, naked, having just come out of the shower. Faint violet light with a hint of pink streaming in through the room's skylight told him the sun had just arisen into a clear, almost dust-free sky.

"Fifty-what?"

“Fifty-six point three.”

“What time is it?”

“Seven-twenty.”

He nodded and glanced at the chronometer next to the bed. He smiled at her.

“Good morning.”

“Good morning,” she said and she leaned over to hug and kiss him. Then she headed to her closet to choose her clothes.

“It’s after noon in Cassini and Dawes now. When the vote passed fifty percent they were sound asleep. I suspect a lot of them woke up, saw the vote had passed fifty, and voted in favor.”

“Probably.”

He got out of bed, glanced at his attaché—there were already almost a dozen messages accumulated, some from journalists—then walked into the bathroom quickly. When he came back out he said “I’d like to go to the House of Worship to say some prayers.”

“You mean the great sex last night wasn’t enough?”

“Mars should have a revolution more often.”

“At our age, I don’t think we could handle very many revolutions.”

Will smiled. “That was the celebration; this is the morning after. I don’t know how we’ll manage the next steps, and I know the national representatives will be angered by my speech. I need to say some prayers and remind myself of what I’m here for.”

“You mean on Mars?”

“No, in this physical world! It’s easy to forget one’s values when one is under severe stress.” He shook his head. “I was thinking of mom, not too long before you awakened me.”

“Really? When did you last hear from her?”

“Last week. It’s about time to contact her again.”

Ethel nodded and pulled on her bra. “So, did we just have a revolution?”

“I don’t know. I suppose we did.”

Will went back into the bathroom, shaved, and showered. In twenty-five minutes both of them were ready to walk to the House of Worship, which was open to the public for dawn prayers. Ananda Thanarat was there with his son; he and Will nodded and exchanged a few words about sticking to principles. Before Will and Ethel left, three other people arrived to pray in the gardens as well.

Back at home, Will found he had five more messages, and one was from his sister. “Will, mom just had a very minor stroke. The ambulance is taking her to the hospital right now. The doctor says it’s too soon to know what damage was done, if any, but he said that at age 96, anything can be serious. I’ll give you an update when I can. Sorry this news is hitting you right now. I was glued to the television watching the celebrations in Andalus Square and saw your brief speech. Mom watched it too, by the way, and was excited to hear that Mars was going to be independent. I think she would have been the first person to sign the petition, if she lived up there. Anyway I’ll update you. Bye.”

Will watched the picture of his sister fade from the screen. It was confirming to hear that his mother had watched the celebration and speech, but the news about the

stroke was a shock. He hit reply. “Thanks, Molly, for letting me know. Send me updates and I’ll try to listen to them, in and around meetings. As you can imagine, this sol will be really crazy. It’s funny, I just woke up thinking of mom and went to the House of Worship to pray, and I prayed for her. It was almost a premonition that something was happening. It’s kind of eerie. Bye.” And he sent the message.

He scanned down through the messages and saw a new one from Helene Dupont had popped in while listening to Molly’s. “Dr. Elliott, please come to the Marriott right away. The five representatives will be assembling at 8:30 to discuss implications of yestersol’s vote and of your brief speech last night. Thank you. Bye.”

That was ominous, but he expected trouble. No need to reply; it was 8:25. He kissed Ethel and set out for the hotel right away, coffee cup in hand. When he arrived at the conference room, the five national representatives were inside, waiting. They all looked bleary-eyed; no doubt they had been talking with their governments much of the night.

“Good sol to all of you,” he said as he entered, knowing he sounded cheerier than they looked.

“Good sol, Dr. Elliott,” replied Helene, who was the chair of the gathering that sol. “Come sit and have a little breakfast with us.”

“I’ll be glad to.” Will grabbed a danish and sat at the table with them. “We have a lot of decisions to make, I think.”

“The first one involves your role,” said Helene. “Your speech last night suggests that you have switched sides.”

“You even signed the petition,” added Pete, angrily. “They said on the news this morning that yours was the deciding signature.”

“You will note that I did not sign until half the voters already had. I wanted to make it clear that I support the Marsian public; I must support the Marsian public on something like this. As of ninety minutes ago, the signatories totaled fifty-six percent of the voters. My vote didn’t make the difference, where the preponderance of public opinion is concerned.”

“Which side are you on?” exclaimed Cheng.

“I think you should resign as Commissioner,” added Pete.

“First things first,” replied Helene. “Dr. Elliott has the floor.”

“In my speech last night I called for the public to ‘consider the relevant principles, educate ourselves, talk to our neighbors, and work hard to advance Mars’s future.’ That is not a partisan position; it’s generic good advice. My position has not changed: my first loyalty is to Mars and advancing this world. My second loyalty is to the Commission because it is the means to the end. I told you all repeatedly that I was in favor of eventual independence and yestersol, on your request, I put forward the best argument I could in favor of postponing independence. The public, however, was not persuaded by either my speech or the comments all of us made. We lost. They voted for independence.”

“As Commissioner, Dr. Elliott, you are not in the position to go against the Commission,” replied Singh.

“Dr. Singh, would you defend the existence of the British East India Company? Dr. Zubko, would you advocate for the continuation of the Virginia Company or the Massachusetts Bay Company? Those companies were a means to an end. They did their

job and ran their course. The Mars Commission similarly had its season. Perhaps in a new form it will continue to exist, but that form will now have to be negotiated with this world's residents."

Pete shook his head. "We never should have had a Commission in the first place, we should have replaced a NASA-led effort with a series of national outposts. Now I wonder whether we shouldn't ignore the petition. It is *not* a vote, even if it's been called one. When there's a plebiscite, people have one day to vote; they can't add their vote any time over weeks and weeks! The petition is liable to 'jump on the bandwagon' syndrome and thus is fundamentally unfair to us."

Will looked around the room. "One can't change the rules of the game after one has lost. When all of you arrived, I told you that the game we had to play was to stop the petition. The signatures can all be verified; this isn't a big place. If someone's name was appended to the petition inappropriately, there's a good chance that person would notice, because everyone's scanning the list of signatories. There's no reason to doubt that the majority of residents have signed the petition."

"He's right about that," agreed Helene. "The bandwagon argument won't persuade anyone among the majority who has signed. They can always argue that it is harder to convince people to cast a public vote!"

"No one held a gun to their heads," said Will.

"What will the Independence Club do next?" asked Helene.

"The club won't do anything, I think. The petition calls for the Residents Council to negotiate independence. I suspect that means Chief Minister Alexandra Lescov is calling and emailing all the council members right now. The Council will have to come

here and meet; our jetwings will be busy over the next two sols. They'll appoint a negotiating committee as soon as possible, since your time here is limited."

"We have three options," said Benigno. "First: Elliott remains Commissioner and six of us work together. Maybe we can even manage to form a single position! That would help, wouldn't it? And we have to keep the other twenty representatives informed."

"Though the five of us represent eighty percent of the votes," noted Helene. The Commission's representatives' votes were weighted based on their nations' financial contributions. The United States currently contributed twenty-eight percent and China twenty percent, so together they had forty-eight percent of the votes. They had to have three percent more to have a majority. In contrast, the European Union paid thirteen percent, India ten percent, and the Latin American Union nine percent, for a total of thirty-two percent. Some of other twenty member nations were also members of the European and Latin American Unions, and their financial contributions were counted there. The next largest contributors were Russia, Canada, Korea, Australia, and Indonesia, with contributions ranging from six to one percent. No doubt, a fierce diplomatic fight would be occurring on Earth.

"And I have no vote," added Will. "What I bring to the discussion is a knowledge of this place and influence because I've been here since the beginning."

"Ultimately, the national representatives decide," agreed Benigno, continuing. "Our second option is that the five of us negotiate and Dr. Elliott runs the Commission and says nothing to the press while the negotiations go on. Our third option is that Dr.

Elliott resigns from his position entirely, we appoint an acting Commissioner, and the five of us negotiate with the committee of residents.”

“Why should he resign?” asked Rama. “He hasn’t done anything to compromise his competence, and he hasn’t used its resources to undermine us.”

“It’s an option; I didn’t say I was in favor,” replied Benigno. “I don’t think it’s wise to free Dr. Elliott of all obligations to us so that he can speak his mind.”

That thought was pondered by everyone for a moment, while Will looked down at the floor and said nothing. Pete finally nodded. “Better have him on the inside pissing out than on the outside pissing in,” he concluded.

“Okay,” said Helene. “Will Dr. Elliott sit with us in the negotiations, or not? We can assume that Dr. Elliott won’t funnel inside information to others.”

“I want Will telling us what will be acceptable to the Marsian public,” said Benigno. “Otherwise we’re negotiating based on our national interests. That won’t work.”

“We have to support our national interests,” responded Pete. “And we have access to Marsian public opinion. Brian Stark has been advising me and I’m sure Weiming’s getting input from General Zhou.”

“That helps both of you, but not us,” replied Helene. “I don’t have an input and neither does Benigno.”

“I’ve been getting interesting feedback from two Indians here from opposite sides of the issue,” said Rama. “That may be useful. But I’d like Dr. Elliott’s private opinions also. He doesn’t have a vote.”

Benigno nodded to Helene. “Okay,” she said. “That’s three votes to two in favor of including Dr. Elliott.”

“That’s idiocy,” exclaimed Pete derisively.

There was a long pause. “I agree with Dr. Zubko,” said Will. “My basic position about independence has changed, after all: I was in favor of it eventually, but now that the public has spoken I am in favor of independence now. That disqualifies me to serve on your side. Your position must minimize Marsian sovereignty, and I can’t support that. The five of you need to go around the room and let everyone speak their mind about the situation. We know the negotiations will have at least one position, that of the residents committee, and there’s a good chance that position will be fairly unified. What isn’t clear is whether the national representatives will hold one position, two, three, or five. If you want to negotiate successfully, you need as few positions as possible, preferably one only. But we know that whatever position the five of you take is likely not to be my position.

“But I can offer to meet with the five of you, advise you, and tell you whether I think your approach will work. And I would not accept to serve on the resident’s committee; that would be inappropriate as Commissioner.”

Helene looked at him, startled by his withdrawal and impressed by his integrity. “Very well,” she said. “Thank you, Dr. Elliott, for your honesty.”

The others looked at him, and even Pete’s face seemed softened. “I suggest the five of you meet and start your work. I have to write the staff of the Commission and assure them, and I have a lot of other tasks to accomplish this sol. I’ll be glad to come meet you any time on half an hour’s notice.”

“Let’s plan a meeting this afternoon to touch base,” said Helene.

Will nodded and rose. “Good luck with your deliberations. Ciao.”

“Good bye,” replied several of the representatives.

Will walked out of the room and closed the door behind him. He sighed with relief; he had originally hoped to be a part of the negotiations, but after discussion he realized it was not appropriate or right. He’d have to leave Marsian independence to others.

He checked his messages; nothing new about mom yet, so he considered his situation again. He still had responsibilities as Commissioner—his term had a year left to it—but at least the burden of the negotiations and having to take positions he opposed were off his shoulders. As he stepped out of the hotel, he felt the sun on his face, looked up at the relatively blue sky through the dome, and his steps quickened. He felt free. He made his weekly tour of the outpost, dome by dome, looking for things that needed repair and brainstorming about what he had to say to the Commission staff. All the staff, on both Earth and Mars, needed reassurance that their jobs were not about to end, and they needed to be reminded to do their jobs without anger or recrimination against other staffers.

He headed west first, all the way to Baltic—their last dome—then turned north to walk through some agricultural domes as he worked his way back east and south. The outpost was triangular in shape, having expanded westward from its original nucleus at the foot of Face Rock and gotten progressively wider north-south as it went. He went all the way east to the original Hab 1 and Hab 2, twelve-meter igloos of plastic that they had lived in almost thirty years earlier, and strolled through them; they were being restored to

serve as the nucleus of their museum, complete with Viking 2 and several other early spacecraft. Then he walked through Yalta, their first large dome, housing the cafeteria for Mariner Institute of Technology or Martech. Rich Stroger, the fifth child born on Mars—now twenty-two—and Jake Dunbar, the sixth Marsian child, now twenty, were drinking coffee in the cafeteria and waved. “Good sol,” said Jake. “I liked your speech last night.”

“Oh, thanks.” Will stopped to visit. “So, what are people saying?”

“It’s Sunsol, so there are no classes, but there’s quite a buzz here,” replied Rich. “We’re all excited about independence. My 9 a.m. course on organic chemistry tomorrow will be a discussion of independence and its implications; the prof just sent out an email.”

Will nodded. “This is pretty big; it makes sense that classes should change topic for once. What do you guys think?”

“I guess it means we’re now citizens!” exclaimed Rich. “But what comes next?”

“Negotiations, and who knows how they’ll turn out. There’s not a lot of time, either; the national representatives have a flight back to Earth in two weeks.”

“Do you think we’ll join the United Nations?” asked Jake.

“Eventually, if it survives. The other question is whether we’ll join the Grand Union, and if so, how.”

“How long before we’re independent, do you think?” asked Jake.

“I don’t know; a few weeks for the negotiations, maybe some months before it actually happens.”

“Are you going to be part of the negotiating party for the Commission?” asked Rich, worried.

“No, I’ve recused myself because it produces a conflict of interest.”

“Oh.” Both young men looked puzzled and Jake was disappointed. Will said goodbye and continued on his way.

He chatted with several other people on the route to Andalus Square and his office. He entered Andalus Dome through the northeast tunnel, which took him past the Church of Jesus Christ and God the Creator. He could hear about one hundred people inside singing joyously; their services were some of the most energetic on Mars. The sign out front announced the sermon topic: “A Free People in Christ.” He pondered it as he approached the square and concluded that in its own way, it was a pro-independence statement.

He was surprised to see so many people in the square; it was thronged with families. It was 10 a.m. and most people on Sunsol mornings were just getting out of the house, if they went out at all. The two cafés along the edge of the square were both packed and the conversations were animated. He felt an energy, an excitement, that he rarely saw.

Many people nodded to him, some smiling, some suspiciously. No one was quite sure where he stood; his ethical position was too nuanced for many people. As he approached the entrance to the Gallerie, he saw Johnny Lind coming out with a coffee in hand. He waved. “Good sol. Did you just get here from Uzboi?”

Johnny nodded. “The jetwing landed less than an hour ago with all the representatives; we’re on our way over to the Commonwealth Building.” He pointed across the square. “Where we will plan our negotiations that will retire you, Will.”

Will was startled by that comment, but Johnny wasn’t done. “I’ll never forgive you for arguing for the other side yestersol, Will. You tried to keep the Commission in

power and hold onto your job. It was a betrayal of the world you hold dear. Or you used to hold dear, at least.”

“Johnny, I’ve recused myself from the negotiations, even after they asked me to help them. I’m willing to argue in favor of eventual independence against immediate action, but the people have voted, so I’m on their side.”

“In spite of your opposition!”

“We all played by the rules and the people decided. That’s the way we do things up here. I can’t support the national representatives. I’ll give them my resignation first.”  
He turned away, angry at Johnny, who turned away from Will, confused.

8.

## Deadlock

18-19 May 2050

Will wondered why Brian Stark had sought a meeting with him. The lines of concern crossing the Colonel's face brought worry to him as well.

“Good sol, Brian, come in and sit down.” He pointed to the easy chairs in the front area of his office and came out from behind his desk to sit with his old friend. “How are you doing?”

“Oh, I'll survive. Martha Vickers has talked me into therapy, damn it! Once a week, an hour; we're reviewing all sorts of things.”

“Has it helped?”

“Maybe a little. I'm 58, you know; just six years younger than you. It isn't easy to change habits at this point even if you want to.” He leaned close. “And nothing to smoke is driving me bonkers!”

“How did you manage when you were here without it?”

“What makes you think I was ever without it? I had to ration my tiny supply for a few years, but I managed. And the hospital isn't equipped to help much. Fortunately they can still get some medications up here, and this close to opposition the flight time will be short.” He looked down. “But I don't want to talk about this.”

“I'm sorry. I admire your courage, Brian. I was lucky—I guess that's one way to look at it—to be raised by two parents who had refined, mature characters. And having raised two kids, now, I appreciate how well they did.”

“How is your mother, anyway?”

“Not good at all. She had a minor stroke about eight or nine sols ago and it has destabilized her health. Just about everything has started to fail. She’s in the hospital and is getting weaker and weaker.”

“How old is she?”

“She just turned ninety-six two months ago. My sister Molly sends me messages from her twice an Earth day because she can barely whisper now. I send a video message in reply, which she loves to get. She doesn’t want me to see what she looks like now, either.”

“That’s hard.”

“It is, but she has certainly lived a long and full life; a remarkable life. Not many people from the pre-Sputnik era are left alive. Think of all the changes humanity has seen. . . it’s really amazing.”

“True. And now we have eight sols of negotiations, no one knows many details, and it appears they are deadlocked.”

Will shrugged. “It’s early. The national representatives have another week here, and the departure date could always be postponed a week or two if necessary.”

“Will, I wish you’d get involved somehow. I have . . . a bad feeling.”

“What can I do? I can’t join either side and they haven’t asked me to mediate, which I am ill-qualified to do. Meanwhile, have you heard the attack on me that has been launched in the U.S. media? Some nasty, untrue, and hurtful things are being said. If I respond to them I could look petty or defensive and if I ignore them I look aloof. They could undermine my credibility to the two sides, also.”

“No, I disagree. Those attacks are aimed at a terrestrial audience and they’re clearly inspired by the White House because they’re afraid you’ll start to use your lobbying skills. I’ve followed them and I’m planning to denounce them. So is Skip. Together, we’ll get some attention from the media.”

“That’s true. I appreciate anything you say, of course.”

“I need your advice. Yestersol Pete Zubko approached me with the plan to send one hundred fifty troops. I don’t know what you originally heard or whether your sources have said anything else since. They’re looking at the launch window via Mercury early next year, though your plans to use it have now complicated their thinking. They’d only occupy New Hanford to secure the American nuclear facilities, but obviously the implied threat is to Aurorae.”

“That’s so risky. It will infuriate the Marsian public. It probably will stir up the fury of the terrestrial public. It could endanger nuclear facilities that otherwise are not in danger. And it could trigger violence; Mars would not find it difficult to defend itself. An automated cargo vehicle with a load of explosives and a lot of small, heavy shrapnel would make a very effective missile and the hundred fifty troops could slowly suffocate in space.”

“And the United States might then declare war.”

“Brian, surely your staff wouldn’t support such an effort.”

“Some would; some wouldn’t. I told Zubko it was foolhardy. I think he’d welcome the story being leaked to the media; it would raise the stakes.”

“It’d also cause the other side to dig in, I suspect. Do you think the White House wants the story leaked?”

“I can’t judge that. Probably not, they’re pragmatic.”

“I have a few contacts in the Pentagon as a result of discussions about various technologies. Maybe I should call one of them and complain about the rumor I keep hearing. If they don’t want it leaked to the media, I suspect the media attacks on me will suddenly end.”

“I’d be careful doing it yourself.”

“I have friends who are helping me; maybe they should do it. But Brian, this will strengthen your hand. You have to push, too, and tell people the plan is foolhardy.”

“Lobbying like that is not part of my job, Will.”

“Brian, it has to be in this case! The United States can’t send troops if they don’t have a safe haven at this end. You didn’t accept the job to be the host of an occupying army.”

“No, I didn’t, but it’s still my country. That’s where we differ, Will.”

“True, that’s where we differ. I’ve never been in the military, either. But even military officers are not bound to obey illegal orders.”

“This is not an illegal order, though.”

“Brian, I beg you to consider the danger to your own facility that this plan creates. What if the Marsian government decided to occupy New Hanford before the troops arrived? There could be bloodshed and your obedience would do your government no good.”

“I know; duty can put us in awkward situations, can’t it?”

Will nodded. “It can.”

Brian rose. “Anyway, I figured I had to talk to you about this. Sometimes friendship is more important, and I know I can trust you. I’ll think about what role I can play, but please, Will, do what you can.”

“Of course, I will.”

“Thanks. Ciao.”

“Ciao.” Brian walked out and Will watched him go, wondering what he could do. Louisa Turner and Douglas Morgan, though old and retired, still had a lot of contacts in Washington, and on opposite sides of the aisle; he’d talk to them. He’d also talk to Helene Dupont and the other moderates. He might even talk to Érico and Alexandra, who led the negotiating team for the residents. Perhaps he could shake things loose.

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Liz opened the door to Mike’s flat and saw Marshall and Amy standing outside. “Oh, come in! You’re not late, don’t worry!”

“Good; we were afraid we were,” said Amy. She walked into the parlor, the efficiency’s main room. Mike was cooking in the corner. “Good sol, Mike.”

“Hey, Amy,” he said, looking up briefly from his culinary efforts. “Hey Marshall.”

“Nice place,” replied Marshall, looking around.

“It’s a lot smaller than your place, but it’ll do for a while,” said Mike. “Liz is helping fix it up, too.”

“Well, I’ll be moving in in a few months,” she replied. “And it isn’t too small, not at all.”

“Well, this whole place is about fifty percent larger than your current bedroom,” replied Mike. “I’m embarrassed about that.”

“Oh, don’t,” said Marshall.

“Definitely not!” added Liz, and she walked over and kissed her fiancé. “You’re doing your best.”

“How can I help?” asked Marshall. “I’m not bad at cooking, either.”

“Liz says she’s marrying me because I have your dad’s interest in cooking. Here, you can finish the salad.” He pointed to a nearly complete salad and two carrots that were ready to dice.

Marshall started slicing. “Anything new about the Mercury assignment?”

“No, so I think it’s looking less and less likely. Getting there won’t be so hard because there will now be a flight every twenty-six months.”

“The caravel won’t stop, though.”

“No, it’ll perform a gravity assisted flyby and head for Earth, but it’ll be accompanied by a nuclear engine that can take a passenger capsule at Portal Station at the sun-Mercury L2 point, where a shuttle will pick up passengers and carry them to the surface. The same system will work to carry Mercury residents to Mars or Earth.”

“A cycler,” said Marshall, nodding.

“How does Saturn look?” asked Mike.

“Oh, it’s way too soon to say,” replied Marshall. “They won’t finalize the crew for at least two years.”

“And who are these guests?” asked Amy.

“Lester and Sylvia Powell, two new arrivals who work in construction with me,” replied Mike. “Hard workers. They don’t have many friends up here, yet.”

“Oh, I remember him from the MIT Mars Club,” exclaimed Marshall, shaking his head. “I’m not surprised they don’t have many friends.”

“Why?” asked Liz.

Just then the doorbell rang. “Well, I won’t prejudice anyone,” replied Marshall.

Liz opened the door and saw two young people in their mid to late twenties standing there. He was white and but she was of a mixed color. “Good sol and welcome!”

“You’re Liz? Congratulations on the marriage plans. I’m Lester.”

“Pleased to meet you,” she replied. She invited them inside where there was a flurry of hand shaking. They all began to sit at the table because just then the meal was ready also.

“So, is construction your ultimate job up here, or is a temporary one?” asked Marshall.

“Permanent, for me,” replied Lester. “My father’s in the construction trade also.”

“But for me it’s temporary,” added Sylvia, who spoke English with a noticeable trace of a Spanish accent. “My training is in hospitality and restaurant management and I want to switch into that relatively soon. It looks like some time next year I should be able to get a job in it, too.”

Marshall nodded. “That’s pretty quick; you must be good! Most arrivals have to wait two years.”

“She has excellent experience,” said Lester.

Marshall brought the salad to the table and it was passed around with the usual complements to Marshall and Mike, who now moved to the table as well. Mike had prepared a vegetarian lasagna and it went around as well. He looked at Sylvia closely, wondering whether, with her restaurant experience, she liked the meal.

“You can guess who’s going to do the cooking after we get married,” quipped Liz.

“To the extent that anyone cooks, nowadays,” added Amy.

“That’s a big change up here,” noted Marshall. “Until maybe three or four years ago, no one cooked at all; you didn’t have a stove and counter space in your flat, and food wasn’t sold for cooking.”

“How long have you been here?” asked Lester.

Marshall looked at him, surprised. “Except for my four years at MIT, all my life.”

“Oh, that’s right; I apologize!” said Lester. “I forgot, you were the first person born up here.”

“I was indeed,” said Marshall.

“So, did you see the article in *Mars This Sol* about the negotiations?” said Mike, changing the subject. “It sounds like the deadlock’s pretty bad.”

“And over basic issues,” agreed Marshall. “It’s pretty outrageous that the representatives are arguing that Marsian sovereignty should extend only over those parts of Mars that are settled. We’d end up getting control over seven million square kilometers out of 144 million.”

“There aren’t many people up here, though,” replied Lester. “And the counter demand, which is control over the planet’s entire sphere of gravitational influence, extends a million kilometers into space. No one on Earth can make a claim like that!”

“But it’s understandable that we’re different in that regard,” said Marshall. “The United States isn’t a planet, but we are. Besides, the Earth has dozens of treaties regulating the use of space around it. In that sense, there is international sovereignty over terrestrial space shared by all the Earth’s inhabitants. We don’t need to join that system; we need our own system up here.”

“It’s a knotty problem,” added Amy. “I was surprised about the disagreement over the disposal of Commission property. I don’t know how the Commonwealth could afford to pay for everything the Commission owns up here, especially considering that the net worth was created by Marsian workers.”

“Well, someone has to pay,” replied Lester, irritated. “If capitalism isn’t allowed to function, we’ll just end up creating a big government to tell us what to do.”

“Like on Earth?” injected Mike.

Lester nodded. “Exactly.”

“It’s a big risk because it could give the anti-Christ a lot of power,” added Mike. It was a comment that surprised Liz, but she realized Mike was referring to the Powells’ beliefs, not his own.

Lester nodded. “Well, it is a risk. He’s probably alive and walking this world—well, the Earth most likely—right now.”

“That soon?” asked Mike.

Sylvia nodded. “That’s what we believe. It’s all in the Bible.”

“Do you think the Grand Union is part of his plot?”

Lester looked at Mike suspiciously, wondering whether his host was teasing him or agreeing with him. “It is interesting to note that there are ten nations proposing the thing, if you count the European Union as one, that is. They could represent the ten horns of the beast in Revelation 13.”

“On the other hand, a lot of Christians thought Napoleon was the anti-Christ, and who knows; they might have been right,” persisted Mike. “And while the Bahá’ís say their prophet Bahá’u’lláh was the return of Christ, more and more Christians are saying he was the anti-Christ instead.”

Lester glanced at the others. He didn’t know that Marshall and Liz were Bahá’ís and that Amy was attending Bahá’í functions, though he may have suspected. “You can read the Bible that way.”

“It’s a shame, I guess, because in this day of rampant immorality, they’re pretty moral. I know; I have a fiancée who won’t go to bed with me.” He smiled at Liz. “Of course, biblical morality is hard to define anyway. It defines slavery as moral and never even mentions lesbianism; as for marriage, polygamy’s fine.”

Lester was clearly getting angry. “And what’s your point, Mike?”

“He’s just trying to figure out how to deal with religion, now that he loves someone who regards it as important,” injected Liz. “He plays games like this with me sometimes, too.” She scowled at him.

“What’s your church?” asked Amy, trying to change the subject.

“We were members of the Boston Church of Jesus Christ, back home,” replied Sylvia. “We just started the Aurorae Church of Jesus Christ last week, so it’s new.”

“Have you gone to the services of the Universal Church of Jesus Christ the Creator?” asked Mike. “Quite energetic.”

“They’re impressive, and the preaching’s not bad,” agreed Lester. “But their theology isn’t the same as ours; not quite biblical.”

“Seriously, I don’t mean any offense, but what do you think of the so-called ‘Cinnamon Revolution’ we just had up here?” asked Mike.

“Cinnamon Revolution’? I’ve never heard that term,” replied Lester.

“It was used in *Mars This Sol* a few sols ago. The term refers to the cinnamon armbands and patches.” He pointed to his. “But of course it really refers to the color of Father Mars. We just had a political revolution; the petition now has signatures of seventy percent of Mars’s voters.”

“It is remarkable,” agreed Lester. “But let’s say we’re not part of the seventy percent, and we are very concerned that the opinions of the other thirty percent might be ignored. Look, Sylvia and I are Americans and we always will be. We love our country and are proud of it. We’re also very worried for it; the world is getting darker and more dangerous all the time, and now efforts to create world government under other names are getting more insidious and persuasive.”

“I’m curious; why did you come to Mars?” asked Marshall, speaking very gently, so as not to offend.

“To spread the gospel,” replied Lester, after a moment’s hesitation.

“And after a month, how has the reception been?”

“It’s slow. This is a tough place to share the gospel. Half the population doesn’t care about religion at all and much of the other half already has their own religious ideas.”

“Have you spoken to any Muslims?” asked Liz.

“No, but I’ve talked to a few Hindus. It’s been quite interesting.”

“Had you ever traveled around Earth?” added Liz.

Lester and Sylvia shook their heads. “We’ve been to a church conference in Canada and we’ve visited Sylvia’s grandparents in Costa Rica,” said Lester.

“I have another question about your being Americans,” said Marshall. “I can understand the argument that since you’re Americans, you really don’t feel the need to bring another nation and citizenship into existence. But you plan to stay and have kids. Will they be Americans too? What are the chances that they will marry Americans? I ask because I am not an American, culturally speaking. My father is American, but my mother is Scottish and a citizen of the United Kingdom. I have U.S. and U.K citizenship. But I was never raised in either place, so I really can’t say I am either American or British. I am partly European and partly African in background, with a touch of native American blood as well. My wife Amy is Australian by background. Over one quarter of the population of this place was born here, and about half of those children are multicultural. Shouldn’t they have a citizenship in a Marsian nation?”

“Hum.” Lester thought about the question. “You have a good point. I suppose, twenty years from now, we’ll be culturally Marsian and our children won’t be anything else. But that’s not the situation now. Right now we render under Caesar that which is

Caesar's; we stay out of political matters like independence and focus on our priorities, which are religious."

"Rather like you Bahá'ís," commented Mike. "But Lester, I think you'll have a hard sell up here. The Bahá'ís have done okay; they get a couple converts a year. But let's see, which is a more practical list of teachings: the Bahá'ís say men and women must be equal; science and religion must be harmonious forces; all the religions ultimately come from God; leaders are elected, not ordained; religious morality should not be forced on other people; everyone must investigate truth and decide on their own; or the Christian list of teachings: Jesus was born of a virgin 2,000 years ago; after just a few years he was killed, but don't worry, his death was an atonement for sin; all his teachings dropped from the sky and were infallibly recorded a generation after his death in a language he didn't speak; and all you have to do is accept him and your sins are forgiven forever." Mike shrugged.

"Well, truth isn't a popularity contest," replied Lester. "And let's face it, to say all religions are from God is to embrace a pretty wide range of totally contradictory views about God and morality."

"Almost as wide a range as is found in Christianity's 30,000 sects," said Mike.

Liz reached over and punched Mike on the shoulder to quiet him down.

"Hey Liz, maybe you better not marry him after all," teased Amy. "I'm not sure I want him in the family. Marshall, maybe you should ask your mom or dad to withhold parental permission."

Marshall smiled at her joke. "I know this guy's humor, and so does Lester, I think."

“Yeah, he teased me like this on other things back at the MIT Mars Club meetings,” agreed Lester. “But let’s not talk about religion, okay?”

“How about football? When will the stadium be done?” asked Mike.

“Football?” asked Lester. “Oh that’s right, you mean soccer.”

“It’s interesting to watch football fever up here,” said Sylvia. “It reminds me of Costa Rica. That game against Uzboi right after we arrived was tense!”

“Well, we usually beat them!” replied Marshall. “The next game, against Meridiani, is coming up pretty soon, but I doubt anyone will pay much attention because of the focus on politics right now.”

“Are you following the Olympic preparations?” asked Lester. “Nigeria’s first games; it’s quite something to watch.”

Marshall nodded and grabbed the lasagna for seconds, relieved the discussion had turned away from controversial subjects. He was still puzzled why Mike had raised the issues in the first place.

The rest of the afternoon was pleasant; the six of them chatted about all sorts of things and the three old hands were able to help the Powells in particular—and Mike a bit as well—to understand some aspects of Mars that had puzzled them. Liz made sure to stay after everyone else had left about 5 p.m. She helped Mike wash the dishes, something someone raised with dish washing machines was not used to.

“I still don’t understand why you almost attacked the Powells,” she said. “Sometimes you were mocking them, you know.”

“I don’t think Lester saw it that way,” replied Mike. “I . . . guess your observation was right. I’m from a family for whom religion was unimportant. All four of my

grandparents were Catholic, but they drifted from the church as it lost touch with ordinary life and they raised both mom and dad as nothing. Mom went to a Unitarian church a few times, a Baptist church once, and can remember being in a Catholic church three times. Dad's about the same. I never went to church at all, except once at MIT out of curiosity, and it was mostly just strange. Now here you are, practical and down to Earth in many ways, a mature person. . . a pretty *refined* personality, I'd say, on top of being absolutely gorgeous and having a beautiful walk and bearing. . . everything about you strikes me as beautiful, Liz. And you're driving me crazy sexually as well! Yet you pray every sol, you read your scripture, you believe in God, and do all these things that strike me as outmoded, old fashioned, immature, or unrefined. It seems like a contradiction and I can't quite figure it out yet. It has made me think about religion again, especially the irrational side of it, and the Powells hold a lot of beliefs I see as irrational!"

"Even so, that's no excuse to be impolite to them. It'd be a reason to stay away from them if they were dangerous to you or to change the subject if they were religious pests, but you raised the controversial issues instead."

"I know, I know. It was bad judgment on my part. I think they forgave me, though."

"Yes, relations were smoothed out in the end. Keep in mind that one of the things that makes this place pleasant to live is that fact that we try not to fight. We have a lot of diversity up here, more than any country on Earth, and we have no dominant cultural majority that minorities have to deal with. Americans are a bit less than a fifth of the population; the Chinese and the citizens of the European Union are tied for second at fifteen percent. No group can start by assuming they're right or that their way is how it's

always been. So we're used to negotiating together how something will be done here. In the process we have to tolerate a certain amount of stuff we see as strange or don't understand."

"I know the facts you've conveyed, Liz, but I still don't *feel* them. I guess that'll take a little time. Meanwhile, the Powells, frankly, strike me as dangerous. Their type is ruining the United States by reinterpreting the Constitution and insisting their understanding of it is biblical and therefore is what it should have meant all along. They're the reason the last Presidential campaign cost ten billion dollars, because both sides are now so sure the other side is destroying the country they'll spend any amount to ensure their victory. Meanwhile, the United States has been trying to do things its own way for the last three or four decades and force the rest of the world to go along, and the world is now tired of it and is basically uniting against the U.S., which is just pushing the paranoia level of half the American population up through the stratosphere. When they said they loved America I practically erupted at them."

"Well, they're not going to get much traction up here, believe me; we're such an incredible mix we have no choice but be internationalists. I wouldn't even worry about them because their approach simply can't win much support." She rinsed the last dish and drained the sink. "But I don't mean to lecture you and I don't want to become a nag. I've got to get home. Do you want to do something tonight?"

"I'd love to, but I have to work on the dissertation proposal."

"Good! Get that done, it's important." She leaned over and kissed him. "See you tomorrow, then."

“Okay.” He gave her a hug, then a passionate kiss that almost melted her. “Just a taste of what’s to come,” he said with a smile.

“I like it.” She smiled. “Anyway, got to go. Ciao.”

She headed out the door and down the spiral ramp to the ground level. She walked home thinking about the afternoon with its unusual conversation, wondering whether Mike would become interested in the Bahá’í Faith eventually, wishing almost desperately that he would but knowing she couldn’t push it on him either. He had to find it himself; the most she could do is lovingly offer it.

She walked into the house and headed for her room. Her mom and dad were in the living room and there was a seriousness in the air that she immediately felt. Her father was talking to Érico on the videophone; she could see a bit of the latter’s face. They were saying goodbye at that moment, so she stopped to see. Will closed the circuit and looked at Ethel. “I guess I’m needed after all.”

“I guess so. It won’t be easy.”

“No, it may be impossible, in fact.” He looked at Liz. “Érico just called me. The two sides negotiated all morning and afternoon and made no progress at all. So they’ve asked me to join the process as chair. They haven’t even been able to maintain an orderly negotiating environment because they’ve been alternating who chairs and that has produced all sort of manipulations and counter-manipulations. As chair I’ll serve the role of bridge as well.”

Liz looked at her father. “All I can say, dad, is thank God! If anyone can do it, it’s you. The article in *Mars This Sol* made it look pretty bad.”

“The article wasn’t completely accurate. And it didn’t even mention the issue of a new Constitution; the Basic Law has to be replaced and both sides have ideas how to do that. The Marsians want a six-month transition to full sovereignty while the national representatives are calling for five years. Then there’s what to do with the idea, enshrined in numerous treaties, that Mars is ‘the common heritage of mankind,’ just like the Earth’s seas. There are issues of dual citizenship and dual taxation and of continuing binding agreements made by the Commission, such as the New Hanford Nuclear Reservation. It’s really vast.”

“At least you already know all these issues,” noted Ethel. “That’ll help a lot.”

“I help hammer out the details, and often I’m the only person involved who still remembers why we did something a certain way. So that may help.”

“But what a responsibility,” exclaimed Liz. “I do have one idea. It comes from the dinner Mike just cooked for six of us, including two new arrivals who are conservative Christians opposed to independence. I’d seek out some of the thirty percent of the public that hasn’t signed the petition and find out what they want.”

Will’s eyes lit up. “Liz, you’ve made my sol. That’s a great idea. And it isn’t difficult because we can make a list of non-signers. That’ll give me some insights the other sides lack.”

9.

## Negotiations

20-26 May 2050

Will got little sleep that night; he talked to all of the negotiators, sometimes several times; examined the room; called in a few Commission staff and send messages to several experts and contacts on Earth. He was in the new meeting facility the next morning, bright and early, and made sure it was ready for the negotiators.

“Oh, this is quite nice!” exclaimed Helene as she entered with the other national representatives. “The environment should help of negotiations!”

“I hope so,” replied Will. “We have the entire roof of the Gallerie; lots of peace and quiet, and lots of gardens to walk in. I had them bring in the potted plants so that the room would be attractive.”

“And a roundtable?” asked Pete. “That's presumptuous.”

“You had a square table at the hotel, and I didn't want to sit on a side by myself. Perhaps the shape will help us reach consensus.”

“And who are these people?” asked Pete.

“The Commission's chief administrative assistant, Huma Mubarak,” replied Will. “She's here to help with logistics. And this is Sylvia Powell. She just arrived from Earth.”

“Oh yes, I remember meeting you on the flight!” said Pete.

“Delighted to be of service,” replied Sylvia, smiling.

“She's here to make sure we have food, drink and other creature comforts,” replied Will. “We want to be able to concentrate on our work.”

Érico Lopes entered the room with Alexandra Lescov and Vanessa Smith. They looked around the room and admired the arrangements. Shortly thereafter Silvio Diponte and Emily Scoville-Rahmani entered as well, completing the Commonwealth's negotiating team. Sylvia encouraged everyone to load up their plates and helped carry drinks to the round table, where the two sides arrayed themselves on either side of Will.

"Let me start by thanking all of you for inviting me to chair the negotiations," Will began, as everyone sat. "I'm glad this new venue meets your approval; in addition to being a neutral location, it will be more comfortable. I've already proposed a daily schedule for negotiations so we can all plan our time better: we'll have a negotiating session from nine to noon, we'll eat separately and have the afternoon free for communicating with others, then we'll reconvene for supper at 5:30 and talk until 8 or 9. Is that acceptable to everyone?"

Helene nodded. "We talked about it this morning."

"Fine with us as well," agreed Érico.

"Good; we have an agreement on something. Last night I also sent everyone a proposed agenda of topics, saving the issue of the extent of Mars's sovereignty for last, since it appears to be the most difficult issue to resolve. It seems to me that the date of the formal transfer of authority—of official independence—should be the easiest to resolve. So I'd like to hear from everyone about the issue and where they stand." He looked at Érico, sitting next to him.

Érico nodded. "Our position is simple. The voters want independence; that presumably means reasonably soon. It's mid May; the end of the year is six and a half months away. A half-year transition is reasonable. Furthermore, the last wave of migrants

arrives on December 26, completing our population this columbiad. It's logical for Mars to be independent starting January 1, 2051."

"The five national representatives are more or less united on this issue," replied Helene. "A six month transition is rather short, and Mars needs more time for its political institutions to mature. We'd favor an entire columbiad of transition, with independence arriving in early or mid 2053, after the next wave of migrants have arrived."

"Does everyone agree with the summaries?" asked Will.

Rama Singh raised his hand. "My government does not have a position on the timing of independence. Neither does Brazil, I understand. This is a detail I can resolve, and I am going along with my colleagues on the matter because it seems reasonable."

Will nodded. "Thank you. Let me ask this question: what criteria have the national representatives used to determine that Mars will be politically mature in 2053?"

There was silence a moment, and discomfort on several faces. "Sovereignty is a big leap," said Helene. "It's not something to take on quickly or lightly."

"But surely we're in a better position to judge when we're ready for the change than you?" replied Érico.

"You'll be sovereign at a time when you can't get an ambassador to Earth," noted Pete.

"So?" replied Érico. "We'll send someone via Mercury early next year, or at the next opposition."

"Or hire someone on Earth to represent us," added Alexandra. "We can find someone easily enough."

“If the last migrants reach Mars orbit December 26, they’ll have only four sols to adjust to independence,” noted Will. “Admittedly they don’t need much time, but on January 1 we’ll still be busy flying people down. If there’s an emergency, independence will receive no priority, and that’s not right.”

“We can take the chance,” said Alexandra. “There’s never been an accident yet.”

“When’s the next election scheduled? March or April?”

“Actually, we’re thinking of postponing the next election, a month to May 25,” replied Érico. “To the first Sunsol after the vernal equinox, which is May 22, 2051. An independent Mars shouldn’t set its election date based on the rhythm of oppositions with Earth. We’re thinking of holding our election once every annum.”

“But that’s changing the Basic Law, and the nations want a say in that as well,” injected Helene.

“Let’s worry about that issue later,” said Will. “Let’s stay focused on the date of independence. Even with a May date for elections, we’re talking about Mars getting independence, then holding an election and changing its government less than five months later. Wouldn’t it make more sense for the voters to elect a government knowing that it will be their independent and sovereign government?”

“That’s part of what we’re arguing,” agreed Helene.

“That doesn’t justify two years,” Érico shot back.

“What advantage does Earth get by pushing for two more years, anyway?” asked Will. “It seems to me that all you gain is a chance to spite the Marsian public.”

“We’re not out to spite the public here, just protect it from haste,” insisted Pete.

“I see,” said Will. “Perhaps we can satisfy that desire with less than two years. The logical time of transition to independence is one month after the next election; that’s when the new government takes office. That would be June of next year.”

“That’s thirteen months from now!” said Alexandra.

Will nodded. “And that’s about how long the process really should take, don’t you think? First you negotiate independence; then you modify the Basic Law into a Constitution with all the powers that independence provides; then the public debates and ratifies the Constitution; then there’s an election; then the new government takes over and is endowed with all the powers and responsibilities a sovereign nation should have.”

“Alright, that makes sense,” said Érico.

“Fine,” added Helene.

“Alright; our first agreement,” said Will. “We’re making progress.”

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After a tiring morning session—extended to 1 p.m. to complete their tedious discussion of Constitutional issues—they adjourned until evening. They had all eaten lunch together in spite of the tension in the room, so they agreed to reconvene a bit later; 6:30 p.m. Will headed for his office to handle the usual heavy burden of work, but walked back to the hotel at 3 p.m. to meet with Peter Zubko.

“Pete, I want to meet with you so that I can understand the position of the United States better. The world’s greatest power, the nation that still has the largest economy, the nation that has more cultural influence on humanity than any other, the nation that was founded by a revolution against tyranny and to achieve freedom. . . shouldn’t such a

nation be in favor of Marsian independence? Shouldn't such a nation see the promise of Mars?"

Pete looked at him. "Are we talking ideal theory, or *real politik*? Because they aren't the same thing, you know. In the ideal world, the United States stands for freedom and justice and dispenses its power to bring about those goals. But we've never lived in an ideal world. The real world is much messier. This little Marsian nation they want to found will be eaten alive in the real world of politics. Do you think the United Nations is a polite little debating club?"

"We don't even know whether Mars wants to join the United Nations. The U.N. might not be around much longer."

"Of course it'll be around! It has survived 105 years and sometimes it even serves humanity pretty well." Pete shook his head. "This so-called 'Grand Union' isn't going anywhere. It may not be said publicly in the media, but it's an open secret that the United States and China are now actively working against it. The European Union is big enough and is already complicating the geopolitical situation."

"Opposition may make the Grand Union more likely, not less. The European Union formed largely in opposition to the Soviet Union, then the United States. The Grand Union is a chance for nations to band together against the tyranny of the big; 'the bullies,' as the U.S. and China have been called more than once."

Pete shrugged. "Like I said, we live in a world of *real politik*. Nations have to place their own interests first because no one else will do it, and they have to play other nations off against each other to advance those interests. You know that; or have you been stuck in this little Marsian bubble too long?"

“I know exactly what you’re talking about, Pete. People talk about ‘enlightened self interest’ but I think the self-interest is getting more and more enlightened all the time. Five hundred years ago, government self-interest meant keeping a king in power and keep power out of the hands of the people. Two hundred years ago American self-interest meant isolationism. After World War One, the United States proposed the first international governing system and it was a step forward, even though it failed. After World War Two the United States performed the greatest act of generosity in the history of humankind and helped rebuild Europe. The United States has been immensely generous to the developing world since. And it mostly paid for the system that got us here. So are you now telling me that self-interest means keeping Mars weak and not-free? Why is that?”

Pete pondered Will’s question. “I don’t decide where the self-interest of the United States lies.”

“Look, we’re talking about a nation that is made in the image of the United States in many ways. It’s diverse, it’s democratic, it’s English-speaking, it follows the rule of law, it has a manifest destiny. . . we’ve always been a natural ally of the United States.”

“And the natural rival, in a few centuries.”

“The United States and Britain have rarely been rivals; they’re mostly allies. Would the world be better for Britain if the U.S. didn’t exist? I don’t think so. Isn’t a Mars in the image of America better than a Mars in the image of China?”

“No doubt.”

“Even during the Civil War, Britain didn’t support the Confederacy and splitting America in two, and it could have. The South tried to obtain British support.”

Pete looked at him with a puzzled look. “Are you a geologist or a historian?”

“I’m a geologist and a leader, and leaders need to know something about the past.”

“Well, not all the lessons of the past agree with your analysis.”

“Which lessons are you talking about? Are you aware that when the United States was founded, it didn’t have political parties? They started later.”

Pete frowned. “That’s not true; there were the Federalists and the Democratic-Republicans.”

Will shook his head. “That’s later; they didn’t exist when the Constitution was written. They were tendencies or groupings, but not formal parties.”

“And what’s your point? Some towns and even a few cities in the U.S. have non-partisan elections.”

“Fewer and fewer all the time. And up here we don’t even have factions or tendencies. I think when the history of this century is written in a hundred years or so that the Marsian custom of no campaigning will be seen as a turning point, just as the United States federal system and Constitution were a turning point some two and a half centuries ago.”

“Dream on, Will. Dividing people into competing factions—and pitting the factions against each other—is as old as Cain and Abel. It’s part of our human condition. Mars can’t fight it.”

“As I said some years ago, in centuries past poisoning one’s rivals was regarded as fair game. Nowadays we just try to assassinate their character. People have been trying to assassinate my character for the last two weeks.”

“And you have an impressive set of defenders, I must say.”

“And I’m staying out of it. As for polarizing populations, one doesn’t have to do it. If I wanted to polarize the Marsian population against you, all I’d have to do is denounce certain plans to use force against it that I’ve heard about on and off for some time. But I’ve held my tongue, and I plan to continue doing so.”

Pete looked at him, shocked. He was speechless for a minute. “What have you heard?”

Will shrugged and said nothing in reply.

“What do you want?” he asked suspiciously.

Will considered the question. “I want the United States to be fair to Mars.”

Pete laughed a little. “You’ll need to be more specific than that.”

Will shook his head. “No, I won’t be. I don’t think fairness is defined by two lawyers or diplomats in debate. I think this morning we worked our way through to a fair arrangement about the timing of independence.”

“That was a simple issue to handle.”

“I don’t know what the fair resolution of the others will be ahead of time, Pete. The two sides have to find it together; I’m the facilitator. I’m not asking for the United States to take or reject certain positions. I’m asking the United States to follow a certain fair process. For example, let’s keep the rhetoric down so that compromise is possible. I’m not blackmailing you. We don’t even know what release of the information would do. I’m simply trying to be an example of moderation.”

Peter Zubko looked at his face closely for a long moment. “I don’t know whether you’re genuine, you’re crazy, or you’re trying a very complicated maneuver.”

“I’ll leave that decision to you.”

Pete nodded. “I’ll talk to Washington.”

“Thanks.”

They chatted a few more minutes about other matters: Will’s newly married son, Pete’s kids, the Catholic church in Aurorae that Pete had attended twice. Then Will headed back to his office. He had a similar meeting scheduled for 5 p.m. with Rama Singh, who appeared to be the group’s swing voter.

As he entered the office area, he saw Huma and several other assistants huddled around a television. “What is it?”

Huma looked up. “Live coverage of the Tokyo earthquake. It just happened ten minutes ago.”

“How serious?” asked Will, concerned.

“Extremely; the magnitude is estimated at 8.9. It was 9 a.m. in Tokyo; the end of morning rush hour, a bad time for a quake. The entire city is without power and communications, except for battery-operated satellite telephones and emergency generators.”

“Casualties?”

“They don’t know yet, but thousands.”

Will watched the television with them for a few minutes. The live report was from the roof of a ten-story apartment building; the camera showed that several similar buildings nearby had pancaked. In the distance they could see the crushed remnants of a thirty-story skyscraper.

“This is very, very serious,” Will said. “I had better call Paris.”

“It’s the middle of the night there; you won’t get anyone,” said Huma.

“I’ll call Houston, then, we have public information staff there. I’ll have to prepare a statement.”

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It was late when Will finally got home. When he entered the bedroom, the light was off; Ethel was asleep already. But she heard him and turned on the light.

“How are you? It’s . . . 2 a.m.”

“I’m exhausted, and I’ve got to be up by seven.”

“How’s it going?”

“Well, we were off to a good start this morning and reached a tentative agreement when independence would start. Then we tried to discuss the issue of writing a Constitution and all five national representatives insisted that any changes had to be approved by the Landowners Assembly. The representatives of the residents wanted the role of the landowners completely eliminated and the national representatives were adamant that couldn’t happen.”

“That’s a serious impasse.”

“It’s going to be tough to resolve it. The morning bogged down completely over that issue. This afternoon I had a long talk with Zubko and I think I made some progress. But this evening nothing was settled, and we finally agreed we wouldn’t negotiate tomorrow.”

“Why?”

“The Tokyo disaster; it’s putting everything in flux. The yen’s plunging, the dollar’s sliding because the Japanese have so much of their savings in American dollars

and bonds, the price of gold is going up while price of platinum's dropping on the prediction the quake will trigger a global recession. . . no one knows whether their position is getting stronger or weaker."

"It's a terrible disaster. Last I heard, the death toll was approaching five thousand."

"It's up to twelve thousand now, and the estimate is it could exceed one hundred thousand. Greater Tokyo has a quarter of the country's population and an even bigger percentage of its GDP, and it'll be completely shut down for months."

"So, they'll be living on savings in dollars and gold?"

"And they won't be using platinum to make fuel cells for at least six months."

"What are you doing tomorrow, if there won't be any negotiations?"

"Talking; I've got appointments with several people, mostly from among the thirty percent who still haven't signed the petition. I'm still seeking to understand the situation."

## Treaty of Aurorae

late May 2050

No amount of coffee could drive the sleep from Will's eyes the next morning. He had slept badly; he had too much on his mind.

"You look as tired as I," said Érico as the two of them ate breakfast together in a private room in the Gallerie.

"The stakes are high; I have too much work to sleep much, and when I go to bed I can't sleep."

"Well, this sol will be a bit less intense. The five of us will meet this morning to talk about strategies, then I have a round of meetings with folks."

"I do, too. I have a videoconference with Joshua Ivakhiv. I want to see whether he could stay an extra six months and return to Earth on the flight to Mercury."

"Why?"

"To represent the interests of landowners. It seems to me if we can resolve the issue of who will frame a new Constitution, he'd be a possible representative of the corporate land owners."

Érico's eyes lit up. "That's a clever idea! He's a good listener. But he's also a tough negotiator."

"He is, but he loves Mars; at least, that's my impression. And Consolidated's Vice President for Mars Operations; he's a heavy weight."

"The Resident's Council will have to decide. It's too bad we don't have a representative of the small landowners."

“There’s Skip; he’s a small landowner and plans to stay until the Mercury flight, and he’s a savvy guy—rich and a good manager—as well as a lover of Mars. We have twenty-five tourists here, ten plan to take the Mercury return, and they’re all landowners.”

“True. But Will, we have to change this arrangement where landowners—especially corporations—have a part of the legislative vote. It’s a ridiculous feature of our governance. We want to abolish it.”

“I understand that; it strikes me as a strange feature of our governance as well. But we debated this ten years ago and established a Landowners Assembly. How will we eliminate it now?”

“You heard Silvio’s opinion: once we have independence, the Basic Law is null and void. The residents voted for independence and they can draw up the Constitution.”

“Yes, but if we drop the Landowners Assembly completely the corporations might be furious and we’ll lose billions of redbacks of investment. We set up the Landowners Assembly based on the principle that any entity that pays taxes and receives benefits should have a say about them. This place has only a few thousand people but produces tens of billions of redbacks of exports because of corporations. Corporations don’t have children, but they need support services such as transportation infrastructure and energy. So their sphere in legislation was restricted to economic development issues. It was not a perfect solution.”

“That’s for sure. The Landowners Assembly is based on Earth, though, and they don’t share our electoral system; there have been several expensive campaigns using sophisticated and misleading publicity.”

“That is a problem, and it’s hard to solve: there are one hundred thousand small land owners scattered all over the Earth and they can’t vote based on a blank slate of candidates because they don’t know anyone. I think they need at least a simple campaigning system, like the one used by university alumni associations.”

“And they meet on Earth; that’s a problem, too.”

“It is.” Will pondered the issue.

Érico drank from his coffee cup. “Will, I don’t know how we’ll resolve all these issues.”

“I don’t either, but we have to. The goal is independence, but we have to make some compromises. Some will be to Mars’s benefit, but others will set up problems for years to come. Think about the compromises that made the American Constitution possible. The compromise over slavery set up the conditions for the Civil War.”

“That’s not an encouraging answer!”

“We live in an imperfect world, Érico. I need the five of you to realize that and accept reasonable compromises. I don’t know what’s fair, but all eleven of us have to figure that out together.”

“I know, and it won’t be easy.”

“It won’t.” Will drank down the rest of his coffee. “I’ve got to get to the office. Shall we touch base again at supertime?”

“Sure.”

Will stood up and picked up his tray. “Ciao.”

“Ciao.”

He headed out of the room, dropped off his tray, then went up to his office. He had looked at email for five minutes, then called Joshua Ivakhiv at 9 a.m. sharp. The forty-year old Ukrainian-Canadian dual national was in his office in Cassini Outpost, where it was 2 p.m.

“Good sol, Will,” he said when he answered the video call. Will could see a view of Cassini’s crater rim out the window behind the blond-haired executive.

“Good sol, Joshua. How’s your visit going?”

“Oh, it’s been excellent. The tourist trips have been nice, but most of my time has been spent here, where I’ve met our entire staff, gotten to know them, have been able to brief them about company policies, and have learned about their problems and ideas. That’s gone very well and has been quite exciting.”

“And you’ve been to the other facilities too, right?”

“Yes, I just returned from a two-week road trip to Dawes, Meridiani, Kalgoorlie, and Thymiamata, which also gave me a chance to see a lot of the highlands. Three weeks ago I flew to Tyrrhena for four sols. Four weeks really hasn’t been enough, but we’ve established the principle that every columbiad or two someone from headquarters flies out and spends time here.”

“We’ve found that essential for the operations of the Commission,” agreed Will.

“Though it might not be essential any more.”

“Probably not. Say, Joshua, I want to ask you a question that could mean less time for your job now, and maybe more later; more than you might want. Right now we have negotiations going on between the national representatives and a delegation from the Residents Council. No landowners are involved. I don’t think I can add a landowner at

this late date, but they've added me as a facilitator or mediator of sorts and I need the advice of some landowners. You're the logical person to ask; you're the highest ranking corporate officer on the planet, you're normally on Earth, and you love Mars."

Joshua frowned. "What sort of advice?"

"We can do some over the videophone, but I'd prefer a face to face meeting. Is there any way you can clear your schedule and fly here for a sol or two? There's a flight tomorrow morning."

"Wow, that's a tall order. I have a full schedule. What sort of advice?"

"I want to sit down with you and maybe one other land owner—probably Skip Carson, as a representative of the individual land owners on Earth—and have a confidential session where I lay out the entire situation. This would be for your ears only; nothing can leave the room."

"I see." He considered. "That's an interesting and attractive offer."

"Joshua, you are a lover of Mars; I know that from our conversations. You're committed to the future of this world. You aren't a resident, but this place is built on a partnership of people and of organizations on two worlds. You're the ideal person to provide this service to Mars and to your fellow corporations."

"You flatter me, Will, and it isn't necessary."

"It's not flattery; it's true, you're committed to this place. And you understand the idea of public service."

"Not sure my company will appreciate it, though. I suppose I could make up some of the lost time on the flight home, while the round trip transmission time is short."

“That’s the other half of my proposition, Joshua. In my opinion, we’ll need a landowner representative to help draw up the new Constitution. That task won’t even start until after the flight leaves for Earth, but it’ll certainly be finished before the next flight back to Earth via Mercury. I want to find someone who can serve as an informal advisor to me now so they can acquire the contact and experience to serve on the Constitutional Committee later; assuming the Residents Council agrees.”

Joshua was startled by that. “You’re asking me to stay on Mars an extra seven months and take a flight back to Earth that takes an extra six months. That’s thirteen more months away from Earth.”

“It is. Of course, the time on Mars will be productive; you’ll have your full corporate office. You could get a lot of work done for the company. And the flight back will be quite comfortable because you’ll have a lot of space; the caravel will be pretty empty. The time delay to Earth is pretty short during most of the flight.”

“True, but I doubt Consolidated will appreciate me working from a very long way away for an extra year, not to mention my wife and two children. It’s not very practical, Will.”

“Perhaps not, but sometimes we need to make a special sacrifice, so please consider it. Meanwhile, as a separate matter, could you come to Aurorae for a sol? I’ll arrange a special flight, if necessary.”

“Alright, that much I know I can do. Frankly, it’d be more convenient if I came tonight. I could give you all of tomorrow, then fly back overnight tomorrow.”

“Alright, I’ll call the airport and arrange the flight at the Commission’s expense. Thank you, Joshua.”

“I’m honored to be of help, really.”

“I’ll have our administrative assistant contact you with the details. Ciao, Joshua.”

“Ciao.”

The circuit closed. Will stared out his window. Through the dome he could see the agricultural domes of Andalus Northeast and Northwest, then the rolling Aurorae Valley stretching all the way to the jagged face of the escarpment. He contemplated the scene and considered his next move.

His conversation with Érico had given him some ideas about the issue of Mars’s territorial sovereignty, and they had implications for the issue of the disposition of property. He had to turn to them next. But to do that he needed advice from some lawyers. He turned to his attaché to prepare an email to their chief attorney on Earth.

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It was three sols before both sides were ready to resume negotiations. Everyone was waiting for the crisis triggered by the Great Tokyo Earthquake of 2050 to recede, but soon two things were clear: the crisis was going to last many months and it wasn’t going to change either side’s strength much. Will, however, used the time to collect information and ideas and to bounce proposals off various negotiators.

“I think we may have cleared the way to agreement on another issue,” he said when they resumed their joint meeting. “I refer to the involvement of the landowners in drafting the new Constitution. In the last three sols all of you have met with both Skip Carson and Joshua Ivakhiv and have heard their thoughts. It now appears Joshua is willing to stay through January to help draft the Constitution if the Residents Council is willing to appoint him.”

“No one here can speak for the Council, of course,” exclaimed Alexandra. “But I will propose both of them as members of the Constitutional Committee, and I see no objection to them being included.”

“They can be appointed before the national reps return to Earth, too,” added Érico. “The Council members are all here, so they can meet any time.”

“How big will the Constitutional Committee be, though?” asked Helene. “Two members out of twelve is good; out of one hundred is not.”

“I think we’ll have to appoint at least thirty people to it,” replied Alexandra. “But there will be other individual landowners or representatives of corporations on the body. The Residents Council itself includes high-ranking officials in Muller Mining and Sibireco, and all of us are individual landowners.”

“If you can get them appointed official members of the Committee by the Landowners Assembly, fine,” replied Helene. “Will, we can’t sign off on this one until we see who is on the Constitutional Committee.”

“Alexandra, do you think that can be settled in the next week?” Will asked.

“Yes, the Council is prepared to act.”

“But one thing we will stipulate: the Constitutional Committee members have to be on Mars,” said Érico. “No telecommuting of members on Earth. The time delay is too difficult and the lack of face-to-face relations will cause too much of a breakdown in personal contact.”

“They all have to be here,” reiterated Vanessa.

“Okay,” said Helene. “We’ll accept that requirement.”

“Shall we turn to the next issue, then?” asked Will. “We have two big issues left; territory and disposal of assets. The lawyers have worked on the first one, the lawyers and accountants on the second. I’ve circulated to all of you the memo by Audrey Ahmed proposing two different definitions of territorial extent. The first involves land and the overflight rights above it in the atmosphere; the second involves space, above the atmosphere. The boundary between the two is arbitrarily set at one hundred kilometers. The first she has termed *national territory* and the second *planetary territory*. Nations on Earth cannot extend their sovereignty above the atmosphere because satellites cannot avoid overflying a particular nation. I propose we treat these two different types of territory separately.”

“Referring to the sovereignty of *Mars* is an unfortunate ambiguity,” said Pete. “We will not concede sovereignty over the entire surface of the planet to the Commonwealth, so it follows we won’t concede sovereignty over space either.”

“And we will accept nothing less than total sovereignty over both territories,” shot back Érico. “The notion that Mars ends 100 kilometers above the surface is absurd. Phobos Borough is part of Mars. Can anyone put something in the path of Phobos without our permission?”

“Let’s not get ahead of ourselves,” replied Will, raising a hand. “First, let’s discuss the question of surface sovereignty. The offer from the national representatives is that Mars remains the common heritage of all humanity, administered by the Mars Commission, with the exception of those parts of Mars already assigned to boroughs; that territory will be part of the Commonwealth. Currently there are ten boroughs on the Martian surface comprising about eight million square kilometers out of one hundred

forty-four million. The counter-proposal of the Residents Council is that all of Mars must be part of the Commonwealth.

“I have contacted several lawyers on the Earth and their opinions are quite interesting.” He handed out copies of their opinions. “First, the Commonwealth Authority is already administering the development and maintenance of 120,000 kilometers of dirt roads that criss-cross the entire planet. Just the main roads—three east-west trails that circle the globe and three north-south trails that run pole to pole—bring ninety percent of the planet within a thousand kilometers of a road. When one includes the short spur roads, ninety percent of Mars is within six hundred kilometers of a road. Furthermore, on the roads are 125 oases and 250 landing strips, which represent a substantial infrastructure; the oases have all been the temporary homes of exploration teams. Finally, since individuals and corporations can petition to purchase land outside boroughs, there is a substantial amount of real property scattered about outside the boroughs. The lawyers conclude that the argument that the boroughs constitute the only developed or explored parts of Mars is ‘arbitrary.’

“But that’s not all. One lawyer has noted that ‘the common heritage of humanity’ is a phrase that by no means implies a lack of national sovereignty. In other words, nations can have sovereignty over parts of humanity’s common heritage and administer it on humanity’s behalf. The Commonwealth is already doing that; over a decade ago it declared by legislation that five percent of the planet was ‘park’ to be preserved in perpetuity. The Basic Law gives the Commonwealth the authority to declare parks over the entire surface.

“So the legal experts do not see a simple and clear argument for restricting territorial sovereignty.”

“We went over all of this two weeks ago,” growled Pete. “We know the Basic Law already gives the Commonwealth certain territorial privileges. We might be willing to continue them, too, as long as the territorial sovereignty outside the boroughs officially belongs to the Commission.”

“That’s ridiculous,” replied Alexandra.

“The bottom line is that we won’t accept anything less than full sovereignty over Mars,” added Érico. “Otherwise there is the possibility of colonies and bases being planted that become other nations.”

“Your position’s unacceptable,” exclaimed Pete, raising his voice.

“Wait, wait!” said Will. “I’m not done. As I said, we have two spheres of sovereignty: surface and overflight rights, and space rights. On Earth, nations do not control the latter; treaties assign responsibility. The Mars Commission itself is involved centrally in the L1 Authority and has representation on the LEO Authority. So my proposal is simple: the Commonwealth of Mars will have sovereignty over all of the planetary surface and a Mars Space Authority will have authority over the Martian gravitational zone of influence.”

“Rather like the situation with Earth,” said Helene.

Will nodded. “A parallel. I suggest the authority be based in Aurorae and a majority of the board members be Marsians, but I think there should at least be an American and a Chinese representative on it, since they both have a Deimos facility.”

“Not acceptable to the United States,” replied Pete.

“I don’t find it acceptable, either,” added Érico. “We should have both. It’s our world.”

“No, it’s not your world, it’s humanity’s,” replied Pete. “And the United States of America’s not going to give it to you.”

“And I suppose the United States of America is prepared to use force to keep us from having it?” Érico shot back.

“How will independence feel when you’re subject to a boycott?”

“And what will that do to Earth’s platinum supply? Enjoy your \$220 per barrel petroleum. We’ve got enough supplies to outlast an embargo; we can go years, and you can be sure there will be leakage.”

“There won’t be an embargo,” replied Helene, raising her voice. She looked at Pete, exasperated. “The European Union has already said privately that it will not honor an embargo, and we assume the Grand Union won’t, either.” She looked at Alexandra. “Sometimes a compromise is the best one can get.”

“Sometimes,” agreed Alexandra.

“I agree also,” added Wei-ming. “China opposes the use of any form of force against Mars.”

Pete looked at his colleagues, startled that they had exposed his bluff. He said nothing.

“What do you propose for Phobos and Deimos, Will?” asked Alexandra.

“Phobos is a borough and is part of Martian territory, and it would be surrounded by an ‘overflight zone’ of appropriate size, probably one hundred kilometers. I think the same arrangement should pertain to Deimos. It has a permanent station that might

someday become an outpost. Most of its surface is within either the American or the Chinese reservation, but there are similar reservations on the Martian surface and they will continue to exist after independence.”

Alexandra nodded. “I can accept an arrangement like that, as long as the board of trustees for the Mars Space Authority is located on Mars and the trustees are on Mars, so they can easily meet.”

Will looked around the room. One by one the others present nodded, except Pete Zubko, and he looked down, knowing he had lost. Érico was reluctant, but willing.

“Excellent; we have agreement on what is the most difficult principle of all. Compromise is painful and the results are not always satisfactory, but sometimes it’s the best we can get. I suggest we take a break before turning to the last issue: disposal of Commission property and staff. It’s the most complex issue of all, but it also provides ample room for various compromises.”

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Helmut Langlais reviewed the latest data from Prospector 250A on Ceres. In the last twenty-four hours the robotic, wheeled geological laboratory had slowly circled the rim of a crater one hundred meters in diameter, then worked its way down to the bottom thirty meters below, where it circled again, photographing everything in minute detail and collecting reflection and emission spectra on as many rocks and rock outcrops as it could in that time. Helmut was wearing a virtual reality helmet, which made the trip around the crater almost like walking around it himself. The click of an icon revealed which rocks had received detailed spectral observation; another icon mapped out the visual resolution available around him. He “walked” around the crater, zooming in on the rocks that could

be viewed in the most detail—it was like picking some of them up and holding a hand lens to them to study the minerals—popping up their spectral data when it was available. Twenty-four hours of detailed observation by the Prospector yielded several hours of high-powered virtual field work; the Prospector’s software made excellent choices for spectral and close visual observation, and the immensely high bandwidth of the continuous laser connection to Mars from two communications satellites in Ceres orbit meant that vast amounts of data could be collected automatically.

But Helmut did not dedicate two hours to exploring the crater that sol. It was not worth the time, not only because the director of Ceres research was very busy, but because it was a fairly routine hole blasted in Ceres’s outer crust, revealing the usual layers of ice-filled, water-altered regolith. He had walked with his space-suited feet in hundreds of similar ones, not to mention his virtual excursions into craters on Vesta, on several of Jupiter’s moons, and even on Titan and Triton. After a while, craters became a dime a dozen unless the software alerted you to something unusual; and the Prospector’s software raised no such alarms in this case. He checked out the crater quickly and left the detailed exploration to the other members of the Ceres expedition. Even they would probably leave that crater for geology graduate student assistant at the Kuala Lumpur Technical University, which had a contract for scientific support services.

He finished up his brief inspection and was about to send the Prospector on another sol’s exploration out of the crater and two hundred meters across a plain toward a nearby hill, searching for interesting geology as it went, when he heard a commotion in the hallway. He looked up and pushed an icon that gave his sights and sounds from two cameras and microphones mounted on his virtual reality helmet, which gave him a

strange, virtual reality view of his own surroundings. Ceres disappeared, replaced by the Ceres Exploration Lab. The sound was coming from the hall, so he turned to look. Just then Amy Elliott walked by on her way back to the Titan Exploration Lab next door.

“Helmut, they just signed an independence agreement!”

He pulled off his helmet immediately. “Really? *Mars This Sol* said they were close. What are the details?”

“Dunno. There’s going to be a public announcement and press conference in Andalus Square at 3 p.m.”

“That’s in fifteen minutes!” Helmut began to remove his virtual reality gloves and slippers and extract himself from the machine that let his imagination wander other worlds. He picked up his attaché and commanded it to call Clara.

“Sorry all circuits are busy,” it replied.

*All circuits busy!* That never happened. Everyone was calling everyone else. And no doubt everyone in Aurorae was heading for Andalus. The kids were in school and day care, so that was no hindrance, and no one would regard work as a hindrance under these circumstances except emergency personnel.

He stood up. “Genie, send a voice message to Clara, Kristoff, and dad that I’m heading for Andalus Square and will watch for them. And Genie, please display Andalus Square on screen and their locations if they enter the square,” he said as he headed for the door. He was wearing a hearing-aid sized device that allowed him to receive audio signals via his attaché and which also could broadcast his vital signs and gps coordinates to the Outpost’s environmental control center. The latter could be picked up by his wife,

father, and brother at any time by mutual agreement with them; it made it easier to find each other in a crowd.

He exited the building with a stream of people. They became a tributary flowing into a larger river of people heading west. The airlock doors between domes, which opened automatically to let someone pass through, were constantly open because of the heavy foot traffic; he was surprised to be able to see the light of the other dome at the end of the tunnel as he passed out of Catalina.

Andalus was filling rapidly with people as he entered. It was shocking to see how many people could assemble quickly, and what it told of their feelings. Pockets of people were singing the Marsian version of “This Land is Your Land” and other patriotic songs that had gone from obscurity to popularity in a matter of three weeks. Cinnamon armbands and patches were on almost everyone’s clothes. He stopped and consulted the screen of his attaché. His father was about thirty meters away, so he walked over to him, based on the broadcast coordinates. They spotted each other and waved.

“You came out,” said Helmut.

“Oh, I can’t miss the excitement,” replied Sebastian. “This is an historic sol, after all. It’s about time they reached the agreement; the representatives are scheduled to blast off tomorrow.”

“They cut it really close.” He looked at his screen again. “Oh, Clara just entered.”

“Let’s find her. Kristoff’s up on the escarpment this sol, but maybe Irma will join us.”

“I wonder whether this will effect the Ceres expedition.”

“It could affect Callisto and Saturn, too. It could affect everything,” replied Sebastian in a grim tone.

Helmut nodded and the two of them headed toward the northeastern entrance into Andalus, from which Clara was heading toward them. They met in between and headed for the stage, because the negotiating teams had just exited the Gallerie and were walking toward it as well. The smiles on the faces of the negotiators—all of them—excited the crowd even more, as it was a clear sign that an agreement had been reached.

Will Elliott walked to the microphone, accompanied by Érico Lopes and Helene Dupont, the chief negotiators. The screen behind him filled with a huge image of them so everyone could see.

“Good sol, my fellow citizens of Mars,” he said, and the crowd immediately erupted in applause. *Citizens*. It was strange to hear it in this context and Helmut immediately thought how strange *husband* had felt after he first got married.

Will smiled and nodded. He waited for the noise to die down. “My fellow citizens of Mars. It will take us time to get used to that term, and time to arise to all the responsibilities it implies. My friends, we have *an entire planet* as our nation. It is undivided.”

Cheers and applause arose again, for everyone knew that was an issue. “The Marsian nation rises to the skies, but not to the heavens; like terrestrial nations it stops with the atmosphere. But Mars will command a majority of members on the Mars Space Authority, based in this outpost—this capital city—which will plan the use of the sphere of Martian gravitational influence to the mutual benefit of all humanity.

“Over the next year, the Commissioner of the Mars Commission and the Chief Minister of the Mars Commonwealth Authority will manage a transition. It will see the Commission’s shares in MarComm and Margen, our publicly owned communications and energy companies, sold to businesses and to the Commonwealth. Aurorae Fabrication and Construction will similarly transition to a privately owned company. The Commission’s share of Marcraft will be transferred to the Authority. The Spaceport and Mars Control will be transferred to a new entity created by the Commonwealth, the Mars Exploration Agency, and the Commission’s remaining biological research facilities will become the Bioscience Agency of the Commonwealth. Mars Commission facilities on Earth will in a few cases be transferred to the Commonwealth and in other cases will go to other uses, such as Saturn and the Galileans. Many details of the transfer still must be worked out. Proceeds from the sale and other assets of the Commission that are left—totaling a few billion redbacks, less than a tenth of our output per columbiad—will be dedicated to exploration of the outer solar system, and much of it will come back our way in the form of equipment orders.

“The transition period will see the drafting of a Constitution for an independent Mars by a convention of thirty persons, which will include at least three representatives from corporate landowners and three representatives from individual landowners, to be selected from among persons on Mars by those two groups. The drafting will commence immediately so that the Constitution can be completed in December and ratified by popular vote in late March of next year. Once there is a Constitution, there will be a vote for a government, probably in May 2051, and a month later I will retire, the Commission will cease to exist, and Mars will be fully independent. That, in sum, is the agreement.”

Applause erupted again, louder and more enthusiastic than before. Some people began to sing and it spread across the crowd. Will beckoned Helene to move to the microphone and he moved aside for her. They waited patiently.

“My friends,” she finally said, and she repeated herself two more times to quiet the crowd. “I speak for my fellow representatives of China, India, the Latin American Union, and the United States when I say that we came to Mars to visit, gather information, and learn, not to negotiate. We never would have dreamed that we would witness the birth of a new nation, a small nation that appeared in the annals of human history with unprecedented swiftness, but a nation with a great destiny. It has never been our desire to fight against the tide of history. We have bowed to that tide and welcome the new people and culture that has emerged. Our five nations all will recognize the sovereignty of Mars and we will not block its entrance into the ranks of the nations. We will partner with you to expand humanity’s knowledge of the universe and will accompany you on that journey. Mars will not pay Earth any fee for the infrastructure that has brought you into existence; rather, we expect you to share with us the burden of spreading humanity to new worlds. On behalf of our governments, we wish this new nation well.”

She moved away from the microphone while applause rose again. It was Érico’s turn; he stepped up.

“My friends, the victory this sol is your victory. The people of Mars matured, increasingly they yearned for self-determination, they began to debate the matter at cafés and on living room couches, they spoke to *Mars This Sol* and a great public debate began. Then they made up their mind; the petition now has the signatures of almost eighty

percent of Mars's voters. There was little rancor, few arguments, no violence, no oppression, no riots; just discussion, then voting. It has been called the Cinnamon Revolution, but it had less spice than cinnamon! Mars has demonstrated a new level of maturity in managing social change and brings hope to Earth's struggling masses that justice can be achieved through peaceful means.

“Now the struggle takes an important turn as we determine the nation we will be. The next year will lay the cornerstone for Marsian civilization and will determine whether we achieve greatness in human history. Will we be in humanity's vanguard, or will we be a small nation lost in the mass of human society? We will determine that, our fate is in our hands. Let us celebrate that priceless opportunity this afternoon and evening, then tomorrow morning let us roll up our sleeves and get to work. Thank you.”

## Changes

early June 2050

“I want to sleep for the next three sols,” Will confessed to Ethel, as they walked home from Andalus Square after the big announcement.

“You should be utterly exhausted.” She reached out and took his hand. He had been home for three or four hours every night for the last week. “But you pulled it off.”

“I guess. Compromises can come back to haunt you; or your entire society, in our case.”

“Life is never perfect.” She hugged him. “We’re free.”

“And we weren’t before?”

“Well, you know what I mean. Let’s go home.”

They went home and Will slept thirteen hours that night. The next morning he was busy with various details of the treaty, then there was an official going-away banquet for the five national representatives, attended by the tourists, the members of the Mars Residents Council, and a few selected guests. That evening two shuttles blasted off with the persons returning to Earth. That did not include Joshua Ivakhiv, who was remaining to strengthen Consolidated Mining’s operations and assist with the Constitution, if the Landowners Assembly appointed him.

It was only the next day—June 1, 2050—that Will was able to go to the office and tackle normal work. There were quite a few messages from friends and colleagues that he hadn’t been able to read, some of them ten sols old. He saw that Rick Page, Commander of Lunar Operations, had called two sols ago, so he started by listening to Rick. “Hello,

Will. I just watched the announcement ceremony in Andalus Square and it brought me back to the time I was there. How much it's grown. . . it's really amazing. It's making all of us look at the moon differently.

“The establishment of Parenago Station has had an interesting effect up here. It's doubled the moon's total population; we just broke the thousand mark two months ago. A huge, buried dome is planned there; as you can imagine, they're swimming in leftover nickel-iron. Now some are beginning to ask: do we really have to go back to Earth after a year or eighteen months? We know adults can stay a few years with no ill effects; a few folks have done it. The animal tests show that usually children can be raised here safely, with the right combination of exercise and medications, and we've got plenty of space for them. So a few people are beginning to think seriously about settling here and raising a family. That's raising new questions about governance and whether we need more representation of residents in our government. Of course, most residents will be short-term for the near future, either because they want to go on to Mars or because the cost of flying back to Earth is getting less and the companies are more willing to rotate personnel. So I don't know what will happen.

“There's not much news from here, not compared to your news especially. The fluctuating price of platinum is driving us crazy. We're holding onto most of our exports for a month until the price settles down. It's incredible how much of Tokyo was devastated. It'll be years before the Japanese economy recovers. It's quite a blow to the world economy, too, especially the U.S. and China. This can only accelerate the Grand Union; it offers better stability and support.

“I hope all is well with you and your family. Looking forward to hearing from you. Bye.”

He was surprised that the moon was so strongly affected by Marsian independence. He tended to think of the place as having no culture of its own, but that wasn't true; inevitably, the moon would develop an identity of its own.

Olaf Norlander, Commander of Mercury operations, had messaged him just a sol earlier, so he listened to him next. “Good sol, Will. I want to congratulate the Marsians for achieving something none of us thought would happen in our lifetime. A month ago, I didn't know you had a grassroots independence movement. I knew a few people took the idea seriously, but I had no idea so many would adopt it so fast! Nationhood requires a new way of thinking, after all; a level of confidence. It speaks volumes that Mars would aim for independence after just thirty years!

“Your struggle has also triggered a soul searching here on Mercury. Believe it or not, a few among the seventy-five of us are asking similar questions: when will we want or be capable of independence? What should we be striving for right now? A few are comparing ourselves to Mars, while others are stressing the differences. Twelve years after arrival, you had ninety-two people; we're not much smaller. We don't have past life to study, but we have some incredible geology, with very hot, dry-rock processes that can't operate on Earth or Mars. Caloris Outpost is gradually learning how to mine deep inside Mercury, below the dayspan heat; so some of us say we might have a bright future in mining rare minerals. Others say no, shipping prices will never fall enough.

“The nay-sayers argue we're too isolated and don't have the mythic power driving settlement that Mars has. The optimists respond that when we begin a new expansion, if

you've already done it, it's much cheaper for us. The pessimists note we have plenty of water and carbon, but no nitrogen. The optimists reply that we only need to import a hundred kilograms of nitrogen per person. The pessimists note that we have plenty of light, but the lack of atmosphere and the excessive heat over most of the planet makes it quite inhospitable; but the optimists say Mercury has enough moderate polar areas to accommodate millions.

“It goes back and forth in the cafeteria. The flights between Earth and Mars via Mercury will revolutionize our contact with you. Our kids are already part of your school system and we're already buying most of our goods from you. A lot of us have been on Mars, now we're recruiting there, and some of us plan to move there, at least for a while. So one idea bandied about is that we should join Mars as a sort of distant Phobos Outpost. I doubt that will work, but should we even think about Mercury being independent some day? Perhaps the Venus-Mercury Commission should become a kind of aid agency? Perhaps we should elect our Commander? I think some of these ideas are far-fetched or premature, but who knows when the time will come for them. We're already selling real estate here, so perhaps we'll need a Landowners Assembly. It's quite a debate.

“Anyway, Mars has started something and no one knows where it will go. I don't know what you have to add, but I'd love to hear your thoughts. Call me when you've caught up on your sleep! Bye.”

Will watched Olaf's face fade on the screen and considered his message. He wasn't sure what advice to give, but Olaf was right; things would never be the same in space again.

Ramesh stuck his head into Will's office. "Have a minute?"

"Sure, come in."

Ramesh walked to Will's desk and leaned on it. "Did you read my email?"

"I haven't read any emails in nine or ten sols, unless they were related to the negotiations. It was pretty exhausting and intense; well, you know that, you were involved in the committee to talk about the future of Aurorae Construction."

"I much appreciate you got a few of us involved. I was surprised, since I made my opposition to independence clear on various public occasions."

"That was irrelevant; Marsians took many positions until there was a definitive vote that committed us to independence. At that point we had to have people with different perspectives involved because the national representatives didn't want to feel pressured or overwhelmed by politically biased experts. What was your email about?"

"Construction timetables. In the last month we've fallen a week behind schedule."

"From the independence struggle?"

"Yes. It created bottlenecks that delayed availability of some materials, and everyone generally worked more slowly. Since housing for the thousand new arrivals has to be the priority, we'll be delaying the football stadium about two weeks. But that means completion is pushed into the duststorm season, and that will generate other problems. Everyone wants the stadium."

Will shrugged. "What can we do? As you said, housing has to be a priority. Go down to public information and give them the story. They'll write it up and get it out right away. If we wait, there will be rumors."

Ramesh nodded. "Okay."

“How’s the family?”

“Pretty good. Rajiv’s running around everywhere; he’s two and a quarter. Sarah’s pregnant with twins, too.”

“Oh, congratulations! That’ll be a big expansion of your family.”

“It will, so I’m designing a new house. I’ll get you a construction schedule update next week.” Ramesh turned and headed out of the office.

Will turned to status reports. Seven caravels—four Mars Commission, one Lufthansa, one United Spaceways, and one NASA—were filling with 1,050 passengers for departure for Mars in the next month. Six Swift 3B shuttles, carrying twenty-four passengers each, were making two trips per week to low Earth orbit, where three caravels were parked at two different tourist facilities to receive most of them. Others were transferring to vehicles heading to Gateway, where the other four caravels waited. Yet others had been flown to the moon for training months ago and were now flying to Gateway from there. It was the largest migration of humans into space in history—the record was broken every twenty-six months—and was costing the Mars Commission, NASA, and the various commercial operations on Dusty Red, in spite of the economies of scale, almost eight billion redbacks or five billion dollars. Their 1,500 tonnes of necessary supplies and equipment were already on the way and had cost 2.5 billion redbacks or 1.5 billion dollars. At that moment seventy-five solar sailing vehicles, each carrying about forty tonnes of cargo, were stretched out over a hundred million kilometers of space between the two worlds, and all were being tracked by twenty people in Mars Control.

He turned to the environmental management and supply inventories. With the dust storm season coming up in three months, they needed to have about 1,600 tonnes of food in storage in case they were struck by a category five global storm; it would shut down their agriculture almost completely for eight or nine months. They were getting close to that number. If the storm was lighter—as it usually was—the surplus would be drawn down during the other two thirds of the Martian year and some fields planted with crops such as cotton or hay for grazing animals. After thirty years they had gotten quite good juggling their various supply inventories, increasing animal herds and future meat supplies or planting more wheat for bread depending on the weather. The new low-light crops that were being developed promised to revolutionize agriculture by reducing the impact of the storms.

He turned to various other reports that came to him directly or were sent to Alexandra by various departments of the Commonwealth Authority and forwarded by her for his information. The Surface Transportation Department had completed the upgrade of the Meridiani Highway as far as Aram; they'd reach Thymiamata in less than a year, Meridiani in sixteen months, and Dawes in twenty-six months, then they'd move on to Cassini in another two years, completing eight thousand kilometers of highway at a cost of about a billion redbacks. The department had launched a major geological and mineral resource study to determine the best route for an extension from Dawes to Jumla Outpost and on to the new Elysium Outpost; at that point an advanced gravel highway would extend more than half way around Mars. New graveling complexes were coming to Mars in the next two years that would allow an advanced highway to be built west most of the length of the Valles Marineris and a partial upgrade to be completed to the North and

South Polar Stations. Most of the work was done by remote-control teams in Aurorae; the machinery was accompanied by three mechanics.

Cassini's seventy-five-thousand kilowatt nuclear reactor was scheduled to go on line in late 2051; with Aurorae's, Dawes's, and Uzboi's, Mars would have a generating capacity of over a quarter of a million kilowatts and surplus power to ship to other outposts via microwave relay or silane tanker. The spaceports at Dawes and Aurorae had completed upgrades that would allow them to handle fifty passenger flights and seventy-five cargo flights in the next ten months. A new transportation tunnel between Aurorae's North and South Main Tunnels had been completed between El Dorado and Liberty Domes. A design for Baltic South—a dome that would climb the side of Layercake Mesa to the top, allowing them to pressurize a steep slope that would become a deciduous forest—was almost finished. Mariner Institute of Technology's Cassini branch would open a new ecology research lab in July, a month later than planned because of delays associated with the Cinnamon Revolution. Jumla's gold output, fifty tonnes for the columbiad, was disappointing, but an adequate start. Uzboi's output during the last month had been ten percent under target because of the revolution; overall, the revolution would cost them a half billion redbacks in lost productivity.

While he skimmed the various reports—he could get one hundred in a typical week—his attaché suddenly began to beep, signaling an urgent message from Earth. He saw it was from his sister and he immediately feared the worst. His mother had rallied in the last few sols; she had even dictated an email to him yesterday about how proud she was that he had led Mars all the way through to independence. But she was very weak and doctors had said she probably would never leave the hospital.

He activated the video message. Molly's face was streaked with tears. "Will, she just passed ten minutes ago. She was doing fine yesterday, but this morning the doctors were barely able to awaken her and said that she was beginning to slip away. Cardiac insufficiency, primarily; she can't get enough oxygen and energy any more. She has been basically asleep most of the day, but she opened her eyes about an hour ago and basically said good bye. . ." Molly stopped to regain some composure. ". . . Then she closed her eyes and went back to sleep, but her breathing became rough and irregular, and finally her heart just stopped. So she's on her way to the Abhá Kingdom and to what is certainly a better place, to what I am sure will be a well-deserved reward. So many people here love her; she will really be missed. I don't know what else to say, my dear brother. . . I think I had better close the line and deal with a few things here, and call you back. Bye."

Will stared at the screen and watched his sister's image fade out. Katherine Fernandez Elliott, 1954 to 2050; her gravestone would record nearly a century of life. He sat, stared, and tears began to stream down his cheeks; tears of shock, grief, joy, and love all at once. At age 64 he was now an orphan. What a mother he had had!

He thought about the Bahá'í passages on death and immortality he had memorized decades ago and that were in him, part of him:

*O SON OF THE SUPREME! I have made death a messenger of joy to thee.  
Wherefore dost thou grieve? O SON OF MAN! Thou art My dominion and My dominion  
perisheth not; wherefore fearest thou thy perishing? Thou art My light and My light shall  
never be extinguished; why dost thou dread extinction? Thou art My glory and My glory  
fadeth not; thou art My robe and My robe shall never be outworn. Abide then in thy love  
for Me, that thou mayest find Me in the realm of glory.*

They helped a little with the shock. He thought back at the horrible wrench his life had undergone when his father had passed away when he was not yet thirty. This wasn't as bad as that; it was the second time around, his mother had been incredibly old, her passing was expected, and she was very, very far away. It was a blessing that he had seen her just two years ago, and four years before that.

With a sigh he commanded Anisa, his attaché, to record a message to Ethel, Marshall, Liz, and Paul. "Grandma passed away ten minutes ago. Molly just called me. There are no details yet, except her heart slowly faded away. I'm on my way to the House of Worship to say some prayers for her and for all of us. I'll see you at home. Bye."

He rose and headed out of the office. He'd stop to tell Huma he wouldn't be in the rest of the sol, but that was it.

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Charles Vickers and Seiji Takada were sitting in Charles' office when Helmut Langlais arrived. Helmut was pleased to see both of them there, ready for his report.

"Good sol," he said to them.

"Good sol," Charles replied. "All is well?"

"Yes; we're all well." He pulled a chair up to the table that served as Charles's desk while Charles poured him a cup of coffee and Seiji spread a big sheet of electronic paper on the desk. Helmut nodded. "Thanks. How's the Agamemnon probe?"

"Oh, great!" replied Seiji. "We just successfully unloaded the sixth and last Prospector 560R. They're already hopping all over the asteroid; the first one has already traveled three kilometers and placed its first seismometer. The mother ship has started

drilling and we're getting good cores. We'll be able to make fuel; the crust has less water than we'd prefer, but it's adequate."

"By the time you get there, you'll have a big chunk of the place explored."

"For sure. The critics say humans shouldn't go, but we'll get a hundred times as much done."

"They're reading the *Iliad* together, too," added Charles. "So the names of all the Trojan asteroids have a history to them."

"The story is fascinating all by itself," added Seiji. "As an undergraduate in Japan, I never studied the *Iliad*!"

"Well, Helmut, what do you have for us?" asked Charles.

"The preliminary mining trials on Phobos," he replied. "They're pessimistic. The existing equipment is very ineffective in microgravity; it takes several sols to fill a truck with ore, for example, instead of an hour or so. The new mining machine—which burrows into the regolith, thereby anchoring itself into place and obtaining a foothold for ore transfer—is much more promising, but it won't be ready for launch next year and requires more crew than we've allocated for the PGM recovery operation."

"Hum," said Charles. He looked at the other two. "That messes up the budget and the plans pretty seriously."

Helmut shrugged. "We knew this was a potentially serious problem. No one has developed effective zero-gravity mining equipment. The folks on Phobos have more experience and interest than anyone else. Lunar experience really is not relevant; Luna has too much gravity."

“If we drop the mining aspect of the Ceres expedition, that greatly increases science,” exclaimed Takada. “Especially the deep drilling project; it’s labor intensive.”

“But we counted on several hundred million per year of revenue from the platinum group metals to help cover operational expenses,” replied Charles. “That’s a serious loss.”

“We have a plan B,” said Helmut. “It’s expensive, but provides the extra science and the mining income: send two caravels to Ceres. Thirty people can do only so much, but sixty can do almost three times as much. The new burrowing machine is at a fairly advanced stage and will be ready for launch from Earth in another eighteen months. Send it via fast rocket six months after the expedition leaves.”

“Two caravels is an expensive solution,” said Seiji. “The big problem is obtaining the second vehicle.”

“The Brazilian caravel returning from Callisto,” suggested Helmut. “It arrives here early next year, leaving six months for refurbishment before the Ceres launch. The Brazilians have no plans for it, apparently; they just wanted a flags and footprints mission to Callisto that beat the United States.”

“It’s already set up for deep space travel,” agreed Takada.

“There’s a better choice; I got a call the other day from Louise Tremblay asking whether we wanted to buy or lease another caravel,” noted Charles. “They want to finalize orders before switching the construction workers to building galleons next year, and one of their contracts had fallen through.”

“We’re talking about spending another billion redbacks, including crew training and launching consumables,” said Seiji. “That’s not so easy to arrange. Obtaining sixty

people here, instead of thirty, is also not easy. The American expedition to Callisto next year is draining off quite a few experienced people, and others are waiting for the Saturn mission.”

“We’ve also got some people coming from Mercury next year,” replied Helmut. “If there’s any place settled by hard core explorers, it’s Mercury.”

“I have some ideas about funding an enlarged Ceres mission,” added Charles. “This is a crucial time in the history of space exploration because the subsidies Mars has been getting may shift to other destinations. Mars may start to fund other destinations as well. Saturn and the Galileans needn’t absorb it all, either. The asteroids should be able to get more.”

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Three sols later, the family watched Katherine’s funeral by video link; Will spoke by videotape. During the forty-five minute period when the funeral procession went to the cemetery, a memorial service was held at the Bahá’í temple in Aurorae. Then the family returned to Will and Ethel’s to watch the graveside ceremony and the interment. Finally, refreshments came out at the houses of Will in Aurorae and Molly in Connecticut to feed those gathered at each, and a video link brought the two gatherings together. With opposition a mere two months away, the round trip communications time was just eight minutes, so they had a fairly spontaneous exchange.

As the reception began to wind down, Will, who was seated on the couch in the living room, said to Ethel “Well, I think we gave mom a good sending off.”

“Yes, we did. She was quite a lady. How many Bahá’ís are here on Mars because of her, do you think?”

Will shrugged. “Maybe a dozen. She was a tireless champion of this place. Some people never would have thought of applying if it weren’t for her reminding them that we need nurses, or hair dressers, or accountants; all sorts of professions that people don’t link to space travel. I’m not sure we’d have a House of Worship right now, if it weren’t for her promoting it to Bahá’í businessmen on Earth.”

“She was proud of her grandchildren, too; and of her son.” Ethel leaned over and kissed him.

“I’m going to miss her,” said Marshall. “I’m glad I spent so much time with her.”

“I wish I had been able to meet her more,” said Liz. “But the video links we had with her were pretty good; when I finally met her she was familiar to me.”

“Isn’t that true?” agreed Ethel. “When I first met her face to face I felt I already knew her.”

“Even I got to meet her,” added Mike. “I was amazed by her energy, at age 93, and how sharp and articulate she was. And of course she tried to teach me the Bahá’í Faith!”

“That was a passion of hers,” agreed Will. “She kept my faith nurtured and alive during my teenage years when my understanding of the world suddenly expanded and my religious understanding didn’t keep up, and of course when dad died that was a really rough time.”

“And now she’s with him,” added Ethel. “Soon enough, we’ll be moving along as well.”

“Not that soon, I hope!” exclaimed Marshall.

“I didn’t mean right away, don’t worry. But fifteen, twenty, twenty-five years; they really aren’t very long, not when you’ve already seen sixty-four years fly by.”

“We’ll at least hang around long enough to see grandchildren,” promised Will.

Just then Mike’s attaché beeped. He looked down at the screen, then stood up and walked out to the garden. He came back to beckon Liz outside while the chit-chat continued.

“What is it?” she asked, coming out to the garden with him.

“A message from the Venus-Mercury Commission.” He held up the attaché’s screen so she could read the message. “My application to Mercury has been accepted.”

“Oh!” she said. “For January?”

He nodded.

“Now what do we do?”

“I don’t know. I don’t want to go to Mercury for two years without you.”

“I don’t want you to leave just four months after the wedding either!”

“I think you should apply. We’d be coming from Mars; the ship will be empty, so there’s plenty of room for passage. They’d expedite your application as my spouse. And they’re expanding the station, so I suspect they can accommodate someone else.”

“Maybe.” Liz sounded uncertain. “This is bad timing.”

“Let’s ask your dad.”

She nodded and they walked back inside the living room. Everyone looked up when they entered. “News?” asked Marshall, knowing that Mike was expecting a notice.

He nodded. “I just got accepted to Concord Station for the next two years to study the Mercurian magnetic field.”

“Congratulations; I guess,” said Will. “What will the two of you do?”

“I think she should apply to go along,” said Mike.

“I don’t know whether they’d accept me, though,” said Liz.

“Why not? You’re certified to do a lot of different things and I bet they have a shortage of people willing to do child care. Everyone in space does,” replied Ethel.

“They don’t have that many children on Mercury; maybe six,” responded Liz.

“The gravity’s the same as Mars,” noted Will. “I think you should go as a dancer who is also able to do odd tasks. They don’t have much by way of arts up there; or maybe I should say ‘down there.’”

“Maybe you could apply to the Mars Arts Council for a grant,” suggested Liz. “Or even to the Venus-Mercury Commission. The cost of the flight could probably be waived because there are guaranteed to be extra berths on board. I doubt there will be a dozen Marsians going to Mercury. How much will it cost for you to live on Mercury two years? The consumables are maybe a half million redbacks, and there will probably be spare accommodation and life support capacity. Concord’s not a tiny place any more.”

“And everyone makes accommodation for spouses,” added Will. “Yes, apply. You don’t want to let this young man get away.” And he smiled at Mike, whom he liked very much.

“Okay,” said Liz, nodding. “I guess I’ll apply, then.”

## Governance

Aug/Sept. 2050

Late afternoon sunlight streamed into the conference room on the top floor of the Gallerie where the Constitutional Convention was being held. When the thirty representatives took a break, the sunlight tempted many of them onto the Gallerie's flat roof, which was set up as a public garden. Will Elliott took his cup of coffee outside and sat to chat with Joshua Ivakhiv, Skip Carson, and Vanessa Smith.

Joshua looked quite disappointed. "I really don't know how this ban on nominations will work for the land owners," he said. "Most of them don't live on Mars, they don't know each other, they can't meet very easily, and they are totally unfamiliar with the way things are done up here. The result will be either arbitrary elections or perpetual incumbency."

"I think we need to add a clause that they draw up their own rules about how to implement this constitutional principle," replied Vanessa. "Every land owner will have to be provided access to a database of all the landowners in the district who reside on Mars and thus are eligible to be elected to the Landowners Assembly. But that database could contain more information than just their name and the district they live in. It could also indicate how long they've owned land, how much they own, and maybe even an optional photograph and a 100-word statement by the landowner of his philosophy or views. In short, everyone could have a chance to introduce themselves to everyone else. That would provide voters with some information."

“I’m worried about voter turnout,” said Skip. “I’ve been to Mars twice and I know people here, so I could come up with some names, but if I were a 30-year old middle class housewife in Los Angeles who owns a hectare of land in Aurorae Borough and I was presented with a database of 1,000 people, I wouldn’t bother to vote.”

“Voter turnout here on Mars is beginning to slide, too,” agreed Will. “In the last election it was sixty percent; better than some democracies, but worse than others. That’s why we’re considering smaller voting districts, so everyone knows a larger fraction of the people in their district.”

“It’ll help with turnover, too,” agreed Vanessa. “If every district elects two, or at most three, representatives, some electors are likely to vote for one representative and vote for someone else for the other position. But back to the landowners, most of whom are on Earth. The committee of landowners who draw up the election rules can do a lot to mitigate the problem of low voter turnout by how they design the election districts so that resident landowners are spread out among the districts and not concentrated in a few. Then no one will have to deal with a database of a thousand people.”

“Not now, but what about ten years from now when Mars is bigger?” asked Joshua.

“If Mars has twenty thousand people and a hundred-twenty thousand landowners, my guess is that a greater percentage of the Marsian landowners will turn out to vote, and the Landowners Assembly will begin the transition to a Mars-centered body,” said Will. “And that’s better for the planet, long-term. A century from now Mars may have millions of people, and the Landowners Assembly will be a kind of lower house of the legislature, with the Residents Council a kind of upper house or Senate.”

“Can you explain to me again why nominations and campaigns are so bad?” asked Joshua.

“There are three principles to consider,” replied Will. “The first is the problem of egotism: while people say they are running for office to serve the public, in fact their primary motive almost always is personal ambition. As a result, in modern democracies we have rule by the self-centered, not rule by the selfless. If the public is free to vote based on what people do rather than what they say, people will be elected who are more likely to have the public good in mind.

“Then you have the problem of campaigning itself. It exaggerates issues in order to polarize the public, which garners votes, but makes compromise and search for truth more difficult. Campaigning also requires money, resulting in huge fund-raising efforts that are not supposed to be bribes, but inevitably influence the elected person’s votes. The largest source of corruption in modern democracies is political fundraising.

“And last, you have the notion that voting one’s conscience is a human right. That human right is compromised if someone campaigns, because you only feel free to vote your conscience if you have no idea who might be elected; otherwise you worry about your vote being influenced or being thrown away on someone who has no chance of winning.”

“But if you prevent campaigning, you are infringing someone’s human right to free speech,” objected Joshua.

“It’s a question of balancing human rights,” replied Will. “Your right to stand up in a crowded movie theatre and shout ‘fire!’ is compromised by my right to safety. And the analogy is better than you think because you’re defending a human right to lie about

oneself, fool people about one's motives, and frighten people about what someone else will do in order to acquire personal power. That's playing with fire, where governance is concerned."

"I'm still not convinced it'll work."

"Bahá'ís have made it work for over a century in their elections, and Mars has made it work for a decade and a half. We have to take it an election at a time," replied Will.

"You need to write up the philosophy behind it, Will," said Skip.

"I guess I will. I suppose that's one reason the Residents Council asked me to be a member of the Constitutional Convention." Will looked at his watch. "It's just about time to get back." He turned to Vanessa. "Are you staying here for Equinox, or going back to Elysium?"

"Back to Elysium, since the convention's taking a two-week break. I'm sorry I missed the discovery of living species three and four; I want to catch up with the work."

"The discoveries are coming faster, now," noted Joshua.

"Well, we're more systematic at thawing sediments. We know how slowly to melt the ice, what pH, salinity, and CO<sub>2</sub> levels maximize revival of dormant cells, etc. We're doing better and better every month. We should have a dozen species revived in a year or so. And we're now looking at some older frozen water bodies that may have cells we can revive."

"Have you corresponded with En-lai about his discoveries lately?" asked Skip.

“Of course, almost daily! He might win another Nobel Prize in biology for recovering an entire ecology under Callisto’s ice. And now there’s evidence Ganymede has an ecology,also.”

“He probably won’t be there for that discovery, though,” noted Will.

“No, he plans to come back here next year,” Vanessa agreed. “What about your plans for Equinox?”

“Ethel and I can’t go anywhere with Liz getting married in two weeks! Too much to do.”

“You must swamped right now, between preparations for the dust storm season, preparations for the next two waves of arrivals, and the transfer of responsibility,” noted Joshua.

“It’s the worst pressure in my life,” confided Will. “And then add the Constitutional Convention on top of it, which will probably meet a total of six weeks out of the next twenty!”

“It sounds like you’re looking forward to retirement,” commented Skip.

Will nodded vigorously. “My duties up here are going out with a bang.”

“Will, what do you think of this announcement that Latin America really will join the Grand Union?” asked Skip.

“It’s the breakthrough the Union needed to become a worldwide body.”

“But they plan to join in 2053; three years away,” noted Joshua.

“That’s not too far into the future,” replied Will. “It’s a huge addition to the Grand Union, since the Latin Union stretches from the Rio Grande to Tierra del Fuego and encompasses four hundred million people and an economy a third the size of

America's. The formula for admitting them can now be used to admit other nations that do not adjoin Europe. That's the significant thing."

"And they're lining up to join," added Joshua. "Speculation about the Grand Union is now being replaced by commitments."

"I'm sure Mars will have to consider joining," said Will. He stood and turned to the room, where people were gathering again. "It looks like they're calling us back in. We've got a few hours of work left before adjournment, so we had better get started on it."

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Charlie Langlais pulled at his suspenders. He hated wearing lederhosen. "How long do I have to wear this?"

Helmut frowned at his almost-twelve year old son. "What do you mean? This is equinox. Everyone wears ethnic costumes all day."

"Not everyone! Some people wear plain clothes, and some kids are dressed as Vulcans!"

"Charlie, 'Vulcan' isn't an ethnicity. Your dad's German. German-Marsian," said Clara.

"And you're Canadian-Marsian! I can't be German-Canadian-Marsian, it's too complicated! That's why some kids dress as aliens or witches or whatever!"

He had a point; a lot of kids were uninterested in their terrestrial heritage, especially if they had several of them, and wore other sorts of costumes. But Helmut was not amused; he looked a bit hurt.

The family walked under the “Happy Southward Equinox 2050” banner and up the main avenue of the Fair set up in Andalus Square. There were two more ethnic booths, compared to last year’s “Northward Equinox” celebration, referring to the time sun crossed the equator heading for Mars’s northern hemisphere. In addition to the dozen booths of ethnic groups, there were eight sponsored by religious congregations, four by outposts, two by departments and businesses, four by domes, and three by clubs, for a total of thirty-three. Each had displays, drink, food, and some had music and a dance floor.

Helmut made a beeline for the German Pavilion; Charlie rolled his eyes when he saw where they were going, but his little brother Oskar, almost three, smiled with delight to see his grandfather, uncle, aunt, and his five-year old twin cousins. Helmut spoke to them in German, but the conversation quickly turned to English for the sake of Clara and the kids.

“How’s business?” asked a German friend to Kristoff.

“Alright. Private commercial agriculture’s not the easiest profession.”

“I can imagine. Can’t make money?”

Kristoff shook his head. “The margins are pretty small. Even with my new thirty-five by seventy-five, it’s hard to pay all the bills.”

“Are you preparing for the dust storm season?”

“Just like everyone else; it’s still six weeks away, though. We’ll have vegetables that are mature and are continuously bearing, like beans and tomatoes; they adjust to the lower light levels pretty well. If it gets really bad and harvests diminish to zero, we’ll plow everything under and plant winter wheat.”

“He’s always worrying,” added Irma, patting her husband on the back.

They turned to other, lighter topics. Charlie saw two friends at the China Pavilion across the avenue and since there were free egg rolls, he went over there, temporarily forgetting about his clothes. After twenty minutes, Helmut, Clara, and Oskar headed out of the booth to explore more of the Fair, so Charlie caught up with them. “Good egg rolls?” asked Helmut.

Charlie nodded. “There are a lot more Chinese people here than Germans!”

“That’s right, though we don’t do badly. I think there are one hundred twenty Germans up here, out of four thousand.”

“And how many Chinese? A thousand?”

“No! Six hundred.”

Charlie nodded and looked at the Russian Booth as they walked by it, then the Brazilian booth across the avenue from it. Both were thronging. The Iranian booth was next and was small, but had free baklava, so they stopped to talk to Ruhullah Nuri and family for a moment and enjoy the pastry. The Cochabamba booth had a dance floor and a bunch of people were dancing to the live country music coming from the United States booth next door. They lingered there, then at the USA booth to enjoy the band, which was pretty good.

They started down the Fair’s other main avenue and the United Kingdom booth was next. It was small and had no free food, but had copious supplies of tea. Will Elliott and Ethel MacGregor were sitting at a table there, simultaneously listening to the American country music coming from one side and the French rock band coming from the other, so Helmut hurried over.

“Will, I want to thank you for your help with the caravel,” he said, offering his hand. Will smiled and shook.

“Oh, I’m glad the Mars Commission was able to help. It strengthens Mars’s role in the Asteroid Belt Commission, and that’s important to Mars’s future. We’ve got a surplus from the platinum exports and we’ve got to spend it all by next June, when we go out of business. We’ve also got an extra caravel; the new arrangement with the Venus-Mercury Commission to fly crew from Earth to Mars via Mercury means they needed one less. Ceres came along just at the right time.”

“Charles told me you were very generous.”

“So, you leave next July? Just eleven months to select and train the enlarged crew.”

“Yes, but it’s plenty of time because everyone we select will already have the necessary certificates. We already have forty—thirty for the original mission plus ten backups—so we only need to select twenty more. We’re stealing a few of them from the proposed outer belt mission, too; that mission can draw off of later arrivals. We plan to finish selection as quickly as possible—late September—and fly everyone to Phobos, where we’ll set up a simulated Ceres outpost with our two caravels. One task will be modifying the second caravel to meet our needs, something the crew itself should do in order to know exactly what the ship has. We’ll do a practice flight to Deimos in December and January and drill a new well for the station there as an exercise. We’ll all fly back to the surface in March and finish our training here, close up our houses and such, then head back to orbit in June.”

“Good plan. So, you’re flying sixty personnel to Ceres? That’s a big complement. I had figured fifty.”

Helmut shook his head. “The caravels can accommodate thirty each pretty easily. Once we get to Ceres we’ll move the greenhouses out, which will give us more living and working space. The sixty is just crew, too; we may have as many as ten kids on board. The two caravels will fly to Ceres docked together, belly to belly, with their fuel tanks on their backs, so we’ll have substantial radiation protection, almost as good as inside a building here.”

“You’re establishing a substantial outpost, then. That’s impressive.”

“The nominal mission is for two synodic periods, or six and a third years. After one synodic period, one new caravel will arrive on Ceres and one of the ones there will head back to Mars. Both will head back after the second synodic period ends. But my hope is that we can arrange additional caravel flights and always keep at least one caravel with crew on Ceres. It’s centrally located in the asteroid belt, it has an infinite supply of water, and our landing site has huge ataxite reserves. In our six years on Ceres, twenty-five asteroids larger than five kilometers in diameter will pass within ten million kilometers of Ceres. I hope we can land Prospectors on all of them.”

“That would enhance your science return, and they’d all be close enough to accomplish a lot of real-time exploration. The ataxite helps a lot, too; you’ll figure out mining in very low gravity and your mining crew will benefit from the medical and horticultural resources of the larger mission.”

“And the deep-drilling project benefits from the resources of the mining crew. We figure we can reach our twenty-kilometer maximum depth in three years, and by then we

may have figured out ways to drill even deeper. Ceres won't get that hot inside as we go down and the modest gravity will simplify some aspects of the drilling. My hope is that a phase two will follow with the eventual goal of drilling five hundred kilometers, all the way to the center of the asteroid."

Will smiled. "That's ambitious, but why not? If we want to know what that world is like, it's the best way. You'll have a problem preventing your shaft from becoming a cryovolcano, though."

"It probably will! But maybe we can use Ceres's internal water and gas pressure to expel the cores. At its center, Ceres should be wet and warm."

"You might even obtain a source of geothermal energy."

"Exactly."

"If your plans are so ambitious, then, have you thought about the issue of the governance of a Ceres outpost?"

Helmut was startled by the question. "Well, no, not too much. I've been appointed the commander."

"That's fine for a mission that lasts a few years, but this is at least six years, with additional crew rotations in between. We elected our first borough government when Aurorae had a dozen people. Mars ran much better and the place had a feeling of permanence when it had a borough government. Establishing it was one of the actions that made people want to stay, raise families, and commit their lives to Mars. If you want Ceres to endure as a habited place, you need to go there with a charter for civil government all drawn up and plans in place to elect an outpost council every year or two.

In fact, I'd recommend that the entire governing structure on the surface be an elected one."

"No appointed Commander?"

"No appointed Commander. Military-style structure is fine for the flight and for the initial few months when you're establishing the outpost's infrastructure, but after that I'd transition to an elected government, just like we did at Uzboi within a year of its establishment. That's a lesson we learned here; people are more involved in the place if they choose their leaders."

"Hum. Yes, you're right, but we were following the model of Mercury and the moon."

"And Mercury's struggling. The moon doesn't apply because the average tour of duty is a year."

"That's true."

"The Constitutional Convention has made me think about these matters a lot. When we send people to Saturn in a few years the voyage alone will take two years, and that's with gas-core nuclear propulsion. There's no reason to stay less than four years, considering the trip back will take two more years; I think they should stay even longer than that. So we are really sending out colonies. People will be starting and raising families. Under those circumstances, maybe the colonists should elect their commander before they leave."

"And they'll need a standard charter defining the rules and rights."

"Exactly. We didn't have that and had to develop it slowly. Anyway, it's something to think about."

Helmut nodded. “Thanks, Will.” He looked around. “Where’s my family?”

“They went thataway,” said Will, who was faced in the right direction to watch them. “Oh, there they are. India booth. Samosas.”

“They love samosas. Enjoy the equinox.” Helmut turned and hurried after them. Kristoff had joined Clara and the kids and was talking to Ramesh.

“So, how long did it take you to set up the thirty-five by seventy-five?” Ramesh was asking.

“Six months, working about half time. It takes a long time to get the reg inside; it’s big!”

“Where did you get the soil?”

“I accumulated most of it in my other domes; whenever I had spare time I hauled in a load of sifted reg and added to my gardens, and whenever I cleared a garden for replanting I removed a small fraction of the topsoil. I own four seventy-by-seventies up at New Tokyo and attached the new dome to them.”

Ramesh nodded. “I’m thinking of setting up a thirty-five by seventy-five in Little Colorado Canyon half way to the top of the escarpment. Are you interested in the contract? It’d keep you busy during dust storm season, and from the sound of things, this one’s going to be pretty dusty.”

Kristoff frowned. Sarah scowled, wondering what her husband would do with a bubble in the middle of nowhere. “What are you planning to do with it?” asked Kristoff.

“Live in it! Build a house in it and make the rest into lawns and gardens. Maybe eventually I’ll sell other housing plots and create a neighborhood.”

“Oh,” said Kristoff, while Sarah disguised her surprise and anger. “You won’t need an agricultural set-up, then. Grass and flowers don’t take much of a soil base. You’ll want to install a nickel-steel bottom, a boulder bed, a false floor—nickel-steel plate’s the cheapest—then a fifteen-centimeter layer of processed reg and soil.”

“Trees?”

“You cut holes in the false floor and install pots in the boulder bed.”

“And you use the boulder bed as a thermal reservoir.”

“Exactly. It’ll take well over a year to heat them up; you won’t have to expel any heat from the dome during that time. They’ll keep the dome warm during the worst dust storm. The air circulation also keeps the area under the false floor dry, so the plastic won’t rot. And your plants will have warm roots, which is important.”

“And you can do all that?”

“No. I can handle boulders, soil, and plants, but a contractor has to install the nickel-steel. My thirty-five by seventy-five has a minimum of boulders because I have a water tank for heat storage and it has at least twenty centimeters of soil, which is standard for several classes of crops.”

Ramesh nodded. “Very interesting. We’ll have to talk more; email me with a summary of our conversation, if you’re interested in a contract.”

“Okay, I will; I could use some extra work in the dust storm season.” Kristoff looked up. “Ah, my brother’s caught up with us. Have you met Helmut?”

“Once or twice,” replied Ramesh, and he shook hands with Helmut.

“Come on, dad, *let’s go*,” said Charlie, full of samosas and bored.

“Alright. It’s good to see you again, Ramesh.” Helmut waved and the entire family headed for the Japanese Pavilion across the avenue. Sarah looked at her husband crossly.

“So, you’re planning to build a little oasis and house for yourself out on the middle of nowhere? Because the kids and I are staying here in Aurorae.”

“Sarah, don’t be ridiculous. You’ll love the house and gardens, and the spot has spectacular scenery.”

“Little Colorado Canyon? Spectacular scenery in the midst of a suffocating a freezing wilderness a dozen kilometers from safety!”

“A pressurized shell for the house inside a pressurized thirty-five by seventy-five; even the latter can’t lose air in less than a sol, it’s so big. It holds *four tonnes* of oxygen. We’ll have solar panels for power and an oxygen-methane fuel cell for backup. Both the dome and the house will have life support systems. We’ll have plenty of water, too.”

“And how will we get to anything?”

“Public busses run six times a day back and forth on Little Canyon Highway; they’ll stop if we email them. Eventually we’ll buy a ranger.”

“A ranger? Are you crazy? How much money do you plan to spend on all this?”

Ramesh shrugged. “Maybe five million, eventually.”

“You *are* crazy. Ramesh, I don’t want to have two babies and a two year old out in the boondocks far from civilization. It’s just not reasonable. We don’t need a country home. No one lives in the range. If you want your own dome, put it down here attached to Aurorae. Or put it on North Ridge, a kilometer from the outpost; you’d have a great view of the escarpment and the town itself. It must be beautiful at night.”

Ramesh shook his head. "I've made up my mind, Sarah. Wait and see, it'll work out beautifully. You'll love the place. The setting is absolutely amazing. And we won't be alone for long because I'll sell other lots. Pretty soon there will be a half dozen families at Canyon Oasis. We'll connect the houses together by inflatable pressure tunnel so people can visit each other. There will be plenty of transportation to town."

"Ramesh, don't I have any say in this family? Don't I have any rights?"

"Sarah, you're being ridiculous. This will work out great, wait and see."

Sarah shook her head in disgust. "Ramesh, you're stubborn as well as crazy!"

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The wedding of Mike and Liz filled the Bahá'í House of Worship to capacity. After a devotional program inside they exited to exchange the vows in the gardens. Then everyone headed to the Gallerie for the reception.

In the reception line, Marshall hugged Mike. "Now we're brothers. Welcome to the family."

"Thanks." Mike laughed his little habitual laugh. "I've felt like a part of the family for months already!"

"That's because everyone loves you!" said Liz, and she leaned over to kiss her new husband.

"He's a good brother in law," added Amy, giving Mike a hug.

Marshall and Amy went and sat at the head table and Ethel came along to hug her daughter and join her in the reception line. She looked at Liz and began to cry.

"Mom, don't cry!"

“Why not, my baby’s getting married,” replied Ethel. She pulled out a handkerchief to dab her eyes and Will put his arm around her shoulders. She turned to him. “I’m very happy.”

“And we have an empty nest,” he whispered. There was a tear in his eye as well. She nodded; that was the main reason for crying.

“Don’t worry, they’re still close.”

“For how long?”

“We’ll see. Your dad didn’t want you to go to Mars.”

“That’s true.” Ethel blinked her eyes a moment and composed herself, then got in the reception line to greet the guests. Meanwhile, Mike had been entertaining the next guest in line with a joke.

Soon the reception line was over and the entire family joined Marshall and Amy at the head table. A large screen to its right showed the Tobin family in Bar Harbor, Maine, at a parallel reception there. With Earth and Mars as close to each other as they would get in fifty years, round trip transmission time was only six minutes, making the two receptions simultaneous affairs.

They ate a sumptuous meal—it looked better than the food at Bar Harbor, much to Will’s surprise—and cut the cake. Then the young people started to dance and the oldsters danced a little and talked a lot. Will stopped by the table with Martha and Charles Vickers to chat.

“So, an empty nest,” said Martha. “How are you dealing with that?”

“It’s hitting Ethel a bit hard, but I’m so busy, it won’t make much of a difference to me. The kids haven’t gone anywhere.”

“Not yet,” said Charles. “Is Liz going to Mercury with Mike?”

“We hope so; it isn’t final. Mike has said he won’t go without her. He’s a good man; a bright scientist with a good character and a sense of humor Liz likes. They’re a good match, I think.”

“As long as they don’t get so busy with various projects that they spend too little time with each other, then discover their marriage has hollowed out,” commented Martha. “It’s a leading cause of divorce up here. I suppose they’re not planning to have kids soon, either.”

“I don’t think so. Liz is almost twenty-three; she’s got time.”

“As long as they don’t wait too long and discover it’s not so easy,” added Martha. “They should stay here six years, have kids, *then* travel the solar system. It’s a better strategy.”

“The new vehicles make that practical,” agreed Charles. “And Marshall and Amy; they’re applying for Saturn?”

“Yes. The first round of decisions are six months away, still.”

“Are either Amy or Mike Bahá’í?” asked Martha.

“No. Amy attends Catholic mass occasionally and Mike’s agnostic. They’re sympathetic to Bahá’í ideas, though, attend some meetings, and don’t object to our involvement, so religion isn’t a cause of conflict.”

“Good, because religious and cultural differences are another leading cause of divorce,” said Martha, ever the psychiatrist.

“You all are empty nesters, too,” said Will. “Caitlin’s living in Martech’s dorm now, right?”

Charles nodded. "She's a junior and turns twenty-one in seven months. She just declared electrical engineering as her major and she wants to be a shuttle pilot."

"Really? We've never trained pilots up here."

"I guess we had better figure out how to," replied Charles. "She's lived a pretty adventurous life and she wants to continue it."

"Wow," said Will.

"Of course, the adventure I'm worrying about is right there," said Martha, nodding at Caitlin, who was slow-dancing with Sammie Anderson.

"Oh? Is there a spark there?" asked Will.

"Oh, yes," replied Martha, a worried tone in her voice. "He is her chance to rebel, and I think she's his chance to acquire some stability."

"Dear, you always psychoanalyze," complained Charles.

"Well, how can I not?" she replied. In a softer tone she added "Of course, if I didn't psychoanalyze her to her face, maybe she wouldn't feel the need to rebel."

"Exactly," said Charles.

"I suppose they won't seek counseling, either," observed Will.

Martha shook her head. "No, unfortunately."

"Sammie's basically a good kid," said Will. "He's been a bit confused, existentially, but he's a pretty good geologist, he's intelligent, he wants to do the right thing, and he doesn't have vices."

"I'm not so sure of that," replied Martha.

“At any rate, the ‘Sammie adventure’ will be resolved one way or another soon enough,” exclaimed Charles. He looked at Will. “We’re thinking of another life change. We’re applying to go to Callisto.”

“Oh? Good luck. I think we’re going to lose all our best people to the outer solar system.”

“Mars has a lot of good people, though; we’re replaceable,” replied Charles. “We’ll see. It’ll be a few years before we go. We’ll be in our mid fifties; we’ll go to the Galileans for a decade, come back here in our mid sixties, work a few more years, and retire.” He raised a finger and wagged it. “I’ve a bone to pick with you, Will, about your conversation with Helmut. He’s now keen on the idea of a charter for a Ceres ‘colony.’ It’s going to complicate funding, staff relations, and all sorts of things.”

“Charles, tell your funders that a civilian governing system will improve morale and strengthen the dedication of the residents. It’ll make Ceres stronger.”

“But the funders don’t want a colony! They want a six-year expedition, *maybe* extendable for another three years. That’s all.”

“Ceres is asteroid central. It’s in the heart of the belt. It can serve as a supply center and with ataxite it can partially pay for itself. The drilling project has immense scientific potential. If there’s any asteroid worthy of long-term attention, it’s Ceres. And this isn’t like the first missions to Mars or Mercury that involved six people. We’re sending *sixty* and they’re staying longer. Babies will be born on Ceres; children will fly back and forth. Ceres starts out bigger than Mars was for its first eight years! Of course they need government, not just a command structure.”

“Well, we had twenty-five people there a few years back and they didn’t need government.”

Martha tapped her husband. “Will’s right. People are more committed when they have a say. That’s true in marriages too; I have a woman in counseling right now whose husband makes big decisions, including planning and buying a new house, without her. When we go to Callisto how many people will be there? How many will we send to Saturn?”

“The Saturn mission will be titanic, no pun intended,” agreed Will. “Every time the plans are reviewed they get more ambitious, too. It’s a *long* way, even with gas-core engines. I plan to raise the issue of governing structure at the planning summit next week. It has to be faced. There’s no reason for the Cinnamon Revolution to be repeated anywhere.”

“As gentle as it was,” added Martha, nodding.

13.

## Category Five

Oct./Nov 2050

Will looked at the image of two caravels closing on Embarcadero Station, Mars's interplanetary transit facility. Between them, they carried three hundred migrants for the Red Planet. It was October 31; in four weeks two more caravels would arrive, followed by two more four weeks after that. By the sol after Christmas, Mars would have received 900 migrants; if one added the 120 that arrived in late April, the total for year 2050 would be 1020. It was a mind-blowing number.

And all Will had to do was look out his window at the pea-soup murkiness of a Category Five global dust storm—the worst storm possible—to know that getting the migrants to the surface would be the trickiest part of all.

He walked across the hall to Mars Control, where Rostam Khan and a team of a dozen monitors directed the caravels *Arcturus* and *Spica* on the final few meters of their journeys. As someone had once observed, it was quite safe to bring together several-hundred-tonne masses if you did it a centimeter at a time. The vehicles were approaching Embarcadero at a pace that would bore a tortoise. But when the docking latches slipped into place a half hour later, the arrival had proved uneventful. The control room broke out into applause.

Will looked at Rostam. “I think I should talk to both captains, the commander of Embarcadero, and the Clerk of Phobos Outpost. Can you put them through to my office?”

“Sure. I guess we should update them about the options. Shall I join you?”

“Yes, please do.”

Will walked back across the hall and mustered a list of facts quickly. His videoscreen beeped when the call arrived, just as Rostam walked in.

He pushed a button and the screen awoke. It was split four ways; Captain Megan Warren of the *Arcturus* in the upper right, Captain Tony Kawakami of the *Spica* in the upper left, Commander Sonya Dykhanov of *Embarcadero* in the lower right, and Clerk Adel Mehmetoglu of *Phobos*. “Good sol to all of you, and welcome to Mars, Captains Warren and Kawakami.”

“Thank you, Commissioner Will,” they both replied. “Delighted to be here,” added Megan.

“I gather that, other than three solar flares that forced everyone into shelters, the trip was pretty routine,” continued Will. “The sun’s been almost as stormy up there as the wind has been down here.”

“The worst in fifteen years,” added Tony. “Just like on Mars. But two caravels docked together have six hundred tonnes for shielding. It really didn’t effect us much.”

“The bigger question is how we’ll get down there,” said Megan.

“That’s the question we’re exploring right now. The long-term forecast is for the passage of a series of storm fronts over the next two months, and so far the computer has been amazingly accurate. So we’re faced with the potential of up to nine hundred people stuck in Martian orbit during a period of very active sun.”

“What about Cassini Spaceport?” asked Megan.

“That’s one option, since it’s so far north it gets little dust and wind. But Cassini spaceport requires a plane change to get to, its fuel production is inadequate to support the forty flights we’ll need—especially now, with the dust reducing solar power output

and the Chinese reactor construction team demanding so much electricity—and we don't have facilities for moving hundreds of people overland to Dawes and then here.”

“We can mobilize quite a few tankers,” added Rostam. “The shuttles only need to reach low Martian orbit; they can refuel there, then proceed to Phobos. That'll stretch tight surface fuel supplies.”

“We can get maybe half of the migrants down that way,” added Will. “There will be sols when the winds at Aurorae and Dawes drop low enough to allow takeoffs and landings. But we have to be extremely careful; a mistaken forecast could cause a crash and the death of twenty-four people. I suspect we'll get more than half of the personnel down here in the next twelve weeks, but it's going to be touch and go. The long-term forecast makes a trip to Phobos more necessary than ever.”

Megan and Tony did not look pleased; Phobos meant a long time before they set foot on Dusty Red. “Can the station there handle nine hundred?” asked Tony.

“It's better than Embarcadero, at least. We have enough landing pads with pressure tunnels so that it will be possible for both caravels to land and dock to Phobos Station, which means your crew will have access to the whole place; the store, the exercise facility, the greenhouses, and the possibility of walking around on the moon's surface. It's also much better in a solar storm. It provides a lot more than Embarcadero.”

“The greenhouses will be quite welcome,” agreed Megan.

“Well, don't be so sure; some of them were killed by the latest solar storm and others look pretty pale because the greenery had to be enclosed and dark for half a week.”

“What's the consumable situation there?” asked Tony.

“Quite good, between emergency stocks, hectares of crops in greenhouses, and supplies we’ve flown up for the dust storm season. Water and oxygen supplies are virtually infinite. Phobos has a population of 200 and a capacity for 320, so it will provide some relief from crowding.”

“It sounds like an oasis in space,” said Megan. “We’re anxious to get our boots on the ground, but a visit to Phobos will be an interesting distraction.”

“Embarcadero already has tugs with plenty of fuel to push you there,” added Rostam. “Sonya, you’ll need about three sols to install landing legs on the caravels, right?”

“Yes, that’s right. I’d prefer to send some of my staff to Phobos with the caravels as well. I only need three people here to handle cargo, and with the solar storms likely to come they’ll be safer on Phobos.”

Rostam nodded. “Okay. We need three sols to plan the docking with the tugs and the trajectories, so the migrants will have some time to explore Embarcadero.”

“Who’s notifying everyone?” asked Tony.

“I’ll issue a statement,” replied Will. “Any suggestions?”

“Stress the positive aspects of Phobos; the flight was safe and pleasant, but we all have cabin fever and we want to get to the surface,” exclaimed Megan.

Will nodded. “I’ve been there. Adel, can you arrange some hiking tours of Phobos and asteroid field geology certification classes?”

“Sure. It’ll be nice to have three hundred guests, especially since they have their own housing. We’ll set in motion a plan to cover the caravels with regolith bags to provide more radiation shielding. Will, are you planning to talk to Louise Tremblay?”

“I’ll call her next. I’m sure she can move a lot of training classes to Phobos for the construction specialists and schedule construction work for them there. It’s good to talk to you all; email me with any questions. Ciao.”

There was an exchange of ciao’s and Will closed the circuit. He turned to Rostam. “So, we’ve got them to Phobos. Based on the forecast, how long to get everyone down here?”

“I think your estimate of two months for each wave of migrants—six months total—is correct if we have to send everyone to Cassini and drive them to the other outposts. I suspect we can land some here and Dawes, though. We might want to consider the direct heavy cargo trajectory; it doesn’t use parachutes, so it minimizes the lateral velocity produced by high cross winds.”

“We’ve never used that with passengers, but it is reliable. We need to make a study of that option.”

“I’d fill the fuel tanks with extra methane for ballast. Phobos is swimming in methane because of its hydrogen production, and we have surplus oxygen. Cassini could produce propellant faster if it only had to produce oxygen.”

“Hum.” Will contemplated the idea. “Check it out with the pilots and other experts. That may widen the weather conditions acceptable for landings.”

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Ramesh entered Ruhullah Nuri’s office prepared to negotiate gently or to complain aggressively, depending on which seemed more likely to work, though he much preferred the latter tactic. Ruhullah looked up from behind his desk, through his glasses. “Ah,

Ramesh, good sol. Come in.” He looked a bit nervous, which suggested some advantage to an aggressive approach.

“Good sol, Ruhullah. I’m hoping we can come to a swift resolution of this rejection of my building permit.”

“I hope so, too,” though he didn’t sound hopeful. “Ramesh, the rejection turns on a very simple principle: we are not ready to see individuals dot the Martian landscape with private homes. The plan you submitted to the Zoning Board is a reasonably intelligent one; it incorporates a lot of redundancy. It will even cost you substantially more than a simpler plan would. But how can we provide emergency services to dozens or eventually hundreds of scattered rural housing units? What standards should we set? You’ve opened a can of worms.”

“And the Zoning Board has taken the lazy road. I have prepared an elaborate plan with lots of built-in levels of safety. The house itself consists of two separate airtight units with separate, independent life support systems and with three interconnections. The house is set inside a dome. The entire complex has two separate fuel cells powered by three methane and oxygen supplies. Power and oxygen will never be unavailable, Ruhullah. There are even two airlocks to provide escape and emergency access.”

“I know; I reviewed the plans myself. But we met, discussed your plan, and turned it down. Like I said, it’s an excellent plan, but we are not prepared for its implications and its burdens on transportation and emergency services.”

“Ruhullah, you *can’t* turn down the proposal on those grounds! You’re saying there is *no* proposal that could be accepted. That’s outrageous; it denies me a fundamental property right! What’s the point of owning a piece of range if you are

forbidden to build on it? What does ‘ownership’ mean legally under those circumstances?”

“I don’t know what it means; that’s a good question. But right now the zoning board has said it means no remote housing in the Borough of Aurorae. If you ride up the Uzboi Highway until you are outside the borough, you will be free to do as you please.”

Ramesh scoffed. “What guarantee do I have that the Commonwealth government might not take the same position? No, Ruhullah, this is a fundamental property right, and it appears I will have to take the Board to court over it.”

Ruhullah shrugged. “I guess that’s your prerogative.”

“Very well, I’ll see you in court, then.” Ramesh turned and strutted out of Ruhullah’s office.

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The setting sun set the dusty sky aflame and cast a ruddy glow over Andalus Square. Érico took a quick look at the bustling square in front of him as he headed out of the Commonwealth building, then hurried down the stairs and across the artificial cobblestones toward the Gallerie. He hadn’t gotten more than ten meters before Alexandra and Skip came out the door as well.

“Wait, Érico!” she shouted.

He stopped and waited for them to catch up with him, irritated he had been unable to make a clean getaway from the Constitutional Convention.

“Thanks,” said Alexandra as they approached. “Look, don’t be upset about the vote. We’re engaged in a process and it involves compromise.”

“An imperfect process,” he agreed, citing a comment Will had made in the debate right before the vote. “But there’s a difference between compromising on arbitrary details that are seen differently by various parties, and compromising an essential ideal.

Alexandra, you’re from a country with a proud Socialist heritage. Don’t you see the craziness—the danger—of establishing an entire legislative chamber based on the principle of property? Government is based on a few fairly simple principles, and one is that democracies give people the vote, not corporations, and the weight of each person’s vote is the same, it is not based on the amount of land the person has. Another basic principle is that a person votes where they live; they can’t vote in ten local elections because they own land in ten different cities.”

“Well, we’re doing things a little differently up here.”

“What sort of argument is that? Shall we elect a hereditary monarch and justify it because it is different? Please!”

“Érico, we have over a hundred thousand people on Earth who have bought land up here. They need to feel involved, to count in the Marsian enterprise. And corporations have sunk billions into property rights up here.”

“People who do not live in a particular locality do not have the same stake in that place as a resident, and corporations have corporate interests—above all, the profit motive—driving them. No matter how good communications get, people who don’t live here won’t have the same stake in this place as we have and they can’t experience a face-to-face meeting to discuss its future, as we can. We can listen to their opinions, we can involve them in various ways, we can empower them to play a part in this place; but if

they want to vote, they should come here. And if corporations want a vote, their executives can come here and buy land.”

“But this isn’t an ordinary place, Érico, it’s an entire world, a lot of people want to participate, and we *need* their participation. Giving them a vote involves them intimately.”

“I understand the argument, and in my opinion it’s just an excuse for undermining the basic principle of democracy.”

Alexandra opened her mouth, then closed it; she had nothing more to say. Skip spoke up. “It’s been interesting to be involved in the Constitutional Convention as a land owner. As a liberal I applaud the idea of involving as many people in the Marsian enterprise as possible; I am even disposed in favor of the idea of letting terrestrials who own Marsian land to have some sort of say in running the planet, though not as large a role as Marsian citizens. But I am opposed to corporations having a say and opposed to voting power being proportional to acreage owned.”

“The Landowner’s Assembly offers something both liberals and conservatives like, but also something they dislike,” commented Alexandra.

“No, overall I’d say it’s a capitalist victory,” growled Érico. “Because it’s property centered. The commodification of Mars has intruded into our governing system.”

“It intruded a decade ago,” replied Alexandra. “And if we take it out now, there will be hell to pay.”

“We’ll see,” replied Érico. “We may be able to convince thirty members of the Constitutional Convention to accept it, but I think the voters will reject it.” With that comment, he turned and walked away.

Alexandra and Skip watched him go. “It sounds like there will be quite a fight early next year,” exclaimed Skip. “I’m sorry I won’t be around to witness it.”

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Mike and Liz hurried along the stadium’s eastern edge, looking for the section with their seats. “Here it is; F,” exclaimed Mike, pointing.

“Good,” said Liz. “Go in. We’re looking for F6L and F6M.”

He nodded. They walked into the entrance and up stairs, which took them to F5; F1 was along the ground level and F10 was the stadium’s highest level of seats. Marshall and Amy saw them and began to wave; Mike spotted them and waved back. They hurried up to sit next to them.

“Wow, this place is big and impressive!” said Mike to Liz, looking at the 50 by 100 meter soccer field, and she nodded in return.

“Good sol,” Marshall and Amy said almost simultaneously.

“Good sol,” replied Mike and Liz as they sat in their seats. “This place is pretty impressive!” added Mike.

“Yeah; seven thousand seats,” replied Marshall. “It’s going to look empty for a few more years, and then it’ll be too small.” He pointed upward. “Do you see the extra safety dome?”

Mike peered at the grayness. “Oh, yeah. It’s pretty far up. It doesn’t anchor where this dome does.”

“No, it anchors at the far sides of the cylinder domes east and west of here and encloses all three of them. That way no one can punch holes in both domes at once. If this inner dome were to rupture, the air would spread out under the outer dome and the pressure would halve; thin, but breathable.”

“Giving everyone plenty of time to get out,” said Liz. “I guess if you’re designing a place that can hold everyone at once, you have to do that.”

“Andalus has two domes as well,” agreed Marshall. “Boy, it’s really gray this afternoon! I can’t even see the sun.”

“I’m amazed they managed to get two shuttles down yestersol,” added Mike. “But then, the front hadn’t come through yet, and it was a lot clearer.”

“And less windy,” agreed Amy. “The new landing scheme seems to be working.” She looked at Liz. “That’s a nice outfit you’ve got on.”

“Oh, thanks; it’s a new Maryam Salih design. I like it. She’s managed to accommodate a lot of radiation shielding into it inconspicuously.”

“Yes, it accentuates your figure quite well. You bought it at Silvio’s El Corte Ingles?”

“Yes, but they have it at Deseret, too. I like your hat; it’s by her, too, I think.”

“Yes, she’s the only good clothes designer we have up here!”

Liz looked at Mike, then at her brother and his wife. “We have some good news. We just got an email from Earth.”

“You’re going to Mercury?” asked Marshall, excitement rising in his voice.

Liz nodded, smiling.

“Congratulations, sis! Great news!” He leaned over and kissed her, as did Amy.

“Thanks. We got it just half an hour ago, as we prepared to leave the house to come here,” said Mike. “We’re pretty excited.”

“I’m glad you’ll be going together,” said Amy.

“So are we! We weren’t looking forward to the decision we’d have to make if they turned her down!” said Mike.

“And now we have to tell our friends, and Mike’s parents, and hear ‘why do you want to go to that God-forsaken place’ all over again.”

“Not from anyone up here!” said Marshall.

“No; from my Harvard friends and my parents. But I think my parents have adjusted. They’ve read about Mercury and realized it’s a pretty big facility and it’s safe.”

“Though they still worry about cabin fever,” said Liz. “You can’t see the sky or the stars from inside.”

Marshall looked up. “Right now, neither can we!” And they all laughed.

“Not only is the Venus-Mercury Commission covering her transportation, they’ve agreed to making her a full time artist in residence,” added Mike. “That’s the other half of the story.”

“Really? Congratulations!” said Amy. She hugged Liz.

“But what are you going to do?” Marshall asked his sister.

“I don’t know yet, but Madhu and I plan to talk tomorrow. We’ve already done a virtual reality tour of the station and she had some ideas for visual arts that I think I could execute. Part of my time involves art classes for the kids; they have eight, now. And of course I’ll be dancing; thank God the gravity is the same as here. I’ll also manage the

Concord Orchestra so that it becomes more active and plan regular arts events. It'll keep me pretty busy."

"How many people?" asked Marshall.

"Right now they have seventy-five," replied Liz. "But within a month of our arrival they'll expand to one hundred."

"Concord Station is the principal model for the Saturn Project," exclaimed Amy. "Right now they're planning to fly one to two hundred people to the Saturnian system for an initial four or five year stay. The initial mission will establish a mature base."

"With gradual expansion, most likely," added Marshall.

"When will you hear?" asked Mike. "In another year?"

"Probably less," replied Amy. "The first selection is January; they accept fifty and reject the lowest ranked applicants. The second cut is July when they accept at least fifty more. There will be another round or two if anyone drops out before launch in 2053."

"Speaking of God forsaken," said Mike. "Titan's a big, dimly-lit wilderness of frozen ice mixed with dirt and petrochemicals."

"Oh, it's not that bad!" said Amy. "You can describe Mars as a big ball of frozen rock surrounded by a suffocating atmosphere."

"My parents have used that line, too," quipped Mike, with a chuckle.

"It's not clear the entire expedition will head to Titan, though," continued Amy. "Insulation against a cryogenically cold and very dense atmosphere is one issue. Titan's gravity is another; it's too low for convenient long-term settlement but high enough to require major reconstruction of any interplanetary spacecraft with artificial gravity. We may set up headquarters on Enceladus or Hyperion."

“Now, how are you actually getting to Mercury?” asked Marshall. “The caravels are flying by, right?”

“Right,” replied Mike. “Two caravels are leaving here on January 10 on a Hohmann minimum-energy trajectory. They’ll fly by Mercury on June 20 using a gravity assist to bend the trajectory toward Earth, which they’ll reach on September 20.

Meanwhile, two caravels leave Earth on April 14, pass Mercury on July 14, and reach Mars on December 24. Flying with our two caravels will be an interplanetary transit vehicle accommodating up to twelve people, with basic consumables for up to three months. It’ll transport six of us to Mercury orbit. We’ll also be accompanied by a solid-core nuclear engine with thirty tonnes of liquid hydrogen; it’ll remain about a half kilometer away from the caravels en route to Mercury and in their shadow to reduce hydrogen boiloff.

“Two days before we reach Mercury, the six of us will board the ITV and separate from the caravels. We’ll dock to the nuclear engine and its hydrogen tanks and perform a small distancing maneuver. At flyby the nuke will burn for fifteen minutes to perform a delta-v of 9,000 meters per second; a pretty big burn to get into Mercury orbit. Two days and two more burns later we’ll reach Portal Station, their interplanetary transit facility, where we’ll transfer to a standard Hermes shuttle and land. The Hermes will have brought to Portal fifteen crew members just three days earlier, who will have boarded another ITV with a nuke. About the time we reach Portal, they’ll rendezvous with the caravels heading back to Earth. Our ITV and nuke will sit at Portal four weeks, the nuke’s tanks will be filled with more hydrogen, and when the two caravels from Earth fly by heading for Mars, they’ll fly out and rendezvous with any Mars-bound passengers.”

“So we’ll get our ITV and nuke back,” said Marshall. “And if you don’t like the place, you can come right back!”

“We plan to stay at least two years,” replied Liz. “But I hope we’ll come back.” She looked at Mike. He nodded.

“Mercury will be interesting, but Mars is a better place to raise a family,” he concurred. “But you never know; the place may grow on us, just like Mars grew on your parents.”

“I hope Saturn will prove a good place to start a family,” replied Marshall. “Because if we’re accepted, we probably won’t return until we’re close to forty.” He glanced at his watch. “The game starts in five minutes.”

“I’m surprised the Uzboi football team drove all the way down for the game,” said Mike. He hesitated with the word ‘football,’ wanting to say ‘soccer’ instead.

“With this weather, you can’t fly, but the new highway reduces the drive to about a sol,” replied Marshall. “Mom and I rode up last month. The vehicle didn’t have to stop to refuel because it used silane.”

“The Aurorae team has even agreed to drive to Meridiani for a game, and Meridiani is driving here,” noted Amy. “That’s a sol and a half each way!”

“They don’t have much of a team, though,” said Marshall. “They’re too small.”

“So, what do you think about the proposal for Canada to join the Grand Union in 2054?” Mike asked Amy, who was Canadian.

“I was surprised when I heard. I never thought they’d cut their link with the United States. But Canada’s been drifting more and more towards Europe over the last few decades; or maybe I should say the U.S. has been drifting to the right faster than

Canada has. And with the Latin American Union on board to join in 2053, it makes sense.”

“The U.S. sounds pretty resentful,” said Marshall. “I was surprised by some of the things the President said.”

“It’ll just push the Canadians to join a bit faster,” said Amy. “They’ve always had a love-hate relationship with the United States, and its aggressive nationalism in the last few decades has increased their mistrust. The Grand Union offers a way out.”

“I was amazed by India’s announcement it may start negotiations to join,” added Liz. “Because they have a long way to go to meet its labor and environmental standards.”

“Not that far,” replied Mike. “They think they can join by 2057. The Grand Union doesn’t have the elaborate requirements of the European Union and doesn’t come with the level of subsidies that E.U. membership did. The changes aren’t as drastic.”

“They focus more on standards of governance: elections, the court system, the rule of law, signing international treaties,” agreed Marshall. “It’s a clever compromise between the strict standards of the E.U. and the United Nations system. The Constitutional Convention has been modeling many of our standards on its regulations.”

“If Mars wanted to join, it could,” agreed Mike. “But we’d have to get some exceptions to the environmental standards, since we’re on a different planet!”

“So, where’s the Union going?” asked Liz. “Earth politics has always mystified me; I guess I didn’t visit the place long enough! Do you think everyone will join eventually?”

“Almost everyone’s expressed interest in joining except the U.S. and China,” said Marshall.

“The joke is the U.S. can’t join until the Presidents who orchestrated the invasions of Turanistan and Khalistan are dead, and thus can’t be indicted by the International Criminal Court,” said Mike with a chuckle. “And I think that’s true.”

“And that ties the hands of both political parties,” added Marshall. “So the U.S. will stay out and lose hundreds of billions of dollars of trade and economic stimulation. It’ll be interesting to see what that does!”

“I fear the isolationists will win and try to create a so-called ‘independent’ and ‘Christian’ country that will cut itself off from the world,” replied Mike.

Marshall shook his head. “That’s impossible. About one quarter of the population wants to stay out of international organizations, but they’re outnumbered by millions of immigrants and post-Christian secularists.”

“And if the rest of the world really pulls together, the United States won’t be a superpower any more,” agreed Mike. “The next decade’s going to be rocky, regardless of the planet you’re on.” He pointed. “Ah, here come the teams. By the way, I plan to cheer for Uzboi, on the ground that no one else will be.”

“And you’re sleeping on the couch tonight?” said Liz, with a smile.

14.

Mercury

Jan. 2051

Ramesh Pradhan exited the Commonwealth Building with considerable glee. He crossed Andalus Square, passing under colorful banners that proclaimed “Merry Christmas” and “Happy New Years 2051.” He crossed Cathay Dome to Punjab, where he stopped briefly to perform puja to the god Ganesha at the Hindu Temple whose construction he had spearheaded. From there he walked to his flat. Sarah was there with the twins she had borne just two weeks earlier. She saw his glee and tried to look pleased herself.

“So, it went well?”

“Yes, Judge DiPonte agreed with me completely. He ruled that the Borough couldn’t arbitrarily exclude my plan to build a house on land I own and that land ownership implied the right to improve the property. He ruled the borough was bound to make reasonable efforts to provide emergency support services, especially to a structure on a major road just twenty kilometers away. He also ruled that land owners have to understand they are taking a risk when building a structure that is not contiguous with and physically connected to an outpost and thus cannot expect the same level of support.”

“What level of support can we expect?”

“The lawyer for the borough asked exactly that question and he replied that the borough had to define a plan, that he was not the expert to do it but the courts were empowered to define standards if the borough did not. That really isn’t hard to define. They already have an emergency vehicle that on a moment’s notice can run around the

outside of the outpost to rescue people trapped in a dome or airlock or deliver a team from the outside. It's also available to go to the Dacha, New Tokyo, or New Hanford."

"What about construction standards for houses outside the outpost?"

Ramesh scowled. "What about them? Silvio said our plans seemed to be excellent; the housing has two pressure-tight envelopes, it has two airlocks, it has two oxygen and power supply systems, it has three separate oxygen and methane supply tanks in different places. Otherwise it will follow all the standards of outpost housing in terms of berms to protect bubbles from vehicles, thicknesses of bubbles, thicknesses of radiation shielding. . . what more do you want, my dear?"

"What do I want? A nicer and bigger house *here*." She shook her head. "You want to be twenty kilometers *in the country*. But Mars doesn't have *country*, Ramesh, it has *range*; airless, plantless, frigid range. It's beautiful, its wild, it can be inspiring, but it's no place to live."

"Well, my dear, the decision is made. I'm going to call Simeon Afigbo right now to give him the go ahead to install the bubble and start building; he has everything ready. And then I'm calling Kristoff Langlais to ask him to schedule filling the bubble with soil and reg."

Ramesh turned and headed for his office without giving Sarah a chance to reply. She stood there, silent, open-mouthed, wondering what to do about such a man.

He closed the door of his office and made the calls. Kristoff was working in his agricultural domes up on the escarpment when he heard from Ramesh. After receiving the good news, he videophoned his father, then his brother.

"So, do you have soil available?" asked Helmut.

“Sure. That’s what I do during dust storm season: buy sifted reg from Construction, mostly eolian dust, sand, and some clay, haul it inside dome 1, mix it, and spread it on my fields. While the tomatoes and beans are still bearing, I’m piling it along the edges of the fields, then when I plow them under I’ll mix it in and plant winter wheat. My plan is to bulk up my soil by about thirty percent so that next year I can haul off some of the mix for new domes or sell it to customers like Pradhan.”

“Got it. Say, want to get together for supper tonight? I have something to celebrate, too. Four of us had a meeting with Charles this afternoon. He’s agreed to talk to the Asteroid Belt Commission’s Board of National Trustees about the governance of a Ceres outpost.”

“Oh? Elections?”

“Maybe. In early January the entire Ceres crew will spend three sols talking about how we want to be organized. We’ve got nine kids on board in five families, and some of the crew members may decide to have children while on Ceres. We’re going to be a hamlet of sixty-nine human beings and could grow to seventy-five or so. And the ABC has agreed to seek funding for a mission in 2058, in addition to the 2055 mission it has already committed to send. That means the human presence will continue almost a decade at minimum. I think we can make Ceres a permanent human outpost; it’s got an economic basis and some very valuable science. If that’s the case, Ceres needs an elected representative council and a governor.”

“But Helmut, do you want to stay that long? It’s a long way from everything and it’ll never have a big community.”

“Kristoff, it’s an exciting challenge and worth a decade of my life. I doubt we’ll stay longer than a decade because it will be a small place; in ten years Charlie will be 22 and I don’t know whether he’ll want to stay. Ceres is no place to grow old; Mars will have the old people’s homes! So we’ll be back here.”

“Well, that’s good. Supper: yes, I think we’re free. I’ll check with Irma and email you. Let’s celebrate some good news together. Your place?”

“Yes, just order what your family wants and I’ll order what my family wants. I can pick it up. How about 6?”

“Good. See you then, bro.”

“Right. Ciao.”

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Aurorae Cathedral was packed to the doors for the installation of Bishop Miller. An overflow crowd sat in chairs on Plaza de San Juan Cupertino, outside the cathedral, and watched on a big screen.

The front row was filled with dignitaries; representatives of all the religious communities on Mars were invited. Will was present as Commissioner, Alexandra as Chief Minister, and all the members of the Borough Council were there. Father Karol Miller wore the grand robes of a bishop. Father Greg Harris and newly arrived Father Julio Conrad assisted him with the mass. The Cathedral was now finished and was grand, although its incredibly impressive art was wallpaper, perfect color copies of the images of great Catholic art transmitted through space and printed onto Martian paper, and its grand sculptures were plastic replicas created by a computer-controlled spray gun.

After the mass, there was a reception line, then refreshments in the plaza. “Bishop Miller, congratulations again,” Will said, shaking Karol’s hand. “Are we following the Marsian custom of referring to people by their title and first name?”

“No; oh, well, why not. Bishop Karol. I can get used to that.”

“How was the flight?”

“Long! I spent almost a year away from here in order to be consecrated. The flight out was stormy; we had to huddle in radiation shelters three times because of flares. Then we were stuck on Phobos almost two weeks because of the weather here.” He looked up. “Which really hasn’t improved much.”

“No. We’re lucky we got you down. We’ll be flying migrants down until mid March. Phobos is now the second largest human settlement off Earth.”

“I was able to organize a parish there, at least! I consecrated enough host to last a year. And people are pretty busy. You should see the new Galleon Hanger; with the extra workers, it has taken shape quite impressively.”

“I did a virtual reality tour last week. There’s no facility like it anywhere off Earth. Phobos is humanity’s spacecraft assembly place and will be for some time.”

“Oh, Commissioner Will, I want to congratulate the Bahá’í community for electing their National Spiritual Assembly of Mars. And I gather the Mormons are organizing a ‘stake’ here, the Hindu temple is now complete, a Protestant Association will form next month. . . this place is maturing.”

“Indeed, we’re worthy of independence.”

“We are! But I hope next time Mars needs a bishop, they send someone here already consecrated or let me do it. I’d rather not wish my journey on someone else!”

“Understandable! Let’s hope the weather cooperates better in the next few columbiads.” Will waved and Karol turned to another well wisher. Ananda Thanarat, who had represented the Bahá’ís of Mars, was nearby, so Will walked over. Ananda was talking to Prince Bilal ibn-Majid Abbas, who was representing the Wahhabi Muslim community, and Victor MacLeod, representative of the Green World Community.

“Quite a sol, gentlemen,” he said.

“Yes. The Catholics can make quite a display,” said Prince Bilal. “And the Cathedral is stunning. I plan to email some supporters and donors tonight about raising the funds for a grand mosque for Aurorae.”

“Where would you put it?” asked Ananda.

“I don’t know. First we need the money. But we can obtain an impressive location, I am sure. I was looking at some of the murals and sculptures very closely. We can get the specifications for computer manufacture of wall panels with qur’anic passages.”

“They can make almost anything now; fake granite, fake mosaics, you name it, it looks authentic too,” said Will. “The same techniques are being used to make some *really* big and impressive buildings on Earth, too, with vast surfaces that look hand-carved or hand-painted. The Muslim communities should build at least one grand mosque.”

“I am sure we will.” The Prince looked at Victor. “What’s the Green World Community planning?”

“We’ve been pretty quiet for the last few columbiads, but our population here has been steadily building; we now have seventy-five at Aram,” he replied. “We have our

original B-160 and ten 200-by-70 meter cylinder domes enclosing 141 hectares; we're a third the size of all of Aurorae now!"

"Really? What are you doing with that much space? You're not exporting food for 1,400 people," said Ananda.

Victor shook his head. "Half of it's nature; forests and prairies, and they're growing beautifully and wildly. I suppose we'll cut timber and we might even sell hay, but half our space is nature for nature's sake. One cylinder is a half-filled with a lake. It makes Aram peaceful and beautiful. You build your temples, cathedrals, and mosques; we'll build our natural spaces."

"What about the idea of terraforming an entire small asteroid?" asked Will, an idea that startled the Prince and Ananda.

"Oh, we haven't forgotten. We're still investing heavily in PGM production, growing our financial base, and expanding our population. When, Commissioner Will, do you think space transportation costs will drop? That's the key to a lot of our plans."

"It's hard to predict. The cost of shipping to low Earth orbit has been dropping about three or four percent a year for twenty-five years, so it's now half what it was when Swift introduced his shuttle. The galleon will cut the cost of flying people to Mars by half. Solar sailers have cut the cost of cargo transportation drastically. I suspect in a decade there will be a lot of used caravels available for purchase."

"In another decade, the technology for enclosing a half-kilometer asteroid may be better advanced, also," noted Victor. He nodded. "We'll be ready by then."

"I wonder how much the Grand Union will change our plans," commented Ananda.

Prince Bilal shook his head. “No, I don’t think so. It’s overrated.”

“Overrated?” replied Ananda. “Last week Thailand announced it would start negotiations to join in 2056. The week before Australia and Japan announced they want to join in 2054. It is growing fast. It has now spread all the way across Eurasia!”

“The haves are joining together and leaving the have-nots out,” replied the Prince.

Ananda shook his head. “India’s joining, Turkey will be in next year, Africa’s making noises about joining. It is true that countries lacking democracy and the rule of law have longer transition periods. But Khalistan would be admitted if it wanted to enter.”

“I don’t think Khalistan will ever want to join. It’s an un-Islamic union.”

That statement stopped the conversation. Rather than continue, Will nodded to the others and turned away. He saw Alexandra hotly debating something across the crowd, but he was looking for Louise Tremblay. He saw her nearby and walked over.

“So, you have a Bishop?” he asked.

She smiled. “We all have a Bishop. Mars has a Bishop.”

“It’s a big sol; I can appreciate it, as a non-Catholic.”

“Thank you. Even Alex appreciated it; he stayed throughout the mass, then grabbed as much food as he could and ran off to see his friends!”

Will chuckled. “Teenagers. Bishop Karol tells me the new Galleon Hanger is very impressive, and I saw it by virtual reality last week, so I concur.”

“It’s something, isn’t it? Ramesh is going crazy trying to get the housing finished without three hundred workers—who fortunately aren’t here to be housed anyway—and meanwhile I have three hundred extra construction specialists in space where there’s

plenty of electricity! So we're finishing up two partially completed caravels ahead of time and we have the Galleon Hanger mostly done."

"It's a good thing the caravels are mostly finished, because we have to send two to Mercury next week and we haven't completely emptied them!" exclaimed Will. "Now we have a place for the migrants to go. Mike and Liz are going to Mercury—I wish they weren't leaving, but they say they'll return—and they're nervous about missing the flight."

"Launches are less affected by this weather than landings; that shouldn't be a problem. You must be proud of Liz. She's going to make a living as an artist in space, which ain't easy."

"I'm very proud of her, and of Mike—he's a great guy—and Marshall married pretty well, too, Amy's a remarkable woman. They're launched on the sea of life and sometimes I wish they weren't quite so successful, because it will take them far away! I wasn't around when either mom or dad breathed their last, and I regret it."

"Yes, my father passed last summer in Quebec and I regret not being able to be there. But what can you do?" She shrugged. "I hope you live long and see your grandchildren."

"Thank you, it's my hope, too."

"What will you do after your term's up?"

"I don't know. 'Retire' sounds rather boring and 'curmudgeon' sounds too meddling. I can always teach and do geology research."

"You can always help Ethel make money."

“She doesn’t need help; Mars Metals is doing quite well. But I’m told the literary rights for my life story are worth about ten million U.S. dollars. An insane figure, eh?”

“Yes, but I’m not surprised.”

Just then Alexandra hurried over. Will and Louise turned to her. “Will, you need to write some articles about the Constitution for *Mars This Sol*,” she exclaimed, agitated. “I just had a long, losing battle over the issue of property owners with three people over there.”

“It’s *the* controversial feature,” added Louise. “Just sit and listen to the buzz in the Gallerie. Everyone’s debating the role of the Landowner’s Assembly.”

“It’s going to require some explanation,” agreed Will. “It’s always been controversial, but we can’t drop it now.”

“You need to explain it,” persisted Alexandra. “You’re the most articulate communicator up here, where Constitutional matters are concerned. I’m sure *Mars This Sol* will publish them. Read them aloud and they’ll publish audio and video versions as well.”

“Alexandra, there are other articulate defenders, including yourself. Besides, I don’t have the time. The transition’s taking an incredible amount of time. Next week I’ll be in meetings almost continually where the transition for the redback is planned, since it isn’t a currency now but functions like one, and it has to become a real currency in less than six months.”

“Will, you have to do it. No one else understands the whole thing as well. Érico has come out against the Constitution because of the Landowners Assembly and—”

“He has?”

“Yes. He told me he would a few months ago, when the Landowners Assembly part was finalized, and he has. He’ll be a formidable opponent.”

“I didn’t know.” Will’s sigh conveyed his disappointment. He thought. “Alright, I’ll try to squeeze out some time. I would like to write up some articles about the Constitution.”

“It’s really important, believe me,” reiterated Alexandra.

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Mike and Marshall slid the antique wooden armoire across the bedroom and living room floors and to the front door of the flat. “Damn, this thing is heavy, even on Mars!” said Mike. “How much did it cost your parents to import it?”

“Never mind,” said Liz. “The wood had to be checked for bugs, too. At least solar sailers are reasonably cheap. Mom said it probably wouldn’t lose value.”

“It was a very generous wedding present,” agreed Mike. “I feel bad it’s going back to their place, but it’ll be better there than in storage.”

“I wouldn’t leave it here for the renters,” exclaimed Marshall. He looked out the door. “Where is that robotic truck?”

“Oh, it’s downstairs, outside the front door,” replied Liz. “It can’t maneuver down the ramp with something like this.”

“Then let’s get it down and be done with it,” said Mike to Marshall, who nodded. They picked it up again and carried it slowly down the ramp two stories, out the front door, and onto the flatbed.

“God, I never thought I’d be moving furniture on Mars,” said Mike.

“Why? You knew you’d have furniture here, and you hoped to be going to Mercury,” said Marshall with a smile.

Mike laughed. “Good point.”

They walked back up the stairs. Liz was packing their last clothes into the soft-sided bags they would carry to the shuttle. Mike looked around. “It’s just about empty.”

“The cleaning robot’s coming tomorrow,” said Liz. “The renters arrive in the next few weeks, depending on when the weather permits the shuttles to land, so it’ll look pretty good.”

“We’ll show them around and collect the rent,” promised Amy, who was cleaning the refrigerator; something robots still didn’t do very well.

“I’m going to miss this place,” said Liz. “We didn’t live here very long, but it was cozy.”

“Another word for ‘small,’” observed Mike with a chuckle. “I’ll miss Mars. Especially now, with the Constitution debate heating up! I hate to leave, I hope they’ll let us vote from space!”

“I’m sure I can; you’ll need to apply for citizenship, though, because you won’t be here at the moment of independence,” said Liz. “I couldn’t believe what Alexandra said about Érico on *Mars This Sol*.”

“At least he didn’t reply in kind; I’m afraid she looks a bit petty as a result,” said Marshall. “I bet dad’s furious.”

“But he won’t look it,” said Liz. “She shouldn’t have questioned his motives that way. I think she’ll just give momentum to the argument that the Constitution should be rejected.”

“I was shocked,” said Mike. “I haven’t been here very long, but I know that people don’t talk about each other that way in public on Mars. The place is too small and people know each other too well! Anyway, we’ll follow the fight—I mean the debate—over the web.”

“We can get *Mars This Sol* anywhere,” agreed Liz. “Dad’s article about the Constitution yestersol was great. If anything will persuade people, they will.”

“No, there needs to be good, old-fashioned public debate,” said Marshall, shaking his head. “And there will be.”

Suddenly his attaché and Amy’s beeped urgently and simultaneously. They were so loud, all four of them jumped. They looked at the two small devices resting on the table. Then Marshall and Amy, guessing what it was about, grabbed their attachés simultaneously.

“What is it?” asked Mike. Then it occurred to him what it might be as well.

Amy opened the email message first. She skimmed it and shouted “Yes!”

“What is it?” asked Liz.

“We’re going to Saturn!” she replied.

“Really?” squealed Liz in delight. When she saw her brother nod she embraced him, then Amy.

“I can’t believe it! We’re in the first fifty!”

“On the strength of your credentials, Amy, not mine.”

“Oh, don’t be so modest!” she replied. She leaned over and they kissed.

“Incredible! We’re going to Saturn!”

“When’s launch?”

“June 2053; three and half years!”

“It says they want a nine year commitment.” Marshall whistled. “Two years to fly out, a minimum stay of five years, and a two year flight back. The first vehicles will stay to constitute the outpost.”

“We can do that,” said Amy. “So, we’ll be back here in 2062. You’ll be 37 and I’ll be 38.”

“And Mars will have twenty-five or thirty thousand people,” said Liz. “Mom and dad will be. . . 77.”

“And we’ll all have children,” added Mike, looking unusually sober.

“Saturn,” repeated Amy. “Wow, a dream come true!”

“Scores of worlds to explore,” added Marshall. “One with more air than even Earth.”

“And *very cold*,” added Mike. “Every time I hear people talk about walking around Titan with an oxygen mask and warm clothes, I think ‘right, walk around in a liquid methane tank wearing a coat!’”

“The technology is complicated,” agreed Amy, who was an expert on Titan conditions. “But never mind, we’ll figure it out. And there are cryovolcanic regions that are almost as warm as the Martian polar regions. We know geothermal power is available. It’ll be quite an adventure.”

“We’ll celebrate tonight,” said Liz. “Meanwhile, help us pack for our adventure to the inner solar system.”

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They all rose very early the next morning to head to Arrival Hall. There, a Conestoga awaited to transport fifteen passengers to the *Kasei*, which was scheduled for liftoff at 7 a.m. Will and Ethel arrived before the kids and saw Brian Stark and Skip Carson.

“Skip, we’ll miss you,” said Will, walking over to shake his friend’s hand.

“I’ll miss all of you, too. But I have a multimillion dollar contract to make a movie later this year, so I have to go back. Heck, I bet this won’t be my last visit to Mars. I’m young enough and rich enough; I could get here another time.”

“Glad to hear it.”

“You gotta come back,” agreed Brian. “I won’t have anyone to argue with!”

“Oh, you’ve got plenty of people to argue with, starting with your subordinates!”

“And there’s always the Constitution,” added Will. “I see we’re on the same side of that debate.”

“It’s nice,” agreed Brian, with a smile.

There were other passengers nearby who knew the Commissioner, so he turned to them. The closest was Joshua Ivakhiv.

“Joshua, thank you for staying all these extra months and participating in the Constitutional Convention. We really appreciate your sacrifice. I want your wife’s contact information so I can write her directly and thank her for sparing you.”

“Oh, that’s kind of you, and she will appreciate it. I’ll email you the information from orbit. I don’t think she’ll stay mad at me too long; the whole family will be glad to see me again. And it’s been a real privilege for me to participate in the birth of a nation . . . that was truly amazing.”

“We are eternally grateful for your contribution, too.”

Just then Mike and Liz walked in, with Marshall and Amy right behind, helping to carry bags. Ethel saw them and walked over, and as she walked tears began to well up in her eyes. “Oh, I didn’t think I’d start crying as soon as I saw you!”

“That’s alright, mom.” Liz put down her bags and hugged Ethel. “You see, now I’m crying too!”

“Don’t worry, we’ll come back,” promised Mike. “Neither of us want to live on Earth, and I doubt we’ll be seduced by Mercury. My research on its magnetic field has a definite end point.”

“We’ll be back in about three years,” agreed Liz. “I think just before Marshall and Amy leave.”

“Good, because I don’t want to lose all four of you at once!” said Ethel. She turned to Mike. “Don’t work all the time and remember you have the best wife in the world.”

“How can I forget; she’s my best friend, too.” Mike hugged Ethel, then kissed her on the cheek. And he felt a tear course down his cheek as well.

Will finally pulled away from the other passengers and came over. “Liz, dear, dance well and teach them art,” he said. He kissed her. “You have a marvelous opportunity.” He turned to Mike. “And I’ll miss you like a son. Be careful and be safe.” He hugged his son in law.

“Don’t worry, we’ll be fine,” said Mike.

It was time to get on board the conestoga. Marshall and Amy said their farewells also, then handed Mike and Liz their other set of bags. With a nod, they turned and walked through the airlock.

## Constitution

Mar. 2051

Will reread his article again, beginning to end. It was his third essay on Marsian governance and focused on the question of why Mars did without nominations and campaigning. The issue was a relatively minor one in the debate over the Constitution; for most Marsians, the matter was settled, and the Constitution had enshrined it as a basic principle of governance. The previous article had focused on why property owners, and particularly corporations, had been given representation in the legislative branch of government. He had done his best, rebuttals had been produced in a matter of sols, and they were often fiery in their opposition.

It was getting late and he needed to submit the article before the deadline of March 4<sup>th</sup>: tomorrow, that is. Or to be more precise, later this sol. His eyes were beginning to hurt and he just doubted he'd finish it.

Then his attaché chirped quietly, signaling a videomail from Earth. The distraction was welcome; it was something that would wake him up. He glanced at the caller id box; it was his friend David Alaoui. That *definitely* was welcome.

“Hello Will. I hope you and Ethel are well. I've been following your articles in *Mars This Sol*; fascinating. In fact, the debate about Mars's Constitution on that site is being read all over Earth. Political scientists are following the debate closely and some are commenting on it. Politicians are watching and wondering what's going on up there. I suppose this won't make it easier to write your articles, knowing half of Earth is looking over your shoulder! We don't see a small, highly educated and articulate population

debate something like this very often. It's being followed on the moon, Mercury, and Venus as well; I'm hearing from them.

“But I didn't call you about the Constitution, or about the flight from Mars to Mercury that appears to be going very well. I've been talking to various people about Jupiter and Saturn. Basically, Jupiter exploration is screwed up. There are plans for five different stations on Callisto, all national, all near each other, and there's fierce fighting over who will coordinate landing and blastoff rights, how close the stations can be to each other, how emergencies will be handled, etc. It's worse than the fight over the lunar poles three and a half decades ago. You'd think we haven't learned anything about settling other worlds. Because the Chinese got there first, the Americans want to ignore the Jupiter Commission and they're basically paying the Canadians and Japanese to do the same. But needless the say, they don't want the same to happen to the Saturn Commission. It doesn't occur to them that the Chinese will retaliate at Saturn for their behavior at Jupiter? It does occur to them, but they don't stop. It's crazy.

“It seems to me that there is one solution: take the leadership of the Saturn Commission away from the Americans and give it to someone who is highly respected and known to be neutral and fair. So I'm hoping you will consider the position of Director of the Saturn Commission. I think everyone can be persuaded to accept your leadership. They can see the success of Mars; they often don't like how you did it, but they know what you do and they know they can deal with you.

“But I don't know whether that interests you. You've always talked about retiring in our videomails. Will, you retire? I can't see it. You need a challenge. And this position

doesn't need to last very long; one five-year term will be enough to set the pattern and resolve many of the basic policies and regulations.

“So let me know whether you're interested. I'm working quietly with Krister Soderblom, Pierre Messier, and a few other senior figures to lobby diplomats. France is behind us, I think Europe will be as well, and we'll focus on the U.S. and China, since they're the two forces driving everything. I think we have a good chance of success, too. Bye.”

Will stared at the screen, intrigued. Saturn. And it had one inevitable destination of great significance: Titan, the new Mars. It was almost as large as Dusty Red—Icy Orange, someone had dubbed it—had a thick atmosphere, a complex and intriguing geology, and was a natural base of operations for exploring the entire Saturn system if its extreme cold could be managed. Its gravity was comparatively gentle, requiring centrifugal augmentation for long-term residence and floors angled to suit both the centrifugal push and the moon's pull. It was cold; liquid methane flowed on its surface like water. Oxygen—artificially produced, since it was absent otherwise—was almost liquid at its temperatures. Living there was possible, but would require a lot of heat, and with a sixteen-day revolution around Saturn, colonies would alternately see eight days of darkness followed by eight days of murky dimness, which was adequate for exploration. Even without its orange overcast, the surface received too little sunlight for terrestrial plants to survive; all domes would have to be lighted. But a large, lighted dome, powered by geothermal power in a volcanic region and suitably insulated, could be quite comfortable and pleasant. There was no physical reason why Titan, like Mercury, couldn't support millions of people. Rather, the limitations were those of technology and

distance; Saturn was over 1.5 billion kilometers from Earth most of the time, with a communications round trip of over three hours.

He rose from his chair and paced around the house. He stopped in the garden and looked up through the skylight at the black night sky, starless because of the dust storm. He was two months short of his sixty-fifth birthday and had celebrated his thirty year anniversary on Mars a few sols earlier. David was right; he wasn't one to retire. His health was excellent and his stamina for work virtually undiminished. Five years as Director of the Saturn Commission was an exciting idea. He walked back to his office and hit reply.

“Hi David, thanks for calling. I'm fascinated by the offer. Obviously, I couldn't start until July; we have to close up the Mars Commission first and transition to the Marsian government. But after that I'm willing to take the position if it is offered to me. I have two conditions, however. First, I have to stay on Mars, not return to Earth, which means the Commission headquarters will be here. Second, we have to examine the self-governance and semi-independence of the Saturn mission very closely. The current proposal is to send 100 to 150 people for a minimum stay of five years, with a round trip flight time of four more. Under those circumstances, they should choose their leaders and approve their laws; our role will be to allocate funds to send supplies and do support research and development. It's a very different role than the Mars Commission. If that approach is acceptable, I will take the position. Ciao.”

He sent the message, then glanced back at his essay. He couldn't work on it now; the new development had pushed the Constitution out of his mind. He rose and went to

the bedroom. Ethel was already asleep, so he touched her shoulder. “I just accepted a job as Director of the Saturn Commission.”

“What,” she replied groggily, then she lurched upright. “What!”

“Well, not exactly accepted. David and Krister want to propose my name to the governments and I said okay.”

“You’re not planning to go to Saturn, I hope!”

“No, of course not. Marshall and Amy are already going.”

“That would be a good challenge for you, and will keep your nose out of Marsian government after you retire here. That’s probably a good thing.”

“I agree. But let’s not tell anyone, even Marshall. Not yet.”

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Several sols later, a Constitution Forum was held in Andalus Square, attended by most of the outpost’s adults. The two-hour debate featured Érico, Alexandra, and Will, and focused on the issue of the Landowners Assembly. Afterward, Will and Marshall went for a hike together outside.

“What did you think of the Forum?” Will asked, noting that Marshall had not raised the matter.

There was a long pause. “I don’t think the argument is working. It’s not with my friends, anyway. In general, the idea that landowners have invested heavily in this place and pay taxes, so they should have a say, makes sense. But that doesn’t mean they should have a vote and a legislative chamber. There must be other ways to include them that are less formal. On Earth there are plenty of countries with extreme wealth and poverty, and

the wealthy people don't get more of a vote than the poor. Certainly corporations don't get a vote."

"What argument do you think will work?"

"Dad, I don't think *any* argument will work. People aren't buying it, and I think Érico's right: it's well-intentioned measure, but wrong-headed. I'm sorry, I mean no offense, I know you've worked hard to promote and implement it. . . but I don't think it's right."

Will was startled by Marshall's frankness. He didn't reply immediately. "I agree it is unusual, but we're in a very unusual situation, and can mobilize the support and involvement of tens of thousands of ordinary people on Earth this way. That has huge potential to strengthen this place."

"It does, but it also means tens of thousands of people who don't live here and whose stake may be highly ideological or based on utopian fantasies have a say in how we run our affairs. Let them elect a coordinating body, and let it comment on legislation as a nongovernmental organization has a right to do. Let them express their opinions in *Mars This Sol*. Let them emigrate and become citizens. But don't give them a vote and an entire legislative chamber." Will didn't reply, so Marshall added "Don't enshrine property as a criterion for voting rights. It really is a very dangerous idea; it leads away from the equality of people. Mars does not seem prone to ideological extremes now, but we can't predict the future."

"And this is about the future," agreed Will. "It will be a real mess, if the Constitution is rejected by the voters."

“I’m sure, but democracy can be messy, and Marsian voters are discovering their powers. We’re becoming an independent nation because of them, and no terrestrial government can stop it now.”

“True.” Will said nothing more about the Constitution. They were hiking up the old trail to the top of Boat Rock and just then reached the top. Will stopped to admire the outpost. “Isn’t she beautiful.”

“Yes, and so big now. Just look at Baltic, 100 meters wide and half a kilometer long! It’s enormous.”

“And Baltic South is going up quite nicely.” Will pointed to the dome’s foundation being implanted into the side of Layercake Mesa, a hundred-meter tall butte west of Boat Rock. “Ramesh was hired partly because he said we should cut the waste, stop building so many big domes, fill the ones we have with people, and focus on more efficient agricultural space, yet he pushed that park dome quite strongly.”

“It will be really pretty, and the idea of being able to hike up a steep slope through a forest is very attractive. And now they want to install a ski slope.”

“It’ll be a really big park, and we could use it. Baltic Lake in the main dome, also, is a huge body of water for us; it covers 1.25 hectares and is up to twenty meters deep. Kids will swim and fish in it.”

“It’s a bad time to be going to Saturn, in a way, because this place is beginning to get *really* big and sophisticated.”

“If we can continue fast growth—twenty or thirty percent per columbiad—this place will have five times the population it has now. It’s hard enough to believe we have

five thousand people on Mars and Phobos, but pretty soon we'll be *really* big. We'll dominate the solar system."

"It's hard to picture what it'll be like to come back here from rustic Saturn in 2062 with a child or two; they'll think this place is enormous."

Will chuckled. "It'll be like you going to Earth five years ago, when this place had a mere thousand people!"

"I think back to when I was ten and Mars had less than 200 people; it was about the size the Saturn Outpost will be, in fact. The interior space was smaller than Baltic Lake!" He turned to his dad so they could see each other's faces through their helmets. "By the way, Amy and I have been talking about a few things. We're going to devote our two years en route to Saturn to two things: completing our dissertations and starting a family."

"Really?"

Marshall nodded. "The voyage will be a quiet time. We'll have complete control over all the robotic equipment on the various moons and we'll have a lot of maintenance to do, but we won't have the crush of work that starts on arrival. A lot of people are planning major writing projects. We'll both have our research finished and Martech will grant our degrees from a distance. As for starting a family, the two Galleons will be traveling together and providing each other radiation shielding; they'll mass about a thousand tonnes, which will attenuate a lot of cosmic radiation. They say the shipboard environment will be almost as safe as Marsian homes are. If we time it right, our child will be a year old and walking when we reach Saturn."

“You’re right. It sounds strange to me, but babies in space is one of the few taboos left, and it’s a taboo that makes no sense with ships the size of galleons.” Will smiled. “Good luck. I’m sure Ethel can wait a few more years to be a grandmother. Of course, she won’t see her grandchild face to face for eight years!”

“And with three-hour communications delays, we won’t be able to be very spontaneous together. But we will be back, dad.”

“I hope so. I told my mom the same thing, you see. And I hope you fall in love with Saturn, because it will need dedicated residents. The Saturn team needs to go not as a mission, but as a community, and our role must be to support. Earth and even Mars have to shell out resources and send a pair of galleons every two years, plus supplies. Saturn and Jupiter need to acquire growing communities of their own.”

“That’s quite a vision, dad. I hope the powers that be come to share it!”

Will nodded. “I’ll do my best to convey it to them, believe me.”

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The Constitutional referendum took place two weeks later, on a Sunsol near the end of March, 2051. Will and Ethel slept a bit later than usual, walked to the Gallerie for breakfast—they sat with Roger, Madhu, Shinji, and Michiko—then went to the Bahá’í House of Worship for a forty-five minute devotional program, followed by adult and children’s classes. As soon as they got home, a bit after noon, Will and Ethel both voted by computer—in favor of the Constitution—then turned to other matters. Will had a videomail from Tina Hvitmer at *Mars This Sol* asking for a comment about the voting and the latest poll, which suggested the Constitution would pass, but the voter turnout might be low. Will called her back and offered a fairly bland statement. Then he turned to

*Mars This Sol* itself, watching two video news clips about the voting, watching the brief weather forecast—continued dusty outside—and reading a series of syndicated newspaper articles. The big Earth news were the announcements by Indonesia and Pakistan that they wanted to join Grand Union in 2057 and 2058 respectively. The former’s decision connected Australia, which already wanted in, to Malaysia on the Asian mainland, which had also announced its desire to join. Pakistan’s announcement had been shocking across the Indian subcontinent because it meant that all disputes with India had to be resolved in the next seven years; India also wanted to join, and open borders were a criterion for membership.

As he finished the article, Ethel stuck her head into his little home office. “Liz and Mike say hello. They’re fine, but bored. The flight’s routine.”

“Good. I’ll look at the videomessage later and send my own reply. What’s the time delay?”

“Eight or nine minutes.”

“Okay.” He turned back to his attaché and started to read an article about the British Parliamentary elections. Then his attaché beeped with a message coming in from Earth. He pushed play.

Will was surprised to see Peter Zubko’s face pop onto his screen. He hadn’t spoken to Zubko for six months. “Good day, Will. I trust you are well. It’ll be interesting to see what happens on Mars today with the vote; the debate has been very lively, even tumultuous. I don’t think Mars has ever had a debate like it.

“But I didn’t call about the election, but about Saturn. I am NASA’s representative to the Saturn mission as well as to the rapidly passing Mars Commission.

As you know, over the last two years multiparty talks have managed to agree on an annual expenditure for the project and on its size and launch date, but not on mundane details like a headquarters and a permanent Director. Those negotiations have been moving forward this month and I have been asked to convey to you an official invitation to submit your credentials for the position of Director. We have had many disagreements with you in the past, but you have been fair, honest in your dealings with the governments, and you have offered a consistent vision for Mars. We think you will do the same for Saturn. After the controversies over the Jupiter Commission and the exploration of that system, we need a strong leader for Saturn. It's very hard to predict, but Titan may be as important to humanity's destiny as Mars.

“If you're interested, please confirm by return email to me. We'd appreciate a statement from you about the job within a week, so we can move quickly. Thank you. Bye.”

Zubko's face faded from the screen. “Wow!” exclaimed Ethel from the doorway. “I heard the whole thing! Too bad it means working with him!”

“NASA has had worse representatives. I don't anticipate having much trouble working with him anyway, because I want the folks on Saturn making most of the decisions, not the Director. We'll need someone strong on Earth to keep the money flowing and someone here to manage the logistics. I doubt I'll do that much management, except keep communications flowing.”

“And that will be a challenge. So you plan to accept?”

“Oh, definitely. It'll keep me off the street.”

She laughed. “We really don’t have streets.” She came into the office and gave him a congratulatory kiss, then left. Will hit reply.

“Good sol, Pete. It’s very good to hear from you. I’m honored that I’ve been asked to offer my service, so I will do so. I have a clear idea of what I will offer, too; I’ll start on the statement this sol. In short, we need to understand from the beginning that we are settling the Saturnian system, not just exploring, and we are therefore establishing a community. That community must run its own internal affairs without our interference. They should have a major voice in how the five billion dollars per year of funds will be spent. Our role should be to encourage them and support them with supplies, new technology, and a predictable level of funding.

“I’ll write up my philosophy in the next sol or two and send it to you. I hope we’ll be able to work together again. Ciao.”

He closed the message and sent it, then turned to his blank screen. He had been thinking about Saturn and Titan day and night for two weeks; it had interfered with his usual work. It was a good sign; it was a job that engaged him. So he opened a blank document and began to compose his statement of intent. There was no reason to wait.

He worked on it all afternoon. At suppertime he quit to walk to the Gallerie for dinner. There, the rumor he had been offered the job of Director of the Saturn Commission was already spreading, thanks to an anonymous leak to *Mars This Sol*.

Back at home, there was nothing to do but wait for the voting to close at midnight. Right after midnight, he and Ethel headed to the voting website to see the results.

“It won!” said Ethel. “Twelve hundred thirty-three to eight hundred forty. But how many voters does Mars have?”

“We’ve got thirty-seven hundred voters and thirteen hundred children. So voter turnout was pretty low; just above half.”

“And about one third of all voters voted for the Constitution. That’s dismal.”

“It really is. A Pyrrhic victory.” Will stared at the screen and considered the implications. “Let’s walk to the square. I’m curious to see whether there will be a spontaneous celebration, like there was when independence won.”

“Okay, but I think we can guess it’ll be pretty quiet!”

They put on shoes and sweaters and headed out the airlock. Andalus Square was a two-minute walk from home. Looking up, they could see a few stars through the light reflected off the dome and the gradually settling dust of the end of the dust storm season. The Square was fairly quiet. Its two cafes were still open, but crowds were normal in size.

“Well, there’s Henry and Sandra Smith,” said Will. “Head of the Chamber of Commerce. Naturally he wants to party.”

“No young people,” noted Ethel. “That’s a bad sign.” She pointed. “And there’s Érico.” She waved to their old friend, in spite of recent events. He waved back and walked over.

“Good evening,” he said. He extended his hand to Will. “Congratulations, you won.”

“I’m not so sure.” Will shook hands. “I think the voters wanted a Constitution, but not one with a Landowners Assembly. We’ve never had an election with turnout this low. We had fifty-six percent turnout, and thirty-three percent voted in favor. Two thirds of the voters don’t want the Landowners Assembly.”

“Well, can you blame them, Will?” Érico sounded a bit exasperated.

“No, I can’t. I agree that it was an error, and I will concede it in public.”

“You will?”

“Yes, I will.” He looked around. “There’s got to be a reporter around here somewhere.”

“Walk to the stage and I’m sure one will find you,” suggested Ethel.

They all walked across the square to the northeast side, where a stage was permanently set up. “By the way, congratulations on the appointment to the Directorship of the Saturn Commission,” said Érico.

“Thank you, but I haven’t been appointed; I’ve been invited to apply for the position, and I will do so. I suppose it’s possible they could turn me down.”

“Not likely.”

“After a sol like this one, maybe I should consider moving to Titan!”

Will and Érico both laughed. They stepped up onto the stage and set about activating the lights and microphones. That attracted a crowd of three or four dozen people, mostly middle-aged businessmen who were diehard supporters of the Constitution. The one reporter who had come to the square walked over as well.

Will stepped to the podium. “Good sol, my fellow Marsians. A historic event has just concluded: Marsians have approved a Constitution for their Commonwealth. We are on track to hold an election on May 15<sup>th</sup>, as scheduled, and turn over the reins of sovereignty to a freely elected government on June 20<sup>th</sup>. The peaceful transition in power will continue on Mars.

“Yet this great victory is marred by an obvious flaw: while the Marsian voters want a Constitution, it is clear by the very low voter turnout and polling data that they do not want the Landowners Assembly. It was the principal point of contention in the constitutional debates. Mars has usually had voter turnouts of seventy or eighty percent; yet the Constitution, one of the most important votes in Marsian history, barely attracted half the voters. The message is clear: the voters want an independent Mars under the rule of democratic law, but they do not like the instrument that is the legal basis of their sovereignty.

“There is a recourse, however: the Constitution has a mechanism for amendment. Amendments must be approved by the Mars Council and the voters. The lesson I have taken away from this vote is that the people of Mars want an amendment, and I will personally support the effort to amend our Constitution. No Constitution is perfect; the American Constitution required twelve amendments in its first decade. No doubt our constitution will evolve somewhat as Mars gains experience with self-governance. The victory for us is that we now have a Constitution and a mechanism to amend it. Mars has its feet firmly on the path to its destiny.”

## Election

May 2051

Baltic Dome was quite beautiful. Its southern end had a cobblestone plaza fifty meters square surrounded by condos on three sides; on the fourth, northern side was a large office building that faced both the plaza and newly-filled Baltic Lake north of it. Since the ground dropped sharply toward the lake, the building was six stories high on its northern side, but only three stories high on the southern side. Baltic Lake occupied a former valley that had once crossed the site of the dome and thus was quite deep in the middle. Its northeastern shore was occupied by a fish farm. Beyond the lake, the dome continued northward another one hundred fifty meters, its rolling floor covered by wheat, potato, and sugar beet fields. Now that the dust storm season was over, the fields were covered by young plants.

Will stopped where a northward street issued from the square to admire the view. He looked south where Layercake Mesa rose beyond Baltic Dome, its steep slope scarred by two parallel concrete and nickel-steel footings for Baltic North, a dome that would run all the way to the mesa's crest. The office building next to him, like everything else facing the square, had vinyl siding that made it look like northern European red brick construction, with fake gray slate roofs above. The street passing the office building dropped sharply to the lake, then bent to the left and hugged its western shore. A man and his son were fishing off a dock on the west side, and a group of swans were nesting on an island in the middle of the lake. Because of the downhill slope, Will could see north and westward to the site of the next dome being prepared; Niger, five hundred meters long

and a hundred meters wide, was scheduled to be completed in another seven months. Serengeti would continue another three hundred meters southward in 2053. With a hundred-meter width, like Baltic, the domes would soar fifty meters into the sky, and the slope would give them a spectacular sight line.

Will turned and entered the office building, the Marsian home of the new Saturn Commission. Much of the building would be rented out; the Commission wasn't ready to fill it yet. Much of it wasn't even finished, including the wing where Will's office would be located. But the labs were finished, as was a large meeting room where he was scheduled to meet the Saturn crew at 9:30 a.m.

The meeting room was dominated by a huge map of Titan on one side wall and a spectacular image of Saturn on the other. The front wall was programmable and already had an image of a conference room on the caravel *Polaris*, en route from Earth to Mercury and Mars, where twenty future Titan crew members were gathered. Another thirty were gathered in the conference room in front of him.

Will knew all thirty and a few of the twenty as well. He shook everyone's hand, even Marshall and Amy's. He also looked at their faces and considered how much older they would be in the minimum of eleven years when they returned to Mars, if they ever did; Yuri Severin, the Commander, would be 64; Seiji Takada, 62; Rahula Peres, a newly minted Martech PhD who had arrived on Mars as an eighteen year old, 44; Marshall Elliott, a very capable young geologist, 37. Marshall was the youngest member of the crew so far, too.

Their seats were arranged in a semicircle with Will at one end. He sat and turned to the twenty still milling about informally on the screen. He recognized Sridhar Pradhan,

Ramesh's older cousin and a geochemist turned lunar administrator, who would be 62 when the mission returned. It would be seventeen minutes before his words reached them and settled them down, so Yuri Severin pushed a button to freeze the image; otherwise it would distract them. "I'm looking forward to getting to know the twenty of you as well as I know the thirty of your crew mates here. And once the remaining hundred crew are selected, I want to get to know all of them as well. I recognize a few of you already from your previous stays on Mars, like Sridhar."

"We're really grateful you agreed to come meet with us," said Yuri. "We know you're not the Commissioner yet—officially—but the political process seems to be taking an inordinately long time, and meanwhile we're working in an administrative and leadership vacuum. The mission's scheduled to depart in a bit over two years and it still has no leadership! I think pretty soon the launch will have to be postponed two years, and all because the nations couldn't get their act together!"

"The political wheels have never been known to turn quickly, in spite of the unbending laws of celestial navigation," agreed Will. "It's been four weeks since I was asked to submit my application and there's still no official appointment, even though they send me questions daily. But if I start on July 1, as scheduled, we'll be able to launch on time. The equipment and cargo have all been ordered and we can plan a cargo launch from Earth about a year later."

"It's ridiculous," grumbled Seiji Takada. "The plan to go to Titan—or maybe I should say the Saturnian system, since we'll be there to explore the planet and all hundred or so moons—is at least four years old, and nations have been building toward it by placing probes in the Saturn system for a decade and a half. But a mission can't be

planned by a committee of politicians. It has to be planned rationally by experts who have the authority to make the necessary decisions.”

“I agree,” replied Will. “Plans for the Saturn Commission have drifted in diplomatic retaliation for the mess over Jupiter. Everyone agrees that three or more separate national operations don’t make sense on Callisto, but they’re seeking advantages over each other in setting up the Saturn Commission. There’s really only one solution; set up a neutral ‘civil service’ type organization to run everything and keep the diplomats at arm’s length. Let them provide the money and let us decide how to spend it.”

“What about us?” protested Yuri. “We’re the ones going to Saturn, we should be the experts about the place, so why not let us make most of the decisions!”

Will raised his hand. “I included all of you in that ‘us.’ The Saturn missions will need a support staff, but the actual work has to be done in the Saturnian system because of the three-hour round trip communications time. No matter how good our technology, we’ll never overcome that. My public statements have been quite clear; the Saturn mission has to make the bulk of the decisions, even about cargo manifests and the direction of the research and development. We had that authority here on Mars pretty early. You’ll need it even more than we did.”

“What will we be, anyway?” asked Rahula. “An outpost? A borough? The beginning of the Saturn Commonwealth?”

“The people in the Saturn system will have to decide. We don’t even know whether the entire system ultimately will be one ‘national’ unit; it’s a big, far-flung place, an archipelago of worlds in the ocean of space.”

“So, we go start a colony and see what develops,” said Rahula.

“Oh, but let’s not use the term colony; too many implications of external dominance and exploitation,” said Adam, shaking his head.

“You’re a community, then,” replied Will. “The Saturn community. Eventually you’ll need a university, a research hospital, and all sorts of other institutions, just like Mars.”

“And how will we handle governance?” asked Seiji.

“That’s probably the big delay on my application. We’ll see what the national representatives authorize.”

“That’s getting ahead of things anyway,” said Adam. “I have serious technological concerns. We can test everything at the Martian and lunar poles in cryogenic conditions, but not under Titanian atmospheric conditions. They’ve refused to build a ‘Titan chamber’ on Earth bigger than ten meters long and wide. We’ve done advanced computer simulations of heat flow in cryogenic high pressure conditions, and we have some data from probes on Titan. But we really aren’t sure that ranger engines won’t freeze up on Titan, that domes will retain enough heat, etc.”

“We don’t even know whether galleons can be rotated on the Titan surface!” added Yuri. “The air will introduce a lot of friction and the angle of the floors will have to be changed dramatically after arrival. The gravity is marginal for human health; it’s even less than the moon. Four years will be alright, based on lunar medical research, but families will need more gravity, and families are the key to creation of a Saturn community. We may have to base families on Enceladus where the galleons can be spun to produce artificial gravity!”

“That would be crazy,” said Will. “I still don’t have access to the Commission’s password-protected web pages and internal memos, so I haven’t seen the data. But as soon as I’m official, I want everyone to tell me about problems like these.”

“There are enough engineering issues to make quite an exposé on *Mars This Sol*,” added Adam.

“Then maybe there should be an exposé. Sometimes the media can reform an agency faster than anything else.”

“That reassures us,” added Yuri. “Will, the last few months have been bad for morale. We were excited to be selected for the first mission, then we discovered there was no mechanism to finalize even basic details, like the size of the crew, or to process our input.”

“I know, I picked that up from the grapevine. It’s bureaucracy and politics. But if they agree to hire me, I pledge to you that all those problems will be at an end. You can expect me to want your input on thousands of details, and I will make speedy decisions about all of them. We do know the equipment you’ll be taking with you: two galleons, two caravels, and three Hermes-class shuttles. Those vehicles can hold between 150 and 300 personnel. I’m inclined to go with the lower number, but I can be persuaded otherwise depending on the safety review. I lean toward the lower number because my goal is to send two galleons to Saturn every other year and build up the place.”

“That’s a big commitment!” exclaimed Amy.

“It is, but the nations have to make a steady level of commitment, just like they have to other worlds. Potentially, this is a much bigger commitment than to the Jovian system, partly because the politics of the latter are messy and partly because there’s no

place like Titan. If the low temperatures, the low lighting conditions, and the low gravity can be handled, it has more potential for human settlement than any world in this solar system except Mars. This is one of your primary missions: to determine the world's potential for settlement. I'm confident you'll send back a very positive evaluation, too."

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Will left the meeting with the Saturn crew in an upbeat mood. They asked good questions; he acquired excellent, frank information; and he cheered them up. He even had something to do for them: they needed a cafeteria in their building so they could eat together every sol. He headed for his office and immediately called Ramesh.

"A cafeteria? That'll take a while. I suspect we have the kitchen equipment in storage; I'm asking my attaché right now. But you know, Will, construction still hasn't recovered from the dust storm. Mars didn't get a thousand new workers by January 5<sup>th</sup>, as planned; the last ones didn't land until April 10<sup>th</sup>. That's a three-month delay. It was good for Louise, who was able to get galleon construction on Phobos ahead of schedule, but I lost three-hundred person-months of staffing!"

"I know, Ramesh. Just give me a timeframe. Here it is, April 25. Can you build them a cafeteria by September 1? What if they provide some of the labor?"

"If they can provide the labor, Will, it can be done even faster than September. We've got the equipment."

"Well, the thirty of them have about fifteen construction-related certificates, and they no doubt want to earn more. They'll need to build things on Saturn."

"Have them decide how much labor they can spare and email me, then."

“Okay, will do. Ciao.” Will closed the connection and immediately called Louise Tremblay, chief executive officer of Marcraft, their builder of spacecraft. “Louise, I’d like to arrange a factory tour for the Saturn crew, so they can see galleon construction. Do you have anything set up?”

“We will in another month; wait till then. The *Aleph*’s inner pressure hull is almost ready for the first inflation.”

“I thought that was already inflated.”

“No, it was scheduled for early April, but we’re delayed two months because of the dust storm. Phobos construction’s ahead of schedule, but everything else is behind. Once the pressure hull is launched to Phobos in July, it can be inflated and attached to the hub ring and rotated, and then construction of the interior walls will go forward very fast. The hub ring arrived from Earth three months ago and is already in the galleon hanger.”

“And the outer pressure hull?”

“Launched to Phobos two weeks ago. Now that the dust storm is dissipating we’re launching fifty tonnes of construction supplies every week. Apparently the spaceports hope to catch up with imports and exports by the end of June as well.”

“Yes, the pace is pretty intense. Okay, Louise, thanks. Bye.”

He closed the circuit and turned to videomail. One message was from Alexandra, with whom he was meeting almost daily because of a thousand vexing details concerning the transition. He took a deep breath and played the message.

“Good sol, Will. You need to contact Mr. Griffith in Finance again. I should have received the monthly statement about the redback currency reserve two sols ago. Also, the construction report about the Cassini reactor hasn’t arrived; did you get it? We didn’t

get the weekly cargo inventory update from Gateway, either. But I liked your piece in this morning's *Mars This Sol* about 'Living Our Marsian Values.' It was heartfelt and inspiring. Ciao."

It was kind of her to end the message with praise; usually she just complained. And her offices had gotten quite bad at copying the Commission in the last few months, since it was about to go out of business. He hit reply. "Alexandra, I'll call Griffith again and I'll use strong language. Meanwhile, I'll ask Jeannie to forward it to you. I got the currency reserve update on time. Frankly, I think the Commonwealth might have to sue the Houston office of the Commission because I think they'll withhold the currency reserve as long as possible. Never mind it'll jeopardize the strength and stability of our money; they don't care, and they don't want a hundred million dollars in gold and other assets turned over to the Commonwealth regardless of the clear wording of the treaty.

"I haven't gotten the Cassini reactor construction report; the Chinese are always a week late. But I did get the Gateway inventory. Frankly, I think it has been withheld because the Commonwealth offices haven't been sending us all the reports they generate, lately. So you should call your space transportation office about that problem, because it'll clear up the Gateway inventory problem. Meanwhile, I'll have Jeannie send that to you as well. It's pretty routine.

"Thanks for your kind words about the values essay. I have another essay on that theme taking shape, and two others in draft form. All of a sudden I feel free to write and speak my mind about things! It's quite liberating. And after thirty-five years, I've actually gotten reasonably good at writing essays. Ciao."

He sent the reply and saw that his daily interrogation from Earth had arrived. He decided to get it over with and activated the message.

“Good sol, Dr. Elliott,” exclaimed Pete Zubko. “The national representatives have had a productive email exchange today and have yet another question for you: Should the Saturn One crew have the authority to decide whether to send missions to the various moons? How much should the Commission be involved in such decisions? Thank you. Goodbye.”

He frowned; it was a silly hypothetical question. It would seem they wanted to build up an inventory of his positions, so they’d have leverage later if he made a decision they disliked. Will thought a moment, then hit reply. “Thank you, Mr. Representative. For the foreseeable future, no flight should be launched from the Saturn Outpost, wherever it is located, without the Director’s approval. We must put together a four-year plan to visit Mimas, Enceladus, Iapetus, Phoebe, and a few of the other larger satellites. If we could visit Pan or one of the other ring-shepherding satellites that would be spectacular. That’s why we have two caravels and three shuttles, after all. Perhaps in a decade, if the outpost gets large enough and the equipment inventory increases, they could make their own plans. But not in the next five years. Ciao.” He sent the message and added it to the bank of commitments he had made. They were taking the fun out of the job.

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Two weeks later, the first Future of Mars Forum was held in Aurorae. The turnout was surprisingly small; perhaps half the voters. Nevertheless, discussion was lively, especially over the role of landowners in the government.

“You were pretty quiet, dad,” said Marshall during a walk around the outpost after it was over.

“I answered a few questions. I didn’t have a statement or point to make. I’ve made all my points in the series in *Mars This Sol* anyway.”

“I don’t know how you do it. Even at this meeting you were criticized—indirectly—for delaying the start of independence and championing the landowners. But you’re never angry. I couldn’t do it.” Marshall shook his head.

Will shrugged. “I’ve already defended myself. I was interviewed by Tina for an hour last month and just about everyone has seen it. I wasn’t going to raise personal issues or offer a personal defense here; this isn’t the place. We have to focus on Mars at these Forums, not on people.”

“But *how* do you stay calm?”

“I don’t know.” Will considered. “I suppose the key is detachment. Mom taught me many decades ago that when making moral decisions—and all decisions are moral ones—you always have to look past your feelings and focus on the principles. Always focus on the principles. Be forgetful of yourself. If the principles lead you in a direction that also is favorable to yourself or your desires, you’re lucky; it’s a bounty. The hard part is when the principles urge you to act in a way that appears to be against your best interests.” He shrugged. “Then you do what is right anyway.”

“That’s the hard part alright.”

Will smiled. “I didn’t follow that principle all the time when raising Liz and you. Emotions get intense at home.”

“I don’t know, I often thought you and mom weren’t being fair! Until I got older, anyway.”

“Sometimes you have to indulge your children a bit. Lord knows, the world won’t indulge them much when they grow up.”

“But still, when you’re attacked in print or even face-to-face. . . it must be very hard to stay calm.”

“It’s almost impossible! It’s best to scream a bit in private. I complain to Ethel regularly. I have to deal with it somehow. But I *can’t* react publicly; it’s against our principles. It’s alright to respond passionately if the passion helps to make a point or correct an injustice, but that’s different from getting angry at someone in public or holding a grudge. I’ve done both of those things and felt bad afterwards. I’ve apologized. And my ability to control my reactions is one of my strengths as an administrator, because a lot of people who work for me feel free to disagree with my positions to my face. One of the hardest problems an administrator faces is acquiring differing perspectives or frank assessments of the results of one’s policies. One is not under an obligation to tell everyone when a policy decision was in error, but one is obligated to fix the policy, to repair any serious damage one has done, and to answer the public’s fair questions about it. And sometimes one has to deal with the unfair questions as well.” Will sighed. “Of course, it isn’t easy to figure out when a decision is wrong or what the damage is. I don’t know what we should do about the landowners because we’ve already given them a privilege and now it’s hard to take it away. What’s right? The people have spoken; they have decided that ‘right’ does not involve a landowner’s assembly. What damage have we done to Marsian governance by giving the landowners privileges? What

do we do about the damage? Maybe the damage will be repaired by reversing the decision. What do we do about the landowners' resentment and the damage the loss of privileges will cause? I don't know what to do about that. I lose sleep over these questions. I'm glad I won't have to deal with them."

"Saturn's going to be complicated enough."

"That's for sure! Money always comes with strings, and Saturn needs a lot of it. So we'll do our best to satisfy the donors and to loosen the strings they tie around the money and build the best Saturn project we can. And you know something? Fifty years from now, the results will be good. I won't live to see it, but I'm sure of it. Look what we have here? This place required the same balancing act." They stopped; they were in El Dorado's Plaza de San Juan Cupertino at the time, a neat space with a Latin American feel to it, clean and symmetrical, with an attractive cathedral at the end. "I've argued over money and control for decades. And in the end we got most of the money and we got to govern ourselves. It'll be harder for Saturn in some ways because it's a lot farther from Earth, transportation will be a lot more expensive, and it doesn't have gold or PGMs."

"Saturn has helium 3."

"If the technology to extract it can be developed. Not to mention the fusion reactors to use it; they're always twenty years away. Meanwhile, I think we can get the money and minimize the strings, because everyone knows people do their best when they have control over their lives and their work. Saturn has to have as much independence as possible from the beginning; it's a question of creative control and empowerment. Just like at Mars."

“But how do you get the nations to give up their self-interest? Look at the Jupiter mess.”

“You don’t ask them to give up their self-interest, but to redefine it as a broad, long-term benefit rather than a narrow short-term one. The Jupiter Commission would benefit from such a recalculation of self interests.”

Marshall nodded. “Amy and I are very excited about what we will be building on Saturn. I don’t know if we’ll come back, dad.”

“I know. I’m torn; I hope you come back for my own sake, but I hope you stay there for your sake. Because it’s exciting to be a founder, Marshall, and I know you’ll make a big contribution.” He smiled. “It’s back to the problem of principles, again, but I don’t know whether I can let go of my feelings on that one.”

Marshall looked at his dad, saw a tear in his eye, and felt tears form in his eyes as well. “I understand, dad. I feel torn as well.”

The two men looked at each other, silently exchanging an emotional bond. Then Will turned and started back toward Andalus Dome via the agricultural domes. Father and son said little else to each other.

They parted at Andalus and Will walked home. Ethel was sitting in the living room watching t.v. “What’s the news?” he asked.

“The Caribbean Economic Community wants into the Grand Union.”

“Really? The Latin American Union wouldn’t take them.”

“The Grand Union won’t offer much financial assistance, and it’ll be spread out among a large number of nations. They think they can join in 2055.”

“That soon? That’s when Korea plans to join.”

“Well, between the rich south and the impoverished north, Korea is about in the same shape as the Caribbean. The news had a good summary of the Forum, too. They even included your statement about how elections should be the chance for voters to chose someone based on honesty, integrity, devotion to public service, competence, and experience, and not a discussion of personalities or a contest over positions.”

“Good; that’s a point that people don’t understand unless they hear it again and again. I was pleased by what I heard. I got the impression a lot of people felt some sort of elected body for landowners was alright if it was based on one person-one vote and if it had authority only over property tax rates and their expenditure.”

“Yes, several people discussed that idea. It’s a possibility, I suppose. If corporations want a vote, they can have all the members of their board buy land.”

Will looked at the screen. “What show is this?”

“My soap opera.”

“My dear, you have too much time on your hands.”

“I can’t work all the time, and we have an empty nest and no grandchildren.”

“And Marshall’s kids are going to be raised on Titan. We were talking and he said he didn’t know whether they’d be back.”

“I fear that will be the case. It’ll be interesting, trying to send them birthday presents three years early.”

Will nodded and glanced at his attaché, which was sitting on a table nearby. It showed a message from Earth. He walked over and picked it up. “Damn, yet another question from Zubko.”

“They should just ask you to write a dissertation about managing a commission. Or better yet, list every decision you plan to make in the next five years.”

“I think they’ve done the latter.” He reached over and pushed play. Zubko’s face looked upbeat.

“Good sol, Will. The Board of National Representatives deliberated by videoconference earlier this morning and decided unanimously to offer you the position of Director starting immediately or any time you choose to begin work. The Saturn Project has been falling behind schedule. We’re confident you will pick up the pieces and move it forward with vigor. We look forward to meeting with you by videoconference tomorrow or another date convenient to you. Please confirm your acceptance of the position and prepare a statement for the media. Let us know if you have any questions. Goodbye.”

Will turned to her. “They finally did it!”

“Congratulations!” She walked over and hugged and kissed him. “It only took them six weeks. When will you start?”

“Right away, half time. It wouldn’t be ethical to hold two full-time jobs. Commissioner is no longer engaging all my time; the big decisions about the transition are all made.”

“What’s the pay?”

“The same; a million U.S. dollars per year. A paltry sum based on the Marsian cost of living.”

“Oh, it isn’t that bad! It’s five times our base salary.” She pointed to the attaché.  
“Go make your call and issue the statement. I want to watch my soap. We can celebrate later.”

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*You’ll love the new house.*

Ramesh’s words rang in her ears as he drove the ranger up Little Colorado Canyon toward their newly finished house. Sarah stared at the wildly spectacular cliffs and boulder falls of the canyon’s walls, contemplating their great age and the innocence of her five-month old twins, sleeping against her chest. Three year old Rajiv sat between mom and dad and stared in glee at the scenery around them.

She hated the new house even though she hadn’t seen it. She had hated it ever since construction had started five months earlier. Now she wondered how she would deal with it. She didn’t want to stop hating it, because she hated what it stood for.

The ranger tilted sharply upward and started up a very steep stretch of road. It wound around a house-sized boulder that had lain there ever since a huge landslide had deposited it and a billion tonnes of relatives a mere billion years earlier. The road wound around another, even larger boulder, then up a steep stretch of bare rock. Then suddenly the road flattened out. It had reached the flattish top of the landslide, which had produced a relatively wide, rolling valley floor for a few hundred meters.

And there it was, a pair of transparent plastic bubbles carved out of the wilderness twenty meters from the highway. One bubble was large—a standard thirty-five by seventy-five—and its lush interior greenery was an incongruous shock set against aging cliffs of crumbling basalt and impact breccia, alternating with dune sandstone and flood

sediments rising over a kilometer above their heads. The other bubble was comparatively tiny but was twenty meters by ten; it held their new house.

Ramesh slowed the ranger and steered off the road, down a dirt track to the garage and airlock. He drove into the garage and its door closed behind them. Ramesh activated the air flood. In three minutes the interior was pressurized. “Okay, we can step out now,” he said to Rajiv, obviously delighted by his son’s excitement. He pushed a button that unlocked the passenger side door and they got out in that direction. The ranger completely filled the garage except for one narrow walkway.

Sarah headed to the second hatch, which led straight to the house, but Ramesh shook his head. “This one. We’ll go in through the mall.”

“‘The mall’?” asked Sarah, startled by the term.

“Yes,” he replied, irritated. He turned the hatch, opened it, and they entered the airlock. Once the hatch was tightly shut they opened the other side and stepped into the big bubble.

“Wow!” exclaimed Rajiv. He stepped forward onto a narrow sidewalk that ran along the east side of the bubble. The entire thirty-five by seventy-five was covered by clover, forming a meadow surrounded by a desolate plain, above which rose an escarpment slope so tall and magnificent it was frightening. The bubble was almost perfectly transparent except for a slight bluish tint and embedded kevlar cables every meter. Rajiv let out a whoop and started to run across the clover.

“Well, he likes it,” said Sarah. “But can we afford this? How much did it cost?”

“The bubble was 1.6 million redbacks; the soil and clover raised it to 2 million. But Kristoff will use this for agriculture. As soon as the clover starts to flower he’ll haul

in a beehive and make honey, and when the clover reaches its maximum height—half a meter, believe it or not—he'll cut it. It's in demand for fodder right now. After that he'll plant other pasture-like crops.”

“But why do we need something like this?”

“My dear, the mall can have up to twenty of the smaller housing bubbles attached to it. This is the centerpiece of a suburban development, and the other houses will pay for ours. Simeon Afigbo and I are partnering; I'll sell the lots and he'll build the houses. At some point the mall will become a nice common area, maybe with a swimming pool.”

“And what will you call this village?”

“I don't know; any ideas?”

Sarah considered. “Well, I wouldn't call this ‘the mall.’ I'd call it ‘the meadow.’”

Ramesh's face lit up. “Excellent idea! Maybe we should call it ‘Pradhan Meadows’!”

“Or how about ‘the Meadows’? I think you'll get farther without attaching your name to it. This place is small; everyone will know whose it is.”

“Perhaps,” he said ambivalently.

Rajiv had made it most of the way across the bubble, so she shouted “Rajiv! Come back!” The little boy turned and ran back across the clover.

Ramesh opened the hatch nearby. They all stepped into the house's airlock, a bathroom-sized space. They opened the other hatch and stepped into the living room, a big, high-ceilinged empty space with a cream carpet and lots of light pouring in from windows in the rear. Rajiv dashed across the living room and stared out through heavy sliding glass doors at their small private garden beyond.

“This has a lot of potential,” said Sarah. She liked the space. They had entered from the western end. The house had windows on the north side as well, where a cliff and talis pile rose fifty meters away. The windows on the south side were relatively small, probably because another housing bubble would eventually be placed there. She walked into the kitchen, which was already generously outfitted with a four-burner stove—not the usual two-burner models most flats had—a refrigerator, a double sink, a dishwasher, and lots of cabinets. “Where did you get the dishwasher? I’ve never seen any up here.”

“Oh, there are a few of them around,” he replied with a smile, pleased by her surprise and pleasure.

He led her through the dining room, a wing of the living room. She looked at the five by ten meter back garden, which was still largely bare. “I want to set up a little fountain back here,” Ramesh explained. “The boulders outside the bubble are to keep vehicles away, but they also have been set up to provide the garden a transition to the rangeland.”

“I see some potential here,” she replied. “Let’s see the upstairs. You’ve set this place up to entertain a lot of people.”

“They’ll come, believe me.”

“What voting district are we in, by the way? Where will we be voting next Sunsol?”

“I asked the Borough Council to keep us in Aurorae District 3.”

She nodded and they headed up the stairs. The second floor had three regular bedrooms, a bathroom, and a larger master bedroom with a private bathroom. The master bedroom occupied the eastern end of the house facing the rear garden and even had a

small balcony. “Our furniture is inadequate for this place, and I’m sure we can’t afford to buy new ones,” she noted.

“The house was another 2.5 million, so we need to watch our expenses. But once we sell a lot or two we’ll have cash.” He looked at her. “So, do you like it?”

She nodded. “Yes, it’s really beautiful! So large and bright!”

“Good. The roof provides plenty of radiation shielding as long as the beds aren’t against an outside wall. So the house is safe. There are two airlocks, one to the meadow and one to the garage. We’ve got two tonnes of spare water in tanks on the roof. We won’t need to haul oxygen here because the clover makes plenty. So we’re in great shape.”

“But the transportation; right now I can do some shopping over lunch and walk home with it.”

“You can shop after work right before catching a bus here. It’ll pull into the garage and dock to the airlock. There are twelve buses scheduled between Aurorae and the escarpment outposts per sol, and we can call a robotic ranger-taxi any time and it’ll arrive within half an hour. You’ll have to plan a bit.”

“Yes, especially since I’ll be hauling kids and shopping up here at once.”

“We’ll get a little cart that will hold both and will fit on the bus.”

“That would work. But what about events like Northern Equinox this weekend? We’ll want to be at the outpost all day, which will be hard without a place for the kids to nap.”

“We can set up a bed for them in my office. It’s big enough.”

She considered the situation. The house was beautiful; she was surprised, but she liked it. “Okay. If we’re safe and we aren’t cut off, let’s give it a try.”

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Will waited until five minutes before midnight to cast his vote. He wasn’t sure why he hesitated; the delay gave him more time to think who he would vote for, but he didn’t spend much time thinking. Perhaps it was the thought that the vote carried far more weight than it had before; or perhaps it was a premonition.

“I don’t know why that was so hard,” he said to Ethel, when he finished.

“It made me appreciate democracy, to be voting for a *sovereign* government. And with only five thousand of us up here, there was a feeling my vote carried weight.”

“Yes; we have only thirty-seven hundred voters. That makes it feel even more important. One thing that threw me off a bit was the districting of Aurorae; I never was sure who was in my district. I tried voting for several people and the computer rejected them because they were in district 1 or district 3.”

“Yes, I had that problem, too. I could see keeping district 4 for the folks on top of the escarpment, but I have no idea where people down here live. I made a comment about that problem in the ‘comment’ box before casting my vote.”

“I should have done that.” Will glanced at the chronometer. “One minute before the voting closes. I wonder what the turnout will be. It’s been declining.”

“It should be higher than for the vote on the Constitution. At least I hope it will be. There’s been good media support for the election.”

He nodded. “And not just *Mars This Sol*; I was pleased to see the CNN and BBC pieces. The reporters are getting good at random videomail calls from our telephone book.”

“No, I think they’re calling people through the ethnic club membership lists. The BBC piece managed to interview three U.K. residents and one Indian, and I bet all of them are members of the Britain Club.” She pointed to the chronometer, which had just clicked over from 24:39 to 0:00. “It’s time, let’s look.”

Will nodded and popped up a list of websites. He chose the election site. They had to wait a surprisingly long four seconds for it to refresh; traffic was heavy.

“Érico, John, Ruhullah, Ramesh, Madhu, Louise, Alexandra, Lal, Eve, Yevgeny, Father Greg, Ernesto. . . they elected me!”

“There you are!” Ethel smiled, delighted. “Congratulations!” She leaned over and kissed him. “They have good taste. I voted for you.”

“Thanks! Well, I suppose the Mars Legislative Council won’t take that much time. I can still direct the Saturn Commission.”

“Sure. You got 201 votes out of 630 cast in district 2; not bad, for someone never elected to office here before.”

“And 1414 votes were cast in Aurorae altogether; the borough has 1590 votes, so about ninety percent of the voters voted.”

“Not bad. I wish everyone voted, but ninety percent is better than just about everywhere on Earth.”

“Whew, I’m still in a bit of shock! I wasn’t expecting to be elected.”

She leaned over and kissed him again. “I’m glad. You’re a great choice, even if it means I won’t see you so much. You have a lot to offer in terms of ideas.”

“Thank you. Oh, look, they elected Bruce Cowdrey to the Council.”

“He was fifteenth, with 70 votes out of 470 in district 2; that’s not a lot. But he didn’t campaign this time, so I guess that’s alright.”

“I wonder whether it’s a kind of protest vote.”

“Against what? The no-campaigning rule?”

He nodded. “There’s still about twenty or twenty-five percent who dislike it. And look how much Alexandra’s support has dropped; she got only 280 votes out of 630. Less than half.”

“I’m surprised, considering she’s Chief Minister. But then she has made several unpopular moves in the last year, opposing immediate independence, then supporting the Constitution.”

“And she never was an articulate voice for either position. This strikes me as a vote of no confidence.”

“Well, that’s up to the Legislative Council that you are now on!” replied Ethel, with a smile. “Come on, it’s late; let’s go to bed.”

## Chief Minister

June 1, 2051

The sun was almost exactly overhead when the members of the newly elected Mars Legislative Council gathered at the Commonwealth Building for their first meeting. Ramesh Pradhan entered with a spring in his step; he had been reelected with slightly more than half the votes in District 3, which felt like a mandate to him. Alexandra entered almost simultaneously with a bit more hesitation. Will followed, feeling humbled by the responsibility that weighed on his shoulders and a bit of dread that after three decades of wrangles and compromises his leadership was still in demand. Ethel accompanied him; she wanted to watch the historic event.

The legislative chamber had forty-nine large, comfortable chairs arrayed in two circular rows that wrapped three quarters of the way around the room. The twenty first-time legislators, including Elliott, were seated in the back row; otherwise the seats had been assigned randomly. The exceptions were the seats of the Speaker and the Chief Minister, which were two of six on a low platform that occupied the remaining quarter of the circle. The other seats on the platform were for special guests and speakers; they had one that sol. On both sides of the platform was an area for assistants and secretaries of the Council; a block of seats on the right was reserved for dignitaries such as the three members of the Supreme Court and the American and Chinese representatives; a symmetrical block was reserved for a dozen media representatives. The rest of the seats were for the public, which had scrambled for the limited number of tickets. Ethel managed to sit behind him.

At 12:30, Alexandra Lescov rose from her seat and stepped to the podium. “Will the Legislative Council of a free Mars please come to order,” she called enthusiastically, and the response was loud applause. Everyone looked at each other at once and most were smiling; the room had a palpable energy in it.

“My friends, last weekend the people of Mars elected their first sovereign government. In three weeks, at noon on June 22, the Mars Commission will dissolve and the Commonwealth authority will become the government of the Commonwealth of Mars. Many of us can look back over three decades of growth of the human presence on Dusty Red, and we marvel at the progress. This world’s continued evolution and expansion will soon be fully in our hands. To help us reflect on the past and future, Yoshiyaki Suzuki, Abbot of the Zen monastery, will give us a few words and a moment of meditation.”

Alexandra sat and Yoshiyaki, who was seated with her and with the outgoing chair of the body, stepped to the podium. He was an impressive sight in his black robes. “It is a great privilege to address this body on the occasion of its advancement to the status of a fully sovereign legislature,” he began. “Legislatures are dedicated to careful and thorough deliberation in order to find the truth and do what is right. But let us all remember that truth is found in many ways; it can be seen in the flash of a ray of sunlight, the flickering of the wings of a butterfly, the moment of insight that floods our minds when they are empty, open, and receptive. This body needs to open itself to spontaneous insights as well, to the unexpected wisdom that suddenly is available to all of us. To do this we must empty our minds. So I would ask all of you to assume a comfortable position, to close your eyes, to focus your thought on your breathing, and free yourselves

of all cares, concerns, thoughts, worries, attachments, and desires.” Then Yoshiyaki stepped down from the platform, sat crosslegged in the center of the chamber, and began to meditate.

The legislators closed their eyes and turned to their breathing. Some fidgeted; as the silence endured, a few smiled or looked around; but they said nothing and preserved the peaceful atmosphere. Yoshiyaki seemed to forget that most of the others around him were not familiar with meditation. Will closed his eyes and said prayers silently to himself. Alexandra tried to relax and focused on how the business of the sol would go and how it would affect her life. Érico relaxed, sat, and considered how much better a physiological relaxation process was than an invocation to a probably nonexistent deity. For Ramesh the sitting was torture; he was a mover and he did not appreciate silence or sitting. But what felt like an eternity to him proved to be three minutes only, when Yoshiyaki rose and Ramesh glanced at his watch.

Lal Shankaraman rose from the seat of the outgoing chair, next to Alexandra’s. “My friends, we have fairly basic business to take care of this afternoon. We have to elect a Speaker of the Legislature, as the new chair of this body will be called, and a Clerk of the Legislature to oversee our records. Both must be members of this body. They do not require a majority vote, just a plurality, assuming we continue with the rules of the Residents Council of which we are the successors. Following that election we will turn to the election of a Chief Minister, the chief executive officer of the Commonwealth. The Chief Minister requires a majority vote and can be recalled by this body at any time by a two-thirds vote. I now open the floor to a discussion of the order of business and the rules of election of the officers of this body.”

There was a pause, then Yuri Severin raised his hand. Lal nodded. “Mr. Chair, I recommend that we accept the order of business and the rules as stated.”

“I second!” exclaimed three others.

“Any discussion?” Lal paused. There was none. “All those in favor?” Hands shot up. “The motion passes. The chairman appoints as tellers Emily Scoville-Rahmani, Vanessa Smith, and Xavier Zare. Will you please come forward and distribute the ballots.”

They walked around the room with specially printed ballots and jars of pens that said “Mars Legislative Council 2051” on them. The fanciness of the latter compensated for the strangeness of doing something the old fashioned way on paper, without an electronic screen. Silence descended and everyone solemnly wrote the name of the Speaker on one ballot and the name of the Clerk on another. Emily, Vanessa, and Xavier walked around to collect the ballots, then sat at a table to separate them into piles. Meanwhile, Lal rose and opened the floor to informal discussion, and the legislators chatted amongst themselves.

It took ten minutes to count all the piles, write the results on an attaché screen, then announce the results. Emily stood to read the result at the same time that the numbers appeared on everyone’s screens. “As you can see, there was no tie, so we have our officers. Lal Shankaraman received twenty-seven votes for Speaker and Emily Scoville-Rahmani received fifteen for clerk.” She stumbled over reading her own name, a bit embarrassed and possibly surprised. One could predict that Lal likely would be elected Speaker because he was the outgoing chair and had done a good job. But the

outgoing body had not had an elected clerk, so the clerk was more of a surprise. The two of them, constitutionally, were the second and third in the line of succession.

Lal returned to the podium. “I’m sure Emily will join me in asking all of you to support and assist us in serving this body. We are now ready to vote for Chief Minister. The Constitution specifies that there is to be no mention of specific persons before voting and that the voters should be reminded that ‘they should consider the person who best combines the characteristics of honesty, integrity, mature experience, wisdom, open-mindedness, humility, and decisiveness.’ Our governing system assumes the principle that we elect people based on their character, not based on their stands and positions on issues. The Chief Minister does not have to be a member of this body. With the reminder having been read, I ask the tellers to distribute the ballot. Could we have silence for the actual vote.”

A profound, solemn silence descended on the room and again the legislators often looked around the room, sometimes excited to vote, sometimes wondering who to vote for. Others looked downward or closed their eyes to concentrate and consider where their conscience was leading them. Many felt a profundity or solemnity settle on the chamber as its members participated collectively in a process of great import. No one spoke, and one by one the legislators put pen to paper and wrote down a name.

After three minutes the tellers began to walk around and collect the ballots. They retreated to their counting table to build piles of ballots, and even from a distance one could see that no one pile was accumulating half the votes. Emily stepped to the podium. “The results are as follows: Érico Lopes, 14; Alexandra Lescov, 11; Will Elliott, 10; Lal

Shankaraman, 9; Yuri Severin, 4; Father Greg Harris and Ramesh Pradhan, one vote each.”

Everyone looked at each other and most were startled; Alexandra, the outgoing Chief Minister, had gotten barely a quarter of the total. Érico clearly was startled, but said nothing. Will was startled that he had gotten any votes and worried about the implications. Ramesh looked at the floor, embarrassed and wondering whether anyone would realize he had voted for himself.

“Another round,” announced Lal, and the tellers passed out ballots again. Some scribbled their choice quickly, but more people took their time and meditated a while; tellers were waiting four, then five minutes for the voters to complete their task. Then they arranged the votes into piles and this time there were only four piles. “The results are as follows: Érico Lopes, 18; Will Elliott, 14; Alexandra Lescov, 9; Lal Shankaraman, 8,” announced Emily.

Again there was murmuring in the chamber as everyone digested the result. Érico raised his hand. “Mr. Speaker, may I have the floor briefly?”

“Yes, you may, Dr. Lopes.”

Érico rose. “Two years ago, when I was nominated as Chief Minister, I reminded my fellow legislators that I desired to retire from active sol-to-sol public service and resume my career as a geophysicist. That desire is unchanged.” He sat.

“Thank you. Let us distribute a third round of ballots,” said Lal.

The tellers walked around again handing out ballots. The scribbling of pen on paper could again be heard on the chamber. The ballots were collected and counted.

Emily walked back to the lectern. “The results are as follows: Will Elliott, 22; Lal Shankaraman, 14; Alexandra Lescov, 7; Érico Lopes, 6,” she read solemnly. “The Chief Minister needs 25 votes to be elected.”

“Another round,” called Lal a bit nervously, since his vote was now growing. Will looked down at the floor intently, as if he could pray away the momentum he suddenly discovered that he had. He had not expected this to happen and debated whether he should stand and make an announcement similar to Érico’s. He could not be Chief Minister and Director of the Saturn Commission at once. He wasn’t sure he wanted to be Chief Minister; it was an exciting idea, but he was exhausted by the demands of running Mars for three decades. He turned to look at Ethel, who gazed back at him as if she was trying to comfort him. He decided to say nothing.

The ballots were distributed and everyone wrote down one name, then raised their hand with the folded ballot between their fingers. The tellers plucked them and took them to the counting table, where five piles grew, two of which were noticeably taller than the others.

Emily returned to the lectern, but this time her step was quicker and more triumphant. “The results are as follows: Will Elliott, 27; Lal Shankaraman, 17; Alexandra Lescov, 2; Érico Lopes, 2; Yuri Severin, 1,” she read.

Everyone turned to Will, then applause broke out. They had a Chief Minister. Will Elliott nodded to the legislators, startled, trying to look calm, trying to collect his thoughts. He looked at the public gathered in the chamber which had jumped to its feet and was applauding enthusiastically. He glanced at the television camera, wondering how

many millions on Earth were tuned in. He turned to Ethel and she rose and walked over. He stood; they embraced and kissed.

“Congratulations,” she whispered.

“Thanks! But I don’t know whether I want this!”

“It’s better that the person elected Chief Minister not want to be Chief Minister.”

“I don’t know whether Bahá’ís can serve as the head of state, when elected this way.”

“We’ll ask.”

“I’ll have to resign from the National Spiritual Assembly and the Saturn Commission. I can’t do them at the same time.”

“We’ll worry about that later.”

Ethel pulled back and the others around Will reached out with their hands to offer congratulations. He began to shake hands even though he still looked a bit shocked.

“Could we have order,” called out Lal. “Order please.” He paused to wait for the applause to quiet. Will sat. “Dr. Elliott, you have been called by your fellow citizens. Will you please step up to the lectern and respond.”

Will rose and walked to the lectern, uncertain what to say. He looked over the crowd again and thought about the dozen or so members of the body who had switched their votes from Érico and Alexandra to Lal possibly because they didn’t want him. It was not obvious who those persons were because almost everyone was smiling at him. “Well, it doesn’t pay quite as well as being Director of the Saturn Commission,” he quipped to everyone.

“This will make the transition from Commission to Commonwealth simpler!”  
commented Emily, from her chair nearby.

Will smiled. “Yes, I won’t have to spend hours briefing myself. But seriously, I am overwhelmed by this unexpected honor. I never would have imagined that an independent Mars would call on me to provide it with leadership. I feel profoundly inadequate to discharge so immense a task. But I pledge to you that I will devote every ounce of energy and every breath I take to the defense of our Constitution and the advancement of our world. Mars is the planet of promise. Together we can fulfill its destiny.”

EM 14 Aug. 2050  
Vernal Equinox, July 21, 2049 (+306 Earth days)  
Autumnal Equinox: Aug. 3, 2050 (+381 Earth days)  
Vernal Equinox, May 22, 2051 (+306 Earth days)  
Autumnal Equinox, June 7, 2052 (+381 days)

C15E departs Earth, 1 Jan. 2050  
C15M departs Mars, 19 Feb. 2050  
C15E reaches Mars, 23 April 2050  
C15M reaches Earth, 29 May 2050  
C15E departs Mars, 30 June 2050  
C15M1 departs Earth, 26 June 2050  
C15M2 departs Earth, 9 July 2050  
Opposition, 14 Aug 2050  
C15E returns to Earth, 12 Oct. 2050  
C15M2 returns to Mars, 9 Nov. 2050 (4 month flight)  
C15M1 returns to Mars, 26 Dec. 2050 (6 month flight)  
C15E2 departs Mars 10 Jan. 2051  
C15E2 passes Mercury, 20 June 2051  
C15E2 reaches Earth, 20 Sept. 2051

Mercury 1 leaves Earth 14 April 2051  
Mercury 1 passes Mercury, 14 July 2051  
Mercury 1 reaches Mars, 24 December 2051  
Mercury 1 flies straight back to Earth, 28 April 2052  
Mercury 2 flies straight to Mars, 28 Aug. 2052  
EM 28 Oct. 2052  
Mercury 1 reaches Earth 28 Nov. 2052 (flies back to Mercury, etc., 28 June 2053)  
Mercury 2 reaches Mars, 28 Jan. 2053  
Mercury 2 leaves Mars for Mercury, 28 March 2053  
Mercury 1 leaves Earth for Mercury, 28 June 2053  
Mercury 2 reaches Mercury, 8 Sept. 2053  
Mercury 1 reaches Mercury, 28 Sept. 2053  
Mercury 2 returns to Earth, 8 Dec. 2053  
Mercury 1 reaches Mars 8 March 2054

Who goes to Callisto on the US flight? Maybe Thierry Colmar and Zach Hersey

1. Ground Rules 2  
 The caravel *Rigel* arrives at Mars with representatives of five major nations on the Mars Commission. Will and his staff debate the issue of independence. Will meets with the leaders of the Independence Club and negotiates ground rules for the debate.  
 DATE: April 21, 2050
2. The Representatives 15  
 The five representatives arrive, are welcomed, and gather to discuss their strategy. They agree that their goal should be keeping the signatories on the independence petition under fifty percent.  
 DATE: April 23, 2050
3. Arrivals 25  
 Mike Tobin and Skip Carson arrive. Mike proposes to Liz immediately. He talks to Marshall. Bahá'í convention elects a National Spiritual Assembly. National representatives scatter to the other boroughs.  
 DATE: late April, 2050
4. Discoveries 39  
 Will talks to Greg and John about the public's opinion shifts; he talks to Gus Subchak about investments, business, and Stark's marijuana; to Zupko about strategy; and to Stark about marijuana and Marines; to Yevgeny about verification.  
 DATE: early May 2050
5. Accident 62  
 Yevgeny reports the information he has obtained, after eight sols. Marshall and Amy get married. An airlock accident at Uzboi injured eleven people (four later die).  
 DATE: mid May
6. Implications 83  
 Érico talks to Henry Smith about his support for independence and gets his pledge to build support in the business community. Will convinces the national representatives to support the Independence Forum. The Forum leads to increased support for independence. Will's family all agree to sign.  
 DATE: May 5-10, 2050
7. The Morning After 110  
 Will and Ethel go to the House of Worship to pray; Will's mom has a mild stroke; Will meets with the national representatives who eventually ask him to serve on their negotiating team, but he declines; he and Johnny Lind have a confrontation in the Gallerie.  
 DATE: 11 May 2050
8. Deadlock 124  
 Brian Stark meets Will and tells him the plan to send troops is getting more serious. Will urges Brian to fight it. Mike and Liz sponsor a Sunsol afternoon dinner for Marshall,

Amy, and the Powells, and Mike ridicules the latter's beliefs. Liz comes home to find that Will has agreed to chair the negotiations.

DATE: 18-19 May 2050

9. Negotiations

142

Will moves the negotiations to the Gallerie and resolves the start date for independence. He meets with Pete Zubko and makes some progress with him. Tokyo hit by a massive earthquake.

DATE: 20-26 May 2050

10. Treaty of Aurorae

154

Will and Érico meet to discuss what to do with the landowners; Will meets with Joshua Ivakhiv and convinces him to stay on and help represent land owners in the negotiations; Will arbitrates a resolution of the territorial jurisdiction of Mars; the last details are announced in a public gathering in Andalus Square just before the national reps are scheduled to leave.

DATE: late May 2050

11. Changes

174

Will talks to Rick Page about the implications of Marsian independence for the moon and to Olaf Norlander about its implications for Mercury. Ramesh tells him of a one-week delay in construction caused by the independence debate. Will's mother suddenly passes away. Helmut asks Charles Vickers to send two caravels to Ceres; he considers the idea. After Katherine's funeral, Mike Tobin learns he has been accepted to Mercury. Liz will apply as well.

Date: early June 2050

12. Governance

190

Will talks to Joshua, Skip, and Vanessa at the Constitutional Convention about landowner rights and voting. New species found in Elysium; Latin America joining Grand Union in 2053. Autumnal Equinox: Aug. 3, 2050. At the equinox fair Will talks to Helmut about electing a Ceres government. Ramesh decides to move out of outpost, Sarah's furious. Mike and Liz get married.

Date: Aug/Sept. 2050

13. Category 5

211

Dust storm season starts, forcing new plans to deorbit 900 new migrants; Ramesh learns his house plans were rejected by the Planning and Zoning board and he says he'll sue. The Aurorae Football Stadium finished; Marshall, Liz, Mike, and Amy discuss Mercury and Saturn plans, fashions, and the fact that Canada and India decide to join the Grand Union in 2054 and 2057 respectively.

DATE: Oct./Nov 2050

14. Mercury

228

Last ships from Earth arrive; Mars has 5,000 people. Constitution debate begins, especially over the role of landowners. Ramesh's house plan is approved by the court.

Asteroid Commission agree Commander can be elected six months after Ceres arrival. Mercury trip begins; Skip Carson leaves, as do Liz and Mike. Japan and Australia decide to join Grand Union in 2054; Amy and Marshall accepted for first Titan mission, to leave Mars June 2053 (two year flight out, minimum five year stay; Jupiter flyby on way out)  
DATE: Jan. 2051

15. Constitution 244

Will accepts position as Director of the Saturn Commission but sets terms of employment; Indonesia, Pakistan, to join Grand Union in 2057 and 2058; Constitution approved by voters, but by a minority of the total; Will calls for an amendment and is very outspoken because of his new job  
DATE: Mar. 2051

16. Election 259

Will meets with the initial crew of the Titan expedition, answers their questions, and encourages them. He talks to Ramesh, Louise, and Alexandra, and answers yet another videophoned question from the national representatives. After the Mars Future Forum, he and Marshall go for a walk and talk about how Will does what he does. Ethel mentions that Korea wants to join Grand Union in 2055; Caribbean island nations want in. Ramesh's house ready for occupancy; Sarah accepts it. Election held; Will elected to Mars Council, much to his surprise  
DATE: May 2051

17. Chief Minister 283-90

Alexandra is not popular, Érico and Will split the vote for Chief Minister with her; then Will is elected.  
DATE: June 1, 2051

Started April 12, 2005, 12:20 a.m.  
Finished June 18,2005, 1:11 a.m.