THE PIONEERS

Vol. 15

Industrial Revolution

Contents

278. Grand Opening	2
279. Capitalism	19
280. Lighthouse	39
281. Managing Nature	51
282. Growing Pains	76
283. Inflation	100
284. Master Plan	114
285. The Plan	130
286. Aftermath	143
287. Party	158
288. Truck	171

.

278.

Grand Opening

13 Dhonménu/3 August, 629/11

The battered rovers set out from Mɛlwika, heading south. Chris and Liz Mennea were in the lead; Thornton and Lébé followed in Lua and Behruz's rover; Amos sat in the back seat.

"A scorching day," said Chris. "Rollup your window." He flipped on the air conditioner.

Liz was surprised. "That thing hasn't worked for six years!"

"It does now. Amos's engineering team reconditioned it, and Behruz's chemical research people synthesized freon for it."

"Does Éra have an ozone layer to destroy?"

"Probably, but two rovers won't harm it."

"Except as soon as those two teams work together on something, mass production isn't far behind!"

"True, but they're looking at commercial refrigeration, not household air conditioning. The Mɛlita Marketplace that's opening today will consume twenty gurnis of ice per day, just like Pértatranisér's and Mɛddoakwés's and Mɛlwika's. It's ridiculously expensive; maybe 3,000 dhanay per year. If each of those places had a series of refrigeration units, they'd have air conditioning and could manufacture and sell ice."

"And what about the ice cutters in Kostakhéma and Snékhpéla and Khɛrmdhuna?"

“They can get factory jobs. The world can’t get ahead if people don’t lose old jobs and get new ones.”

“That’s true, dear, but you should show a little more sympathy, which means helping to solve the problem you create!”

Chris sighed. “Well, I can’t solve all the problems we’re creating for this world!”

“I know, but maybe that’s an argument to go a bit slower. This world’s material progress is faster than its spiritual progress.”

“I suppose I know more about how to bring about one than the other.”

“Then devote more time to the one you aren’t as good at.”

That ended their conversation. They slowed to pass through Dɛksawsupɛrakwa, crossed over the Majakwés—still surprisingly full with meltwater—then passed through South Mɛnwika, which had only a hundred houses but was growing around its new grange building. A few kilometers farther south they slowed again and turned right onto a road that had not existed nine months earlier—Route 5, which cut through the newly planted lands south of the valley all the way to Mɛlita.

The first few kilometers were unbroken prairie, but as they neared the western end of Moritua Mountain—a long volcanic pile that paralleled Moritua Lake’s southern shore—they reached new farmlands. Most of it was green with its second crop, usually a cash crop; cotton, peanuts, tomatoes, squash (still growing amid the dead corn), beans, soybeans, and clover (for animal fodder and nitrifying the soil). Every few hundred meters a grand, new villa rose. “Wow,” said Liz, after they passed the third one. “This is the arid brushland we sprayed with DDT six or seven years ago, right?”

Chris nodded. “The prairie fire five years ago burned up the brush and the rainfall has caused the prairie to spread almost overnight. Then the new policy of giving land and grants to old houses last year transformed this area in six months. Route 5 has thirty-six villas on it; Aryéstu counted the other day. He figured the villas averaged 25,000 dhanay, so this entire highway saw 900,000 in construction since last fall! And they’re all still being finished!”

“Where did it come from?”

“They all had savings, they got grants and loans from the Royal Development Bank or our Prosperity Bank, and they promised farmers a rebate on crops owed in exchange for work. This stretch of the road is the most opulent; it’s the part closest to the capital.” He slowed for a stop sign by three large villas, then pointed to the road on the right. “Morituora’s three kilometers that way.”

“I see there’s a power and telephone line.”

“The army put in the poles back in the spring. Route 5 will be concreted its entire length over the winter; 300,000 dhanay of tax money so the rich people can have a prestigious address, while Route 1 from Mɛddoakwés to the mouth of the river is still gravel.”

“Crazy.”

“Wealth, my dear. And jobs: the villas and the road will pump money into the local economy. Farmers are no longer unemployed all winter. That’s one reason why the average family’s after-tax income has increased fifty percent in the last decade to 900 dhanay.”

“So, if the tax collections have doubled, how much has the income of these people gone up?”

“A lot; more than doubled on average.”

They continued down Route 5 in silence. Soon, they caught up with two steam cars; when they went around a gentle curve they saw that in fact there was a passenger bus, a truck, and six cars in front of them. The rest of the trip would be slow.

Route 5 bent northwestward and followed the ancient Sumi canal that carried water from the Arjakwés to the Dhudhuba. As they approached the Dhudhuba, the road turned southward to skirt the outer edge of the ancient crater rim; a new irrigation canal, full of water, ran beside the route. In a few more kilometers the canal split and part turned west. Then Route 5 bent southwest and dropped into the broad, shallow valley of the Ornakwés. The road crossed the river on the top of a long, low dam that created a storage reservoir where the river entered Mɛlita, then became an arrow-straight slash, southwestward across verdant fields. “All prairie, a year and a half ago,” said Chris. “And now it’s all farmed one way or another; all 24,000 agris. We collected 130,000 dhanay of mortgage payments and 33,000 in taxes due to us from the most recent harvest and we’ll get that much three times a year for twelve years.”

“That’s unbelievable.”

“But when you see Mɛlita, you’ll see where a lot of it went; the schools, the concrete streets, the water and sewer lines under every single street . . . it has cost an incredible amount of money.”

“I’ve seen the figures.” Liz looked around as they chugged along behind the other vehicles. They passed a large vineyard of baby grape vines, an orchard of olive seedlings,

and a huge clover field with a cluster of wooden bee hives on one side, as well as fields planted in corn, wheat, and various vegetables. “A lot of new crops,” she observed.

“Just like in Mɛlwika. The prices of the traditional crops keep dropping. That’s one reason our mortgage and tax collections have been two thirds of what one would expect from 24,000 agris. But in a few years these other crops will yield as well, we’ll get larger payments, and the orchards and vineyards will pay us over many years.”

It took twenty minutes more to reach Mɛlita. Fields abruptly ended, replaced by a zone of construction where small cinderblock houses with tile roofs were going up. Chris turned right and went down a concrete side street, because Route 5 was plugged by cars. Many of the small houses had tents erected next to or behind them. “It looks like everyone has invited their relatives,” said Liz.

“Most of these little houses belong to people on the North Shore. Typically, the house belongs to two brothers, or brothers in law, or a group of cousins, and they rotate who stays here and tends the fields. But for the grand opening of the marketplace, everyone has come!”

“No outhouses; that’s progress.”

“About half the houses have running water in them, but a lot less have a sewer connection. Most houses have a ‘bathroom’ with a bucket for a toilet and a bucket under the sink to catch waste water. They take the buckets out and empty them into the sewer drains two or three times a day. Just about everyone has electric lights, though; the grange has trained a lot of electricians. Only one house in twenty has a telephone. Mɛlita has seven hundred fifty houses and thirty businesses, but only fifty telephones.”

“People still don’t feel a need for them.”

Chris slowed as the residential street approached Route 3, the north-south road that ran from the Arjakwés Valley at the town of Ornakwés, through Mɛlita and on to the army settlement at ɛndraidha. Chris had planned to drive straight across and park the rovers at the Grange, but the Grange was surrounded by parked buses. Route 3 was lined with them, too. "My God, every bus in the world must be here!" said Liz.

"Mitru was planning to use every spare bus, but this is amazing." Chris saw a gap in the traffic and drove across, then headed for the Grange building itself. There was room right outside the entrance to the Grange offices for two rovers, so Chris pulled in. Wɛrétranu, head of the grange and of the City Council—Mayor, essentially—came out when he saw the rover. "Good morning, lord. It's quite a day."

"I guess so. Have the buses from the North Shore arrived?"

"They started arriving half an hour ago. The parking around here is full, so they're parking on the soccer field and the people are walking."

"Any problems?"

Wɛrétranu smiled. "We've had to deputize the entire fire department! We have an engine from ɛjnopéla and one from Mɛlwika here as well, and their crews are serving as policemen. We've deputized thirty grangemen as well, mostly to direct traffic and stand guard outside Home Improvement."

"Stand guard?"

Wɛrétranu nodded. "Four men. The store is packed to the doors. They can't let anyone in until people inside leave. There are lines everywhere and policemen are keeping order."

"What about food and drink?"

"All the vendors are scrambling. Aryéstu and Luktréstu are making calls to get more supplies. Home Improvement's stripping their Mɛlwika and Mɛddoakwés stores bare. I think they've even called for stuff and staff from Pértatranisér." He pointed inside. "The switchboard's practically on fire from all the telephone calls. We've had to appropriate the palace's private line to ɛndraidha; we're making calls through the palace and ɛndraidha switchboards!"

"Wow!" said Chris. "I don't think there's ever been something like this!"

"I hope it ends tonight!"

Just then Thornton drove up, so Chris nodded in thanks and walked to the other rover. The five of them locked their vehicles and walked to the marketplace next door. It was a large two-story brick structure, with a walking area fifteen meters wide running along the middle onto which the stores opened. The second story of stores extended over the walking area by five meters on each side, leaving only a five-meter wide tunnel of sky to admit light. They slowed to enter because there was a backup to get inside. Liz looked at the neat houses across the main highway on their square lots, the traffic-choked main road, and the modern-looking shopping place.

"Chris, you've created an American suburb, complete with a mall."

He looked across the street as well. "I guess you're right. I'm not sure that's good."

They entered the marketplace through the swinging doors and were hit in the face by cool, almost cold, air. "They're showing off," said Chris.

“Too much!” said Liz, shivering.

They immediately found they had to squeeze past the long line to enter Home Improvement, which was on the right; the left side of the mall had clothing and shoe stores, a book store, and miscellaneous other shops. Most people in the line recognized Chris, so he had to say hello to a very large number of strangers and accept their congratulations, compliments, or occasionally complaints for the long line. Home Improvement was a long store—fifty meters square, half the length of the marketplace—with displays easily visible through open, glassless windows that at night were closed by metal grates. Half the storage racks were bare of goods and staff were restocking like mad. People were walking out of the store with armloads of stuff.

When they reached Home Improvement’s main door, the shopping area opened onto an open-air plaza a hundred meters square, partially defined by simple brick walls that would be the fronts of future stores. Palms and orange trees provided shade and escaping air conditioning made the place pleasant. The stores and stalls opening on the plaza mostly sold vegetables, fruits, bread, meat, herbs, and traditional medicines. The ice cream store had an immense line outside it. The plaza, which could hold a few thousand people, was packed so tightly it was hard to walk across it. In the middle, musicians played on a raised stage.

“Wow!” said Thornton. “I never expected this!”

“I think the marketing guys have gotten too good!” agreed Chris.

“This is a sensation!” said Amos. “The opening of Pertatranisér marketplace was nothing like this!”

They made their way across the plaza to an orange tree near the stage, but not so close to the stage that the music was too loud. There, a family rose from a bench to move on, so they quickly grabbed the bench and sat. Not far away was the entrance to the town's public baths—they were built into the marketplace as well—and there were lines to go inside. "I don't know how we'll ever get something to eat," said Chris.

"Stand in line, like everyone else," said Thornton.

"We should have packed lunches!" said Liz. "I'm tempted to call home and ask them to send lunch down!"

Just then, Mitruiluku and Mitrubbaru, lords of Kérékwɛs and North Gramakwés respectively, spotted Chris while pushing across the plaza and detoured over to see him. "Congratulations, Lord," Mitruiluku said, grudgingly.

"Thank you, Lord." Chris rose and they shook hands. "How are both of you doing?"

"Better; our wives are in heaven!" said Mitrubbaru. "They say this is the best shopping in the world."

"I think the choices and variety in Mɛddoakwés are better. Most of the North Shore now comes to this area regularly and that province has pretty limited commercial opportunities, so it was logical to open a big marketplace here. We're right in the middle of a north-south population concentration as well, from ɛndraidha to Arjdhura."

"There are people from the *south* shore here," replied Mitruiluku. "Listen to the accents. The chief of police told me there are twenty thousand people in Mɛlita today!"

"Really?" That surprised Chris.

"I'm envious, lord," said Mitruiluku. "I think of the tax you're collecting."

"That goes to the city; I'm not keeping any of it. But I get rent because I own the buildings and the land they're on. The taxes are needed because ten thousand people reside in Mɛlita at one time or another—they come and go—but we have to provide them schools and other services, which are expensive."

"I suppose," replied Mitruiluku. He and Mitrubbaru were enjoying the tax revenue that came in from ten thousand agris of farmland in each of their towns, but the farmers mostly lived in Mɛlita where they had access to services. As a result, thought Chris, the men had opulent villas and a lavish lifestyle, but had no significant population settled near them.

"We're opening more factories, you know," said Mitrubbaru, as if he was continuing Chris's thought. "We've joined the circle of investors for Mɛlwika Motors and plan to pay for a metal stamping facility in Kérékwɛs. We'll probably build a steel wire factory, too, to weave wire into fencing."

"Excellent. During the Grand Court, Duke Aryu came to Mɛlwika for a day and we talked about ways to integrate Ora's manufacturing into Miller Motors, because in the last two years they've fallen behind. As a result, Ora's making a half million dhanay investment in new factories and will make a quarter of the parts for the new designs. In turn, Mɛlwika will make some important nickel-steel parts for Ora's heavy equipment."

"I heard that you've basically divided up the market. It makes it easier for us; we can participate in both ventures without complaint. Is it true, then, that after a two million dhanay expansion, Miller Motors will be able to turn out a thousand vehicles per year at about a thousand dhanay each?"

"We think so. The initial price will start out higher, and the eventual production volume probably can be doubled or tripled if the demand is there. We'll also subsidize the basic model with a two-thousand dhanay luxury version, with leather seats and beautiful workmanship. The world economy has doubled in the last decade; if it doubles again, about a quarter of the world's families will have the money to buy a basic vehicle with a five-year loan. That's a market for at least ten thousand vehicles, probably fifteen when the needs of businesses and granges are included. But you must have read all this; it's in the investment prospectus."

"I have read it, but I don't believe it." Mitruiluku shrugged. "But we now have tax and mortgage income and we have to invest it somewhere! Are you putting any factories in Mɛlita for vehicle parts?"

"There may be one, but the bulk of my investments in Miller Motors support expansion of the plants in Mɛlwika and Mɛddoakwés. Mɛlita has a corn processing plant opening next month. We're supporting chicken production in Pértatranisér and turkey production in Mɛlita, a pasta making factory in Tritɛjna, a paper bag making facility in ɛjnopéla, sandal making in Wɛranopéla in the South Shore, rug making in Gordha, a facility to make dried fruit in Bilara on Sumilara, and a jam manufacturing plant in Pértatranisér. There are a lot of things to invest in other than metal parts. We're spreading our money around to support local villages."

Mitruiluku nodded. "A noble plan, Lord. Have a good day." He and Mitrubbaru nodded goodbyes, they shook hands one more time, then the brothers went their way.

"A rather abrupt departure," noted Liz.

“They define self interest very narrowly. If you define it broadly enough, it begins to look a lot like philanthropy, but they don’t understand that.”

“And how do you differentiate between self-interest and philanthropy?”

Chris considered that. “They can overlap, but you can be sure which is which if the money you are investing doesn’t bring any return to you at all; and I don’t just mean profits, because many donations confer prestige. No one knows how much we give to the Bahá'í Funds, for example, or to charities. That’s philanthropy. Investing in a plant to mass produce dried fruits for export to the mainland is good for Bilara, but makes us money as well.”

A few moments later, Soru walked by with his wife’s cousins. They stopped and he introduced everyone; Chris already knew Majéstu slightly, since he lived in Mɛlita. “If you need any construction done, Lord, I supervised construction of a grain grinding mill in Tɛrskua,” exclaimed Moléstu, Kanawé’s older brother. “I also have considerable experience with cinder block; last winter I was here helping with the school and grange building.”

“Excellent. How well can you read?”

“I can puzzle things out, lord, especially with some assistance, and I’m getting faster all the time.”

“That’s the spirit. We’re starting on a pasta-making plant in Tritɛjna in a few months; that’s pretty close to Tɛrskua. It’ll be cinder block and initially it’ll be small; twenty by twenty meters, one story, with a concrete floor and a corrugated nickel-steel roof, electricity and plumbing. The doors have to be very wide and it’ll have glass windows. Can you handle something like that?”

"Of course. That's pretty basic and simple."

"I haven't described everything. I'll make a note to pass your name on to Luktréstu, my assistant, who is handling the details. Soru knows him as well. The Tritɛjna Grange will probably bid on the job also. We'll have detailed plans for the building, will provide them to anyone interested in bidding, and will probably go with the lowest bidder. Construction materials can be had through the Mɛlita Grange; you'd want to base your bid on their prices, unless you can find lower prices elsewhere. You'll have to do a fair amount of reading and writing to participate."

Moléstu looked at Soru, who nodded. "I can handle that, lord."

"Excellent. Perhaps we can work with you, then." Chris extended his hands and a pleased Moléstu shook them. They exchanged parting words, then Soru and the family ambled along, talking animatedly about this opportunity.

"He looks like Kanawé," noted Liz. "A good chance to spread opportunities."

"It'll be hard for him to win the bid against a grange, though," said Chris. "They're organized to do just that sort of job."

Several other people stopped to say hello; Randu and his family, who had come for the day to see the town and buy Alimu ice cream and new shoes; Lord Roktɛkɛstɛr, who chatted about manufacturing car parts in Ornakwés, as he was thinking of investing; and Lord Estoséru of Nuarjora, who had come with two busloads of Fish Eryanɛ from their three villages spread out along the mouth of the Arjakwés south of Arjdhura. Then Kɛkanu came by. "Lord, we have a more comfortable spot for you, if you'd like, next to the stage. It's not close to the loudspeakers, so the music is not too loud. You can make

yourselves visible there if you want to talk to people, or step ‘back stage’ if you want more privacy.”

“That’s great,” said Chris.

“Do you have any spare sandwiches?” asked Liz.

Kɛkanu laughed. “Better: we have someone to go get food for us, and he doesn’t have to stand in line! The businesses provide it free if we mention them from the stage!”

“I’ll go for that,” said Liz.

“How’s it going?” asked Chris.

“It depends on what you refer to! Everyone here in the plaza is having fun. We have a great lineup of musicians, the best from around the world. It’s all going out live over the radio; the entire day is sponsored by Home Improvement. But I just got an announcement to read aloud from the stage—it’ll go out over the radio as well—that they just closed the doors to the marketplace because there’s no room for any more inside! There’s a line forming outside and Wɛrétranu is having a bunch of tents erected so the people can wait in the shade. They’re calling down vendors from Mɛlwika to provide food and drink; the Mɛlwika Grange is renting trucks to get them here! This will make quite a story on the *World Table.*”

“I bet people are listening, saying, ‘I’ve got to experience this,’ and heading for the nearest bus stop,” said Chris.

“I’m sure. It’s summer, it’s a Primdiu, it’s after harvest and people have a bit of cash . . . and this is the place to be!” Kɛkanu turned to Liz. “Will you join me on stage to play a piano duet this afternoon?”

“You have two pianos here?”

“Indeed; we wanted to make sure we were prepared.”

Liz hesitated, then nodded. “Alright, why not!”

They all rose and walked to the side of the stage near the rear, where Kɛkanu had a table and chairs brought out for the Lord of Mɛlita and his family. Thornton and Lébé promised to come back and headed over to the bus station—attached to the marketplace—to see how Mitru was handling the strain. No sooner had Chris, Liz, and Amos settled down with a bottle of ice water and a bowl of fruit—while awaiting the arrival of hot food from the marketplace’s one formal restaurant—than Lord Déolu of Bɛllɛdha approached. He was followed by his wife, four children, and two servants carrying packages.

“Lord, what a surprise!” said Chris, rising to greet his guest. “Please, come join us. Isn’t this amazing?”

“Indeed, I don’t think anything can compare, not even a pilgrimage to Isurdhuna. The crowds there are larger, but they’re spread out more!”

“Very true. Come, sit with us.”

Déolu nodded and sat next to Chris. “Truly remarkable. But over half the people here are from the North Shore, and I’d rather see them spending their money in Bɛllɛdha.”

“Of course. But the Queen was just in Bɛllɛdha and the city had its usual summer harvest festival. We intentionally waited until after.”

“And sales were down ten percent compared to last year when we expected a big increase. Now we know why. I bet the North Shore will send fewer buses to Isurdhuna this year, too. I was just in Home Improvement talking to Sarédatu himself. He had

started with 200,000 dhanay of stock in this store because it's the biggest store yet and they anticipated a big opening. The demand is so strong after three hours that most of the stock is gone! Truck after truck is pulling up in back and unloading all the stock from the Mɛlwika and Mɛddoakwés stores, and five trucks bearing a lot of the stock from Pértatranisér should arrive early evening. He expects to have *half a million dhanay of sales* today. No one has ever done anything like that. Figure it out: if there are five thousand families here, that's an average of 100 dhanay each. And half of the shoppers are north shore residents. Do you realize that's maybe fifty thousand dhanay in taxes and other income that Bɛllɛdha won't get?"

Chris nodded. "Did you ask him about opening a store in Bɛllɛdha? He has a store in Ora and is planning to open one in Tripola."

"He said 'why open a store in Bɛllɛdha when they can come here'?" Déolu gestured dramatically. "Lord Chris, how will the North Shore ever get ahead if its people are pulled away by a migration to the tropics every winter and their commercial purchases are made there? Bɛllɛdha has lost one hundred permanent sales jobs to this marketplace. I wasn't going to complain when people started coming home with loaves of bread and little gifts from Mɛlita, but you should go see the buses in the Grange parking lot and the school soccer field: They're piled high with cast iron stoves, electric lamps, futons, furniture, bundles of copper pipes, sinks; I even saw toilets in the aisle!"

"I'm glad they'll have a more comfortable life, but I agree this is a problem." Chris glanced at Liz, who was scowling at him. "I'll talk to Sarédatu. After a day like today, he can afford a store in Bɛllɛdha, even if he loses money."

“And you can afford to visit the city and walk it with me to plan a revitalization of our commercial district! An investment by you would be helpful.”

“You don’t have a good setup, Lord. Home Improvement has generated a lot of its sales through newspaper advertising and coupons, but Bɛllɛdha doesn’t have a newspaper.”

“Then a plan to revitalize our commercial district will have to include starting a weekly newspaper. We have plenty of literate people now; as many as Néfa and Tripola when they got their newspapers a few years ago. You are right, newspaper advertising is a crucial element in both the success of a newspaper and of a commercial district. Let’s fix that. We have excellent streets, excellent water and sewer, a fire department, a police department, a bank, electricity, telephones, a post office, and now that the army is allowing soldiers to marry after five years of service instead of ten years, we have more families than ever in town. Let’s not let Bɛllɛdha fall behind, Lord.”

“Alright,” agreed Chris. “I’ll come up in a few weeks and we’ll talk.”

Reread and edited 6/3/13, 8/14/17, 9/23/26

279.

Capitalism

16 Dhonménu-1 Abɛlménu /6-21 August, 629/11

Three days later, during mid-eclipse, Chris came home from the tomi building. Lébé and Liz were sitting in the main room listening to Kɛkanu's poetry program on *The World Table.* Liz saw Chris's happy smile and suspected he had news more interesting than Eryani poetry; at least to her, for Lébé was immersed in the show. "What is it?"

"A report from Wɛrétranu about the grand opening of Mɛlita Marketplace. Sales continued strong into the second day and the buses were crowded for three days; a lot of people bought things, took them to their family's cottage, and waited for the crush to end before hauling it home to the North Shore. All five Home Improvement stores are practically bare and Sarédatu's scrambling to order new stock, because the Isurdhuna pilgrimage is in two weeks and half the travelers stop in Pértatranisér to shop."

"How much did he sell?"

Chris hesitated, knowing how she felt. "Five hundred fifty thousand. The other merchants in the Marketplace and the grange sold one hundred thirty thousand more, so the total sales were six hundred eighty thousand. The tax was only on the value added and totaled 50,000, and the share to the township and me was 16,000, 3,000 to me and 13,000 to Mɛlita. With their other revenue sources, the township can now pay off my 30,000 dhanay loan for installing water and sewer pipes under the streets and start on my 90,000 dhanay loan for paving the streets, and can hire two more teachers, which will relieve the crowding of the elementary school."

"Three thousand, huh?" She sounded disappointed.

"Why, were you hoping we'd earn more?"

"I was hoping we'd earn enough so I could admonish you about helping Bɛllɛdha. But 3,000 isn't much. Can we spare some to help them? How much will we earn this year?"

"I'm still not sure, but Mɛlita doubles our income."

Her eyes grew wide. "*Doubled?* Chris, you mean we'll hit 1.2 million this year?"

"I think so. That includes Amos's income in Pértatranisér, about 40,000 from tropical fruit, wood, and latex from the tropical forest plantation, and 20,000 of taxes he gets to keep as lord. Most of our income is mortgages, which means we've helped 1,400 farmers earn about 3,000 dhanay per year before taxes. That's a lot of people lifted out of poverty. When you remember that the land they would have used in their old villages is now used by their cousins, who are also lifted out of poverty, and they are helping cousins, we've probably lifted twenty thousand people out of poverty just from our agricultural projects. And remember, that includes no money from the electrical, telephone, and gas companies, because together they take in and spend 1.75 million dhanay per year. It'll be a few years yet before they stop expanding and become profitable."

"Still, Chris, 1.2 million; that's almost . . . obscene!"

"Honey, ten years ago this world had a gross domestic product of about 40 million and now it's about 90; it has doubled in a decade. Miller's family has a cash flow of about 2.5 million; our industries and agricultural projects are almost 2.5. So it's not like we have been the only ones benefiting. Admittedly, we have a bigger income than any

Duke; Kandékwɛs is at the top with maybe half a million a year, but he has a lot of obligations because that includes all of Mɛddoakwés's tax income, most of which has to be spent on the city. But we have to spend a lot on our cities and townships, too. Our money has done a lot of good; it has been spent very well."

"I'm sure it has, Chris, and—"

"Let me add," he continued with his lecture, to an increasingly irritated Liz, "that we are now embarked on a very different sort of project because Her Majesty won't be giving us any more land; indeed, farmland simply can't expand much more, it would lower our income and the income of farmers. People are now consuming a third to a half more calories than they were ten years ago and they're producing two or three times as much food per agri, plus they're using fifty percent more land. Agricultural output has quadrupled and prices have halved. I was puzzled how this was possible until Aryéstu and Prime Minister Wɛranolubu and I discussed it last month. The population has increased about twenty percent and the rate of increase is increasing as the grandparent generation, usually in their mid thirties, are having a second, smaller crop of children, and their adult children are having a large crop of kids who are surviving infancy. Further, in the last decade farmers have acquired about 25,000 horses and oxen, and those animals are using pastureland that otherwise would be farmed. Non-food crops have expanded acreage fast; cotton, flax, and hemp are the three big ones, but clover, olives, grapes, and soybeans are growing as well. The agris of rice and wheat going into beer production have jumped.

"But mechanization has decreased the labor to produce a bushel of something to a quarter of what it was, and it'll keep dropping, so farmers will want to farm more and

more land. The average farm in the new areas has forty agris; not coincidentally, that's four times the old peasant holding. In England, one of the triggers of the industrial revolution was an agricultural revolution that produced lots of cheap surplus labor, but it produced a lot of suffering and social unrest. If we want to avoid that, we have to sink our profits into manufacturing. The number of people earning their living by farming has already dropped by ten percent; Aryéstu says they've either moved to the cities or are working full time for the army road-building program. Construction now is ten percent of the economy. But a decade from now, a third to a half of the farmers need to be working in factories. That's a lot of machinery, electricity, trucks, raw materials—coal and limestone—and a lot of garbage and industrial waste. And a decade from now we won't be getting practically any mortgage income because it will have run out. If we want to continue to do good, we need another source of income."

Liz put her hands on her hips. "Chris, please don't lecture me about your strategy. I've heard it all before. It isn't bad, either. It lets us pour a lot into the génadɛma, the medical school, hospitals, schools, and new industries that won't make money right away. My concern is that we can spread our wealth around better than we are—like supporting the development of Bɛllɛdha's commercial district more—and we could be supporting charities and the arts more. You've talked about bunching factories in industrial parks so their wastes can be handled efficiently. Where are the plans for a Bɛllɛdha industrial park? Can we help Soru expand his school? The number of handicapped children far exceeds the number he can help now. Can we encourage the arts even more? Mɛlwika Génadɛma could expand its arts program. And what about women? The jam making factory in Pértatranisér will produce jam at half the price the widows can and severely

limit their income. You are a generous capitalist, Chris, but you still think like a capitalist! You'll make people resentful and jealous and face more attempts on your life. Better to be generous. Thornton doesn't want the empire."

"Liz, I'm good at making money, and not just for myself. I guess I'll have to count on you to find more ways to spend it."

"I'll do more to find ways to expand charity and the arts, but you need to figure out how to reach places like Bɛllɛdha! Néfa is growing, but not fast; Ora hasn't gotten reoriented since the death of Lord Mitru; some Tutanɛ tribes are almost untouched by the changes of the last decade; Isurdhuna is traditional and unchanged in many ways. Arjakwés, Lɛwéspa, the Pértatranisér district, and maybe the South Shore are doing well. It isn't all politics, some of it is training."

Chris nodded. "Alright, I agree! I'll see what I can do. We still have half the summer and we're spending a month in Pértatranisér, which is a perfect place to work on these matters."

"And I'll work on the other matters and get back to you. I hope you plan to be generous!"

"When can I say no to my wife?"

Liz laughed at that and didn't reply. Lébé smiled as well; she heard some of the conversation, but she was concentrating on the poetry. Chris settled down to listen—with one ear—as well, while his mind ran over all sorts of possibilities.

The *World Table* ended and supper was soon ready. The entire family sat down to eat together—Amos, May, and the kids were there for a month, so the only one missing was Jordan, who was part of a Bahá'í youth team teaching literacy to Kwétékwonɛ

tribesmen. After they all reviewed their days and the news—Her Majesty had just spent two days in Sumiupɛrakwa and was on her way to the Isurdhuna Festival—Chris turned to Thornton and said, “So, the development plan for the Long Valley; is it finished?”

“Except for the details, yes. Crown Prince Mɛméjékwu spent a day with us reviewing the entire plan in great detail and he made some important changes. We have to get the final plan to him next week just before Her Majesty visits Réjéivika. That’s when it’ll be unveiled and the implementation of phase one will be announced.”

“What sort of changes did he want?”

“He wanted four industrial parks sited, the big one at Réjéivika. We explained to him several times that smoke production was very unwise because of the valley’s permanent thermal inversion. Any factories will have to be very clean. But the Long Valley has immense hydroelectric potential, so that’s possible.”

“He kept the environmental plans?”

“Completely. I think he is thinking that forest preserves and prairie could be settled later anyway, and there’s no reason to rush. But he grasped perfectly the problem of flooding and slope erosion because the valley sides are still largely treeless. He wants to plant trees.”

“Good for him. How did you plan the valley settlement?”

“We divided it into 200 blocks, each three kilometers square. We set aside twenty blocks for permanent parkland and twenty more for forestry; the valley will need timber. The rest are numbered and will be made available to settlers in an order; a line of blocks south of Réjéivika, then a line north of it, until the whole valley is filled. With this plan, roads will be laid out and cleared as needed. It also allows one to plan the construction of

schools and village centers, since each block will have fifty or sixty farmers and nine such blocks will constitute a district of about five hundred farmers and maybe three thousand people."

Chris nodded. "So, do you think Kɛrda has the same thermal inversion problem?"

"No question. We came back from the Long Valley via Kɛrda; it's just as deep, but narrower, so the valley's air is renewed even more slowly. By late afternoon the air pollution from cooking fires and blacksmith shops is quite visible. Kɛrda is a lousy place for industries requiring smoke stacks."

"Do you have enough data to create a land use plan for Arjakwés or the North Shore?"

"Depends on what you mean by 'data.' The areas are mapped in detail and we know the soils, vegetation cover, roads, numbers of houses, minerals, etc. But a land use development plan requires consultation with the inhabitants. The Long Valley doesn't have practically any; the Crown Prince can make the essential decisions. But if you want to plan Arjakwés province, you have to take into account the wishes and ambitions of thirty villages and cities and fifty thousand people. It's more an exercise in politics than science."

Chris nodded. "Well put. Every village aspires to be the next Mɛlita or Pértatranisér. They all want jobs; they want the buses to bring workers to them every morning, rather than take them from the village."

"The dukes have to make regional decisions," said Amos. "But they have to do them in consultation with everyone else. Rudhisér province imposed a plan of sorts on everyone, and that's one reason the province isn't developing as fast as it could. There are

still fights about the location of the central high school and of the industrial park, and no money to make the industrial park a proper one."

"For that matter, the provinces are financially starved; the palace needs to allocate more money to them," said Chris. "The Royal Development Bank seemed like a good idea last year, but it occurs to me now that it is scattering development very widely when some things, like factories, probably need to be concentrated. Maybe the Royal Development Bank needs to support industrial parks."

"It depends, Chris," replied Amos. "A small factory making a few items and producing very little toxic waste can go anywhere there's a good road and a power line. Khɛrmdhuna's doing very well with its two factories. A big industrial park could produce rather intense air pollution, but scattered factories will impact health less."

"That's true, though air pollution might be easier to control when there are a lot of factories in one place. The issue, then, is how to handle toxic wastes."

"Even that can be managed locally," said Amos. "Tanks of liquid waste can be hauled away periodically. Industrial parks could process the waste of village factories."

"This will require a lot of thought," agreed Chris.

Two weeks later, Chris, Liz, Thornton, Lébé, Amos, May, and various children left Mɛlwika for Pértatranisér. There was a four-day gathering in Néfa of the provincial lords and the provincial assembly during the Queen's visit to that city, and Amos had to attend. Then Her Majesty would come through Pértatranisér for a day on her way to Ora, an event in which Chris and Amos planned to participate.

They left Mɛlwika in a steam car and two rovers about noon and headed west. The army's intensive effort to pave the world's major roads was showing considerable progress; Route 4, which went to Pɛnkakwés, was paved to ten meters width through or around every village, though it was gravel between them. When it joined Route 1 at the Fish Eryanɛ village of Akɛldɛdra, the latter was paved as well. Route 1 narrowed to four meters of pavement north of that point, but was paved all the way to Bɛllɛdha, and was a wider six meters once it reached the first village of the North Shore. As they approached that city, the road went over a low hill that gave an excellent view of the entire area. Thornton was impressed at how quickly the sea had taken on a "normal" appearance; the population had used canoes to cut and remove drowned trees for firewood and construction, so the sea was clear of stumps to the horizon, and waves had already started to create sandy beaches. The Mɛgdontakwés entered a gradually widening estuary at Bɛllɛdha, the banks of which were farmer's fields, many greening from recently planted crops of clover. Surrounded by a high, strong square of defensive walls, Bɛllɛdha looked like an ancient fort.

They had to make a stop in Bɛllɛdha because the kids needed to stretch their legs and use a bathroom, and the steam car needed a fresh bag of charcoal. It was 11 a.m. in the capital of North Shore province; their three-hour journey had crossed four time zones. The men had a noontime appointment with Duke Déolu, so the women and children rested at the Bahá'í Center, then walked around town, waiting for them to finish.

Déolu was pleased to see them. "Lord Chris, I am very happy you brought Amos and Thornton with you," he said, offering his hands. They shook, then Déolu pointed to two other men in his office. "Allow me to introduce Wɛranobɛjnu, my head of staff and

chief assistant for running this city and province. And this is Major Estosmiru, commander of the Bɛllɛdha army garrison."

"Pleased to meet both of you," said Chris, shaking hands with them.

"Thank you for coming and offering your ideas about the commercial heart of the city," said Wɛranobɛjnu gratefully.

"We are honored and pleased to help."

"We also want to offer ideas about industrialization," added Thornton.

"Oh?" said Déolu.

"Bɛllɛdha needs factories," said Chris. "They're the next step in the development of this world. The North Shore can still get involved near the beginning of industrialization. This province has a lot of partially unemployed farmers; factories will keep them here and increase their income."

"We want that!" said Déolu. "Let's walk down to the market and talk about our options." He headed for the door and the others followed.

"The city looks better and better every year," observed Chris, as they stepped outside the palace.

"It is, but we have a long way to go," said Déolu. "As you can see, about a quarter of the city's lots are still vacant. We've rebuilt about a third of the city since the fire, but the other two thirds are still in bad shape. Last month, a building collapsed in the middle of the day and killed three members of a family. We have several collapses per year."

"But at least we have a good fire department and a pretty strong police department," said Wɛranobɛjnu, looking at Major Estosmiru. "The police are all full-time soldiers at the garrison."

How many soldiers here are married?" asked Chris.

"About three hundred," replied Estosmiru. "They've added five hundred wives and children to the population. Most of them have permission to work as well, as police or craftsmen. The city garrison used to have five hundred soldiers, but technically it now has a thousand, because those assigned to the highway construction are considered assigned to Bɛllɛdha. Most of them are new recruits and are here for half the year for education. The married ones have been in the army longer; last year we lowered the years of service before marriage from ten years to five because fewer young men were joining the army. They're attracted now because the army guarantees an education and useful skills."

"The new prison is practically empty," added Wɛranobɛjnu. "Pickpockets and other petty criminals are given the choice of imprisonment or joining the army; most decide to become soldiers. The murderers and criminals who commit major crimes are executed. All we get are a few in the middle."

"Who works the copper mine?" asked Thornton.

"Local men," replied Déolu. "Bɛllɛdha isn't doing too badly, in some ways. The mine employs twenty, the limestone quarry and cement plant twenty-five, and the mint six. Because of the garrison, we have a lot of shops to supply food and clothing. I think Home Improvement would be surprised by the sales here."

"Show Sarédatu a tax collection figure," suggested Chris.

"Such private information!" objected Wɛranobɛjnu.

But Déolu nodded to Chris. "Not a bad idea, if the goal is attracting business. The province has made a lot of progress since the fire six years ago. The nine hundred

households in the polar basin were almost completely out of the economy then, and paid only tiny taxes; last year they paid 135,000 dhanay to the queen and 13,000 to me, and this year it has increased by a third. The twenty-two hundred households outside the Polar Basin and outside Bɛllɛdha paid 325,000 dhanay to the queen and 16,000 to me five years ago and last year it had increased to 450,000 and 45,000; my percentage as Duke has doubled and my income from them, tripled. In addition to the extra harvest from the Mɛlita area, 500 local men work seasonally on army road building projects, and they're earning as much as 1,200 dhanay per year. The seven hundred households in Bɛllɛdha outside the army garrison paid 100,000 dhanay to the queen five years ago and 47,000 to me; this year it has increased to 260,000 and 156,000. Most of that increase is due to increased commerce in town; the province's 3,400 households outside town spend an average of about 100 dhanay per year in or through Bɛllɛdha market, producing sales of 340,000, and the thousand army soldiers and their families spend 200,000 dhanay more. On top of all that, the copper mine belongs to the city and produces 20,000 dhanay profit. So as Duke I now have a budget of 244,000, which is triple what it was after the fire. I also have fewer family members to support via pensions because of the policy of encouraging 'old houses' to get land. Finally, the army soldiers built the high school and the army pays 24,000 dhanay a year to support sixteen elementary, middle, and high school teachers for the soldiers and their families."

"We have 200 soldiers attending high school at night," added Estosmiru. "Two hundred more have permission to operate small businesses, and they pay taxes on the income. The soldiers have done the bulk of the work graveling roads and setting up utility

poles for the electrical and telephone companies. The garrison has been a real asset to the area."

"I'm sure." They had walked down Sula Rodha, "Sun Street," so named because it ran east to west, just like the passage of the sun, until they reached Gɛsra Rodha, "Hand Street," so named because it ran north-south, from "right of east" or south to "left of east" or north, directions named after the right and left hands. Like ancient Roman army camps and some ancient Sumi cities, Bɛllɛdha was laid out on a perfect grid, with main north-south and east-west streets meeting exactly in the middle of the square of city walls. There the streets widened into Mɛdhplaka, "Central Square," the heart of the city's commerce. They stood a moment and watched people walk from stall to stall in open air in the northwestern and southwestern sides of the square. The ancient dilapidated stone stalls were crumbled; some had gaps in the arched vaults or thatch replacements where the vaults had collapsed. The southeast corner of the plaza fronted on an abandoned building. The only modern building occupied the northeast corner, where the local branch bank filled a dignified brick structure.

"I'd start anew," said Chris, after a moment. "The arched stone stalls are practically unusable in the winter and are unpleasant in rainy weather." He waved his hand along the southern and western sides. "Tear down the abandoned building first and put a two-story market building there, then remove the stalls on the western side and replace them with a two-story building where everyone can shop in warmth during the winter and out of the rain. Connect all the second stories together over the southward and westward streets so people can walk across without stepping into traffic. There will be plenty of room for a Home Improvement Store. Rent out space for offices if there isn't

enough demand for market stalls. If the buildings are elegant, with big glass windows and lots of electric lights, they'll be a source of civic pride and self-confidence."

"That's a lot of money!" replied Déolu, replied.

"Maybe 100,000 or 150,000," said Chris, looking at Amos, who nodded. "Lobby the crown for a grant for a third of it, raise a third from private investors, and put up the rest from city and provincial resources or bank loans to the city. The crown's creating a similar plaza on the westside of Tripola and they're putting a lot of money into it. I'd also expropriate all vacant lots in the city and sell them to people at a very nominal fee if they'll build on them."

"You should pass building codes, too," suggested Amos. "Mɛlwika's are the model. Buildings built to those specifications are of a sufficient quality to qualify for bank mortgages."

Déolu nodded, absorbing the ideas. Just then, Liz, May, Lébé, and the kids came out of a stall nearby. Liz saw them and walked over.

"Lord Déolu," she said in greeting.

"Lady Lisé," he replied with a smile and slight bow, Eryanizing her name.

She held up several pairs of gloves. "This man makes some of the best gloves I've ever seen. The leather is incredibly soft and supple. He says he uses a special tanning process. And the design; simple but elegant."

"Kwɛnéstu does very good work," agreed Wɛranobɛjnu.

Chris took the gloves and examined them. "Nicely done. Hand sewn; there's a new sewing machine that can handle leather."

“I told him; he didn’t know,” said Liz. “I bet there’s a market for gloves like this all around the world.”

“No one has opened a glove factory?” asked Déolu, incredulously.

“I don’t think so,” replied Chris. “There are literally a thousand objects that could be manufactured systematically somewhere in this world, if someone were to take the time to set it up.”

“I told you we have a lot of potential! We have incredible talent here!” exclaimed Déolu.

“I’m sure of it,” agreed Chris. He looked around. “I’m not sure that I have other ideas for the square. I’m willing to loan money or invest in a building here once there is a plan. I’ll offer the same for a factory.”

“We have plenty of vacant lots inside the walls where we could build a factory, especially on the eastern side of the town.” Déolu gestured and started walking.

Thornton shook his head. “Lord, factories tend to make a lot of noise and sometimes a lot of smoke, so I wouldn’t put them inside the city walls. The best spot might be south of the city walls along the banks of the river. They would be away from the houses, but close enough for people to walk to work; they’d be close to Route 1, so trucks could come and go without jamming the city streets; and you could build a separate sewer system for them. Factories often produce noxious waste products such as acids and they need to be handled separately.”

“What does Mɛlwika do?”

“Our system is primitive, but it’s the best we can do,” explained Amos. “Factories have a separate sewer system that leads their effluent to a walled-off settling pond. We

add lime to it periodically to neutralize acid. Pretty soon we'll have to dig up the sediment and enlarge the pond. We'll have to create a permanent hazardous waste dump somewhere, probably in arid Tutanɛ areas east of Mɛlwika. You'll probably want something similar. Along the coast there are large areas of sand accumulating; they'd provide excellent sites for settling ponds."

"Ora doesn't have anything like that," objected Wɛranobɛjnu.

"They put their wastes straight into the river," replied Amos. "When the flood was raging in full force, that was no problem. Now the flood has stopped and the pollution is slowly accumulating in the sediments of the river. Pretty soon, the fishermen will start to get sick. We've warned them; they'll see. Mɛddwoglubas has a settling pond. Tripola puts their waste in the river, but their industry is still small and generates very little waste, so they haven't done much damage yet."

"If you are talking about 'damage,' surely you are damaging the settling pond," noted Déolu.

"Of course, and the soil under the pond, and the groundwater. Industries produce waste and the waste is hazardous. Eventually we'll be able to mitigate much of it. Meanwhile, we have to know where it goes and plan for it. You can always bury an area of hazardous waste later."

"This is getting complicated," said the Lord. "What sorts of factories could we open?"

"I've been thinking about that question ever since Chris asked me," replied Amos. "The Engineering School has been developing manufacturing techniques and the machines for them. Right now, we are putting all our energy into plans to expand Miller

Motors. So I'd try to get some jobs making metal parts for vehicles. That'll require a lot of investment because on average each job will cost between one and three thousand dhanay to create; the machinery is a big expense."

Déolu shook his head. "How can we afford that? Look, we already have two modern industries: copper and cement. We should expand them and develop related industries. But we can't make cinder blocks because the machines your School of Engineering made to produce them are licensed to the Miller family and they won't set up a facility here. Same with manufacture of copper wire; the machinery is licensed. I'm glad the engineering school is able to make money to continue its work, but where will we get our jobs?"

Amos nodded. "That's a fair criticism. The demand for cinder blocks has been exploding and they're only manufactured in Nuarjora. I'll talk to Déru Miller about expanding his operations to Bɛllɛdha."

"And to Bruagras?" asked Déolu, referring to the other cement facility, outside Pértatranisér.

"Eventually, but let's see whether we can get it here first. Déru doesn't own an interest in your plant, but he does at Bruagras. That's another problem; he has made a lot of money and views you as competition. Maybe you should invite him to visit."

"You know, Amos, we've talked quite often about other items that could be made from copper or concrete," said Chris. "Copper parts for electrical motors, for example; they're made by hand right now. Concrete sewer pipes have been considered, but until recently we couldn't control the quality of the concrete enough and trucks weren't big enough to haul a large enough load of them."

"That's true. Maybe we should invest some money and time at the engineering school to develop them, and offer the licenses to Bɛllɛdha first. The existing manufacturers will want them, of course, but maybe they'll be willing to share some of the older machines with Bɛllɛdha in return." Amos pulled out a pad of paper and made a note. "I think we can spare a few guys from the projects for Miller Motors for that."

"What about the thousand other objects you mentioned?" asked Wɛranobɛjnu.

"You name it and it can be manufactured more cheaply than by traditional methods," replied Amos. "The trick is getting the time of the experts, who can look at a traditional production process and come up with a new approach using machines and a series of separate, discrete tasks. You should send a couple of smart, creative young men to Mɛddwoglubas to learn from them. They are the real experts, not the guys in Miller Engineering School."

"You have some marvelous handcrafts here," said Liz, who was still standing with the men after Lébé and May had drifted away with the kids, partly because they didn't like the way the conversation was going. "There's a lot of wood working. It could be made faster and cheaper with wood lathes. Mɛlwika has a lot of wood-working machinery that isn't too expensive, and they were created before the licensing system had been established, so you can buy some."

"We've thought of that and haven't implemented it yet," agreed Déolu. "Wɛranobɛjnu, you pursue that. A wood-working factory would not be expensive to set up."

"There are also beautiful carved ivory objects."

“They’re made in the polar basin and have become a major export item. I assume they can’t be mass produced!”

“They probably can’t,” agreed Thornton. “But that raises another matter—the number of mastodons. I understand none returned to the high alpine meadows above Mɛlwika this year. The herd is not very large and could be wiped out entirely, especially with the new longbows the hunters acquired a few years ago. If the Polar Basin people want to export ivory art, they have to preserve the mastodons.”

“How do we do that?” asked Déolu.

Thornton thought for a moment. “The main thing is to determine how big the herd is and how big it can be. The hunters probably have some idea how large it is now and how large it was, though it may take some time to help them organize what they know. Then a plan to preserve the herd needs to be made with the help of the local people. They have to realize that they can hunt only so many of the beasts every year, or their children will have none, and they have to enforce the hunting quotas themselves.”

“Can you do that?”

“I’ll need the help of local people because they won’t trust me otherwise.”

“We have very few Bahá'ís in the eastern basin, partly because there are now so many in the western basin,” noted Chris. “You might want to start with them, or with any school teachers who have gone to the génadɛmas.”

“Okay, maybe I can get up there next month.”

“I have a few other thoughts, if I may offer them,” said Liz. “These are ideas from May and Lébé, too. Bɛllɛdha has over a thousand adult women and I have heard nothing about helping them advance themselves economically. There are two simple, obvious

things to do. The first is sewing machines; for a hundred dhanay a woman can buy a machine and get training, and she can work in and around the children and domestic chores if she has to do such traditional things. But to make a sewing machine work as a business opportunity, there has to be a sewing center to buy items for resale, contract out jobs, and teach women new techniques. The sewing machines are getting better and better every year; pretty soon they will come with electric motors, so one won't have to pedal endlessly to keep them going. A sewing center takes maybe two or three thousand dhanay to set up, but afterwards it will pay for itself. An existing tailor's shop can do it."

"Good idea; make a note of that, Wɛranobɛjnu. What else?"

"Maple sugar; this is the region that produces it and the villages west of here are expanding their production fast. But the province should export things made with maple sugar as well; maple candy, syrup, jams, dried fruit. . . there are hundreds of possibilities. A cooking center with big kitchens could do it, it would employ widows honorably, and it could also farm out some of the work to homemakers." She looked at Chris. "That is a business we could set up, and I wouldn't mind coming here for a month or two to do it."

"Okay," he replied. "Maybe it's time to set up 'Cooking Centers' around the world, just like the widows have done in Mɛlwika."

"They'd help, too. Women can do a lot to raise money for their families, and they'll get educated in the process."

"It sounds like this has been a very useful visit for everyone, then," said Déolu.

Reread and edited 6/3/13, 8/15/17, 11/17/24, 9/23/26

279.

Lighthouse

1 Abɛlménu /21 August, 629/11

It was mid afternoon when they were ready to leave Bɛllɛdha. Amos started the firebox of his steam car with pitch-coated wood, and in a few minutes they were ready to go. Before he started off, however, May came back to her parents' rover. "Can I ride with you?"

"Of course," said Chris, though he wondered what his daughter was going to bother him about.

She jumped into the back seat as Amos started his steam car slowly forward. They waited for him to get ahead of them, because the steam car accelerated much more slowly than the rovers. "The kids are ready to take a nap," said May. "I hope they sleep well; we've got a two hour drive ahead of us."

"At least," said Chris. He put the rover in gear and started to move forward, Thornton and family following behind. They rolled out the city's western gate, turned southward along a concrete road past Bɛllɛdha West High School, then turned right onto Route 1, which was a smooth ten meter-wide surface.

"Dad, I suppose mom has already talked to you about this visit, but I have to say something," May began abruptly. "The part I heard left me speechless. There was no concern about women at all."

"We talked about that with Déolu," replied Chris, quickly. "We're coming back to set up women's industries."

“Good, because if there’s any city that needs them, it’s Bɛllɛdha. Think of what the women could earn with sewing machines! If nothing else, they could make clothes for their families. I bet this city needs a good, modern bakery, too.”

“It probably does. We want to find a tailor shop or clothing sales outlet that can organize a sewing center, and mom wants to come back and organize a cooking center.”

“Good. I’ve already bent Amos’s ear about the licensing problem; I had predicted that problem years ago when we started the system.”

“Well, dear, people won’t invest money in making a new machine unless they have a monopoly on its use for a period of time.”

“Dad, we can now pay to develop the machines from our fortune, so let’s distribute them more fairly, okay?”

“I’m in favor of that, but giving a little rural village with almost no machine operating skills the chance to create a new factory is not productive. The villages have to have skills first.”

“Then we had better use our fortune to train them.”

“I agree. That’s why we give money to the Development Corps and the Bahá'í community.”

“We do need to do more,” emphasized Liz.

“And the pollution problems; we’ve got to come up with better approaches than dumping the contaminant into a settling pond and letting most of it leach into the groundwater,” said May.

“Well, if you find a solution, let us know. Shoreline communities really are in the best situation because sand is a perfect filtering material, and the partially cleaned water

slowly leaks into the sea and is diluted. Very little environmental impact will result. Mɛlwika is stuck; there's no place to put waste where it won't end up in the groundwater. Where we've put it, it will contaminate ground water under Miller's fields without affecting those fields and should be diluted by the river."

"A hazardous waste dump in Tutanɛ territory will just export the problem to the land of poor people."

"Well, if you have a better idea, let me know. An uninhabited sandy island somewhere might work, though marine birds would be affected. A desert location would be best."

"There's nothing we can do? Earth has cleaned up a lot of its waste."

"And they have a lot more money and a lot more waste; and in the end, they put most of it in hazardous waste dumps anyway."

"Dad, we can't just postpone this; we have enough money to make a start."

"Honey, we have made various starts. We can't scrub smokestack gasses, but we were able to build a smokestack tunnel all the way up the mountain and twenty meters above the peak to get the smoke as far from the city as possible. Then last year Miller added a powerful fan to get the gasses up the smokestack and a sprayer to inject water droplets, which washes a lot of the soot and sulfur dioxide from the exhaust. It was a cheap and partially effective anti-pollution measure. The hazardous waste cesspool worked and now we need to dig out the gunk and dispose of it as safely as possible. Step by step."

"Chris, isn't this something the palace can help on?" asked Liz.

"Probably; do you want me to add it to my long wish list?"

“Definitely.”

“I’m worried in general about this trend toward factories,” continued May. “Working conditions have been okay, so far, but there are no laws to protect the workers, not even for fire safety.”

“That’s why we’ve tried to establish a culture of safety, and a culture where factory workers are paid decently. So far, that has worked.”

“Well, let’s do everything we can to make sure it continues to work.”

“I am, dear.” Chris was getting weary of the conversation.

“Chris, what we’re trying to tell you is that over the last few years, you’ve become too much of a capitalist,” said Liz, quietly and patiently.

He didn’t reply to that, though as he drove he thought about the steady rise in their family income and all they had done with it.

They passed Véstroba, Dontilɛdha, Guspludha, and Klɛndɛdra, villages farther and farther west of the provincial capital and set in land that came to be dominated more and more by maple sugar forest. After the last one, Route 1 suddenly narrowed from eight meters to four, with a faded white line down the middle to separate the traffic. They had passed the bulk of the North Shore’s population.

The road was straight and they sped up to 90 kilometers per hour until, ten minutes later, they approached a line of vehicles coming toward them. They had to slow to 60 kilometers per hour because of the narrow pavement. “Where are all these cars and buses coming from!” asked Liz.

“Isurdhuna,” replied Chris, after a moment of reflection. “The pilgrimage ended yesterday evening. I bet these vehicles left Kɛrda at dawn. We had better not take Route 1 through the Néfa Basin.”

“How can we do that?”

“Route 43 is now open around the basin.”

Liz nodded, wondering where the new road went, exactly. She watched the vehicles whizzing by, sometimes dangerously close. There was now concrete all the way from east of Bɛllɛdha to east of Tripola, 320 kilometers in total, but much of it was dangerously narrow; enough to make people drive fast, but not enough to keep them safe. They passed two remnants of smashed vehicles, mute witness to previous accidents.

Almost an hour after leaving Bɛllɛdha, they passed Sumiupɛrakwa, a prosperous village with a large school, a very large sawmill, two factories making wooden products for construction such as doors, and extensive fields. Forty-five minutes later they drove through Lɛpawsɛmdomas, the former squatters settlement that was becoming reasonably prosperous, thanks to their grange. Three kilometers farther south there was a sign “Route 43.” They paused for a gap in the oncoming traffic, then turned left onto a wide gravel road that ran between the Nefa Basin rim and the sea.

“So, what town is this?” asked Liz.

“This is unnamed and uninhabited, so far,” replied Chris.

They drove through open woods with scattered pockets of prairie, a beautiful rolling land kept open by the residents of the basin by burning the dead grass, leaves, and fallen branches every spring. After half an hour they entered corn fields and rice paddies, the agricultural bounty of Boléripura, a relocated Eryanɛ village that had once been

farther east, where now there was sea. They slowed for the village, chugged through it, then drove over the Rudhisér on a beautiful new steel bridge. Looking downstream, they could see the river's mouth just a hundred meters away. On the south bank was the Fish Eryanɛ village of Owyapéla, with a smaller farming area but over a hundred fishing boats beached on the river bank or tied to wooden docks. They passed quickly through Owyapéla. "These are the people Pértatranisér works with to harvest timber in the shallows," said Chris. Liz nodded.

Past the fields, Route 43 ran due south through rolling hills of ancient lava flows capped by an immensely tall tropical forest. There were no breaks in the forest canopy; the area received more rain than the more open lands farther north, and had never been burned annually, so it had less game. After topping a particular hill they passed a sign that said "Welcome to Luktrudéma," which intrigued Liz, as she wondered where the "Lighthouse" was. Five minutes later the forest was suddenly replaced by an area where the trees were being clear cut, then farmer's corn fields. The hill slope dropped rapidly downward in front of them to a cozy village stretched out along a picturesque cove.

"That's Luktrudéma?" she asked.

"Yes. It was an old Sumi city. You see that rock northeast of the cove? It has an old Sumi lighthouse marking the cove entrance, which was the city's harbor."

She nodded, impressed by the attractiveness of the location. The cove had a rock marking its southern side as well with an old, ruined temple on top and a theater carved into the rock of the slope below.

They descended to the village and slowed as the gravel was replaced by ancient Sumi cobblestones. Sea level was a bit higher than in the Sumi days, so no houses had

been built on the seaward side of the street, only the landward side. Most were wooden or a combination of wood and old building stone with tiled roofs. “This is charming!” Liz exchanged.

“It really is,” agreed Chris. “I’ve never been here before.”

Ahead of them, Amos pulled over the steam car and parked in front of the village’s only inn. He hurried out with six-year old Marié. “Looks like she is desperate to use a bathroom!” exclaimed May.

They parked behind the steam car. Thornton stopped behind them. They opened the doors and stepped out to stretch their legs while waiting, but also to view the village’s charm. Lébé hurried over. “Look at the old theater! You can still see all the stone benches!”

“It almost looks like it could be refurbished and used again,” said May.

“What a pretty place,” added Thornton. He looked both ways, then trotted across the street, followed by Liz. They walked the hundred meters to the theater; its stage was just two dozen paces from Route 43. All the monumental pillars and arches behind the stage except one were still standing. “A lot of brush and trees,” he noted, looking at the bowl.

“Nothing that can’t be removed,” said Liz.

He nodded, and they walked back to the inn. The owner had come out with Amos and Marié and was talking to Amos; he was a brother of Estoipuru, Mayor of Pértatranisér. “You like our theater?” he asked Thornton.

“Yes. It’s in pretty good shape!”

“I’d love to see it fixed up. I could use the business.”

“I can imagine,” said Liz. “How many people come here?”

“Maybe two or three a week; visitors to the grange or overflow from the Pértatranisér Palace Hotel. I make my living in my fields!”

“Who’s the lord here?” asked Lébé.

“Pɛrku,” replied Chris.

“Really? Good!” said Liz.

They said good bye and climbed back into their vehicles. “How far are we from Pértatranisér?” she asked.

“Twelve kilometers.”

“That’s all!”

“We’re quite close. You’ll see. No electricity and telephones yet—the town’s just nine months old—but they’re supposed to arrive in the fall.”

“Chris, this is a perfect village for art. The theater should be refurbished; it’s a beautiful facility and wouldn’t cost that much to fix up. Luktrudéma is a beautiful place; fix it up, plant a lot of flowers, and it’d make a great tourist destination. I bet we could patronize the arts here, too.”

“Except we should support Pértatranisér instead.”

She shook her head. “We don’t have to. This complements Pértatranisér; let people go there to shop, then come here to stroll and attend a show.”

“Pértatranisér still doesn’t have a theater,” agreed Chris. “Neither does Néfa, either.”

“Then let’s support this one!”

Chris nodded. He drove on across the rolling fields south and west of Luktrudéma, fields that merged with Pértatranisér's. They crossed the Atranisér and came upon the city suddenly from a direction Liz hadn't expected; Route 43 ended at Route 2 across the river from the city's marketplace. It was thronged with buses and steam cars; people leaving Isurdhuna had stopped to shop before driving to their destination.

"It's the big shopping day of the year here," Chris said with a smile. "I wonder whether Home Improvement was ever able to restock, after the huge sale in Mɛlita."

Liz sighed. "Back to capitalism again," she wryly observed.

They had a joyful family reunion that evening; Lua, Behruz, and their kids had been in Pértatranisér for two weeks—except Jordan, who had arrived from his youth work project the day before—so for the first time in months the entire family was assembled in one place. They had a big family dinner together followed by a family meeting to plan who would go where over the next five or six months, because all of them were in demand for one thing or another, and all of them had vital contributions to make to the growth of the Bahá'í Faith around the world.

Early the next morning, Amos donned his lordly robes and headed for Néfa for the joint meeting of the lords and representatives with Her Majesty. May normally avoided gatherings of that sort, but after talking to her mother, she put on the modest dress of a lord's wife and accompanied her husband. On the opening day wives often accompanied their husbands to the ceremonial opening. She knew relatively few of the other ladies; they had never welcomed her and she had never felt comfortable with them. But there was one woman she knew from Mɛlwika, with whom she hoped to speak at

length: Sharé, Pɛrku's wife. She was a bit cool to May at first, no doubt because she sensed the hesitation of the other wives.

"It's good to see you again," she said with a smile after May greeted her.

"It's good to see you, also. How are the children?"

"Oh, fairly good; growing fast! Our littlest has started to walk."

"And get into everything, no doubt. Yes, our youngest is six, now."

"Just two?"

"Yes. We're being careful."

"I wish I could convince Pɛrku to be careful!" They had now borne seven children in sixteen years.

"It isn't easy. I want to congratulate you on Luktrudéma; a very pretty village in a gorgeous location. We drove through it yesterday and stopped to walk around."

"Thank you. It's still fairly small; it doesn't give us much tax income yet. It has less than a hundred houses, I understand."

"Have you visited?"

She shook her head as if the question was a surprise.

"Did you know it has an old Sumi theater? It's in pretty good shape, too; it could be fixed up pretty easily."

"Oh? Too bad it's out in the middle of nowhere."

"It is, but it's such a pretty location, with fresh sea air and lovely vistas, probably a very healthy location, that I see no reason why it couldn't become popular."

"Really?" She was interested. "What do you mean?"

“Well, the lords in Rudhisér have a house in Néfa or in their own village, sometimes both; but they rarely have a summer residence. Same in Véspa. Luktrudéma has the kind of qualities that could make it attractive as a summer residence. And if one repairs the theater and sets up regular bus service to Néfa and Pértatranisér it might be even more attractive. My mother says it has the light that painters need, and lots of pretty sights to paint as well.”

“Really?” She started thinking about the possibilities.

“So Lady Liz and I were thinking; your family can make money, the village can develop, and the arts can be helped to flourish. It’ll take some planning and investment. Lord Pɛrku probably has some money he could invest, but we’d be willing to be involved as well.”

“Did Lord Chris or Amos say so?”

“They did. I am hoping Amos will speak to your husband.”

“I hope so also! This is an intriguing idea.”

Reread and edited 6/3/13, 8/15/17, 11/17/24, 9/23/26

281.

Managing Nature

Thornton drove the steam car slowly up to the two-room schoolhouse at Dɛntastéa and got out. He looked at his companion, Budhu, who was stepping out on the other side. “It feels strange to be here again.”

“It does,” replied Budhu nervously. Some six years earlier, their arrival at this village had prompted an attack by the villagers and Thornton had narrowly missed an arrow shot at his head. Rudhisuru’s leg still bore a scar from the arrow he received. He looked around at the graveled road—it was designated Route 21—the electrical and telephone lines, and the school building with its glass windows. “But this is a very different place.”

“It is. I have to take my hat off to the Queen and the army—they’ve connected this world together really fast.” He pointed to a truck loaded with metal milk canisters nearby. “The village even owns a vehicle.”

“Impressive.”

They headed for the school’s front door. Inside, a short corridor led to two classrooms on the right and a series of four small rooms on the left, serving as an office, a library, the village post office, and a photography studio, respectively. They could hear sounds coming from the second classroom, so they entered. Four men awaited them.

“Honored Dhoru,” said Lord Rudhawsu. They had met on several occasions, both connected with the volley of arrows and since.

"It's good to see you again, Lord." They shook hands, then Rudhawsu turned to the others. "You probably remember Lujkrénu, one of our chief hunters; he was your guide, the first time you explored this area. These are our two school teachers, Mɛgdontɛr and Sulu."

"And this is Budhu Akwani, professor of ecology at Mɛlwika Génadɛma."

There was a flurry of hand shaking. "I remember Mɛgdontɛr in an ecology course I taught at Bɛllɛdha last summer," said Budhu.

"And Sulu took geology from me in Mɛlwika two years ago," added Thornton.

"We've tried to pass some of the ideas on to the people of Dɛntastéa," added Sulu.

"I have attended several of Mɛgdontɛr's ecology sessions here in the school," added Lujkrénu. "Until last winter, when half of us went to Mɛlita, there wasn't much else to do in the winter!"

"Until the radio came along," added Sulu. "We have one in each classroom and this place is full during *The World Table* and at night."

"A lot of changes," said Lujkrénu. "And thanks to the farmland in Mɛlita, our children are eating better, and we have more blankets and coats in the winter."

"But we are still waiting for your father to help us with a factory," exclaimed Rudhawsu. "Thanks to the assistance of some Mɛlwika grange people, Yujdwoakwés has gotten a grant for a dairy. They hope it'll be operating some time during the winter. But we lack any industry here."

"We're not here to talk about factories," replied Thornton. "What we want to talk about won't make a factory harder to establish, either. We want to make sure your supply of ivory is reliable and can grow. With that, your village can go into ivory carving. You

can make ivory buttons with ivory chips, for example; that's something you aren't making now."

"Have you visited the other villages in the Basin?" asked Sulu.

"Not yet. Your village is the smallest, most remote, and most northerly in the Northern Basin. You do more hunting, reindeer herding, and ivory carving than anyone else. Our experience has shown that the most remote places on this world are often the most innovative and open to new ideas. Dɛntastéa has two teachers; most villages up here have one. You have about 200 children, and 100 are going to this school; another 30 are going to Bɛllɛdha High School. Both of your teachers know something about ecology. So this is the place to start."

"Now, why do you care about our mastodons?" asked Rudhawsu suspiciously. "Because Mɛlwika is just seventy kilometers south of here and its hunters compete with ours for them?"

"They do," agreed Thornton. "And this year they found very few mastodons; the herd returning to the high meadows was very small."

"I'm from Mɛgdhuna, just north of Mɛddoakwés," said Budhu. "Many men in our village hunt in the northern mountains, including my father, and I went with him as a teenager until I started at the génadɛma. Hunters know the lifecycle of the animals they hunt. Mastodons are not created from thin air; they mate, the females get pregnant, the babies are born every spring, they grow up, and if they survive the cycle repeats. If there are no mastodons, there will be no baby mastodons. Mastodons live in the coldest places in this world where there is the least grass. There has never been a large number of them.

They are much easier to hunt now that we have longbows and trucks. We could wipe them out forever."

"It happened on Gedhéma," added Thornton. "Every mastodon died about 15,000 years ago, and there have never been any since. The experts think people hunted them to extinction."

Mɛgdontɛr looked at the others. "So, are there fewer mastodons now?"

Lujkrénu stroked his beard a moment, then nodded. "I think so. We got fifteen last fall and so far this summer we've killed two. We did better in previous years."

"But we had four very cold winters in a row," added Rudhawsu. "That's very rough on them. The herd suffered starvation several winters; we found the dead carcasses every spring."

"But I think there were fewer winter kills this last winter," said Lujkrénu.

Rudhawsu shrugged. "How can you tell? No one has looked everywhere."

"We asked Lord Déolu how many mastodons are killed every year," said Budhu. "He didn't know. But we know how many have been killed in Mɛlwika in the last few years, and we know how much ivory they yielded based on the taxes collected. So Déolu did research on the tax receipts on ivory. We're guessing that fifty were killed in the entire North Polar Basin last year by your hunters and those of the other villages. The year before, it was seventy-five. The year before that, eighty-five. The year before that, one hundred three."

"But that includes the animals killed by winter," objected Rudhawsu. "Because we look for them to harvest their ivory."

“That sounds quite possible,” said Sulu. “The amount of money our village gets from mastodon ivory has decreased in the last few years. But the price of ivory has almost doubled; people have more prosperity and more of them want ivory jewelry.”

“That is true,” agreed Rudhawsu.

“So, the kills have been dropping, then,” said Budhu. “I was doing research about elephants, which mastodons closely resemble, studying information available in English from Gɛdhéma that a student translated for me. My guess is that the Basin can support a herd of about a thousand beasts, and the alpine meadows of the Spine might support a thousand more. That’s not many. If we obtain the permission of the people of the Basin, we probably should try to count them.”

“*Count* them?” said Rudhawsu incredulously.

“With an airplane,” explained Thornton. “The pilot would fly over the Basin, counting aloud, with someone on the ground listening over the radio and writing down the result. The pilot might photograph the herds as well, so we can do a breakdown by sex and size.”

“Amazing, that something like that could be done,” replied Rudhawsu. “Of course, the stories we hear from our grandfathers is that several centuries ago, the Basin had a lot more animals, because they retreated to the warm meadows of the western basin in the winter. Now that the Kristanɛs live there—now they are Bahá'ís rather than Kristanɛs—the animals cannot winter there, so the herds have shrunk.”

“That is possible,” said Budhu. “The herds can only grow as large as the Basin’s ability to support them in the winter.”

“On Gɛdhéma, there have been three approaches to this problem,” said Thornton. “Two are modern, one old. One modern approach is to leave animals completely alone and do nothing; the scientists state that humans just interfere in the operation of nature and will make problems worse. Closely related is the second approach, which involves some management; protecting forests from fires set by people, for example. The third approach is that of traditional tribal and village peoples: improving nature for their benefit. This has involved planting fruit trees, burning underbrush annually to keep the forests open for grazing animals, and other things.”

“And I am sure you are opposed to anything that isn’t ‘new knowledge.’”

Thornton shook his head. “No, not at all. The hunters here have knowledge that the ecologists don’t. You can see what a few efforts do and improve them. On Gɛdhéma, traditional peoples developed their improvement methods over centuries. We don’t have that much time.”

“I wonder whether we could grow hay in Mɛlita and put it out in stacks every fall,” said Lujkrénu. “It would be tall enough to stick up above the snow. The grazing animals—our reindeer and cattle as well as caribou, mastodons, and moose—would find it and eat it when grass is scarce.”

“Expensive,” objected Rudhawsu. “And all the villages would benefit from our expense.”

“Maybe all the villages could cooperate,” suggested Budhu. “Maybe Duke Déolu or Her Majesty could provide a grant.”

“I wonder whether the Royal Development Bank would consider it worthy,” said Rudhawsu. “All six villages have land in or near Mɛlita where we could raise hay.”

“We plan to go to the other villages in the eastern basin, and to Khɛrmdhuna,” said Thornton. “Maybe you could give us recommendations. We have no one to speak to in two of the villages.”

“We can do that, and I would be glad to call a meeting of the lords,” replied Rudhawsu.

“And what about the representatives?” asked Mɛgdontɛr. “I suppose Lujkrénu and I could call a meeting of them.” He turned to Thornton. “We’re Dɛntastéa’s representatives.”

“I think that would be excellent,” said Thornton. “Perhaps Duke Déolu could attend as well if a formal meeting is arranged. The residents of the Basin have common concerns and should make some decisions together.”

When Thornton finally reached the house in Pértatranisér, he was surprised to see Lébé, his mother, and father, still waiting in the great room. “I was about to call you!” said Lébé. “I was getting worried, You left Yujdwoakwés over four hours ago! And the road is so dangerous!”

“Exactly.” Thornton kissed her and plopped down on the couch next to her. “I was delayed a bit in Bɛllɛdha; Budhu’s bus to Mɛlwika never showed up. But he said he’d go to the génadɛma for the night and take the next bus in the morning, so I started driving here. Just before I reached Sumiupɛrakwa, though, I came across a bus: it had had a head-on collision with a steam car going south.”

“How terrible! Any casualties?” asked Liz.

Thornton nodded gravely. “The young man driving the steam car was ejected from it, I suspected he bounced off the bus, and was thrown fifteen meters off to the side of the road. He was wearing a toga and almost had his head torn off; it was quite gruesome. The steam car’s license plate was 505, so he was from Véspa. It was an old car with no headlights. Maybe he was hurrying to get home in daylight. There were also two uncorked wine bottles on the floor of the car, so he may have been drinking. The driver of the bus was seriously injured, as were five of the twelve passengers. The policeman from Sumiupɛrakwa was already there; the driver had limped to the nearest telephone pole with a phone jack and had instructed a nimble passenger how to climb up and plug in the bus’s telephone. Two ambulances arrived just after I reached the crash and took the wounded to Néfa and Bɛllɛdha. Then a Bɛllɛdha policeman arrived and argued with the Sumiupɛrakwa policeman that the crash was in North Shore province and he should leave. I prevailed on him to relax and help the Sumiupɛrakwa policeman complete the essential work that had to be done.” Thornton sighed. “Anyway, we pushed the two crashes off the road and the policemen and I shuttled the remaining passengers to Bɛllɛdha, where I paid for them to spend the night at the Palace Hotel there.”

“Good,” said Chris.

“Then I drove here. I called Mitru and told him what I saw; the bus is a total wreck.”

“What a terrible story.” Lébé kissed him.

“They *have* to do something about a four meter width of concrete,” said Chris. “It’s crazy. I think there have been a dozen crashes this year; that’s probably over a dozen

dead, usually some of the wealthier and better educated citizens, and maybe two percent of the world's vehicles."

"Mitru has to be concerned because it costs him money," agreed Thornton. "Not just the bus; passengers can sue him, even if the bus driver wasn't at fault. The passengers told us the car was coming at a high rate of speed."

"The police have to do something," said Chris. "Maybe I should call Dɛku tomorrow. If the police put a car out on a stretch where people drive very fast and if they stop people for speeding and tell them to slow down or they'll get a ticket, that would help."

"I think someone has to do something," agreed Thornton.

"You look beat," said Liz.

"Of course. It's 10 p.m. here; that means it's 1 a.m. in Bɛllɛdha! I'm tired and drained by the accident."

"But I gather the day-long meeting in Yujdwoakwés was successful," said Chris.

"In some ways. Every village sent their top five vote getters, and on average four of them showed up, so we had a pretty representative group. Four Lords out of seven showed up, including Pédru, and they were reasonably polite to him, especially after he ignored a few snide remarks. The other three village lords were represented by the headmen. Déolu came. At first he was uncomfortable and I think upset that the Basin's villages were having a meeting together, but he got over that once it was clear they had common concerns. I think the big victory was the idea that a legitimate meeting of this sort could happen; the villages have a list of people in order of numbers of votes received, so any particular number of them is viewed as a legitimate representation of the

village. The big problem was discussing mastodons. I finally managed to get an hour of discussion on that subject before the end of the meeting. I think most people agreed the herd is shrinking, and most agreed something should be done. Déolu pledged a thousand dhanay, but only after I pledged a thousand from us; hope you don't mind, dad."

Chris shrugged. "It sounds like it worked."

"The villages all pledged a few hundred, so I think we have four thousand to work with. I suppose it'll be used to buy bales of hay from Mɛlita and other places, which can be put out in stacks all over the Basin before the snow buries the dirt tracks. I suspect some of it will go to feed the local cattle; I hope not! The deer, elk, moose, and caribou will eat a lot of it as well."

"That's alright, they need it," said Chris. "And the rest of the discussion was on development?"

"Yes! This is not like five years ago when lords complained that electric wires would disturb the weather or stir up evil spirits. No one even accused Khɛrmdhuna of witchcraft. Everyone knew what Bɛllɛdha and Mɛlita are like and many had visited Mɛddoakwés. They wanted more things that could use electricity. They wanted factories. They discussed getting grants and loans from the Royal Development Bank and the Greater Mɛlita Grange. Everyone asked Lord Dontu what sorts of things Yujdwoakwés could do with milk and he spent ten minutes explaining pasteurization and how to make yogurt. Everyone wants to buy hay so their cows can yield milk all winter; usually they dry up for half the year because their diet is so restricted. People asked the Khɛrmdhunans about what sort of leather and wool they want to buy and Pédru made some deals over lunchtime."

"Good. Money usually speaks louder than prejudice."

"But doesn't eliminate it."

"No. So, do we have a plan for spending the four thousand?"

"No. Do you think we should work with Lord Déolu? The two teachers in Dɛntastéa—Mɛgdontɛr and Sulu—both understand the problem well and are competent. We could hire one of them to oversee the work, ask someone else to oversee the expenditure, and send someone—maybe Budhu—up to make an inspection before the snow stops the effort."

Chris nodded. "Let's do it. And let's get to bed. We're going to Luktrudéma tomorrow morning, so we need a rest."

The next morning, Chris called Sulanu, editor of the *Mɛlwika Nuɛs,* to tell him about the accident, and suggested that he call Kɛkanu, who was with the royal party in Mɛddwoglubas. Then he called Dɛku to suggest some countermeasures. They stayed at home through the eclipse to listen to the *World Table.* Kɛkanu's team worked fast; he interviewed the Bɛllɛdha policeman and two of the bus passengers, who were still in Bɛllɛdha Hospital.

At midmorning Chris, Liz, Lébe, and a still-tired Thornton left Pértatranisér in the rover for Luktrudéma. In a mere fifteen minutes they reached the village on the cove. Liz and Chris went into the tavern to talk to the owner, Estoiésɛr, "the wrath of God," the brother of the Mayor of Pértatranisér, Estoipuru or "God's fire," while Lébé and Thornton walked to the old theater.

“Look, they’re already removing the bushes and trees,” said Lébé. “Your dad was here three days ago for most of the day, walking over the theater and explaining to the three workers that he wanted them to clear it without doing more damage. Afterward your mom was furious; she said he would get a heart attack in the heat and humidity.”

“He does have to be careful at his age. So, did dad arrange a lease from Pɛrku?”

“No, a partnership. The general was here, too. They walked the amphitheater together, figured out its capacity, agreed on a guess of how much repairs would cost, and agreed to split them fifty-fifty. Estoiésɛr hired three local men to do the work.”

“So, that’s moving forward.” Thornton looked at the amphitheater and tried to guess its capacity; several hundred at least.

“Thor, we need to get away,” said Lébé urgently. “The Women’s Génadɛma is driving me crazy with little administrative details. Sometimes I need to escape for a week. When we come to Pértatranisér, May drags me into her work with the women’s college here, even if she thinks my plans for the college in Mɛlwika are undermining its quality. Everywhere we go, we’re always with your family or mine. I like being with them, but sometimes I wish our family could be on its own.”

“I know what you mean. The kids love to play with their cousins, but they get pretty noisy at times and we neglect them. Maybe we should build a house of our own.”

“You mean in Mɛlwika? I wouldn’t do that. I just need a getaway.”

“I understand. No, maybe a place of our own here in Luktrudéma. And dad has commented once or twice on the need for a house in Mɛlita, even if it is only an hour from Mɛlwika. If there was a house there, we could escape for a few days. If we want a week, we could escape here.”

"I like that idea. But right now we don't have the income to do it."

"We don't, but we should. I'm full professor at Mɛlwika and you are a college president, and we both have Masters degrees. According to the official pay scale, we should earn about 4,000 and 7,000 dhanay per year, respectively. That's enough to buy a good house with cash after less than a year. We'll need a car as well."

"So you'll talk to your dad?"

Thornton nodded. "Sure. But I think we should make it clear that we plan to stay in the Mɛlwika house."

"Definitely." She grabbed his arm and squeezed it affectionately. "This is exciting. I think we need this."

"I agree. This is such a peaceful place, I think it'll be a nice spot for a vacation getaway. Let's walk along the shoreline."

She nodded and they turned away from the theater and headed northward along Route 43, then turned off to walk the thin blanket of sand that the sea had cast onto the former forest floor. The cove was enclosed by a short arm of lava on the north and a longer curved arm on the south, leaving an opening to the sea facing northeast. The drowned forest had been removed by loggers, so there was no ugliness of bleached tree trunks standing above the waves, though the shoreline had a lot of driftwood littering it. A lady was walking the beach and collecting it for firewood; that was a convenience few villages had. The bay and the sea beyond were dotted by small islands, usually with tufts of forest still standing on them.

"You can see why your dad and mom think this could become a summer getaway. The Old Houses have their suburbs east of Mɛddoakwés, but there is no place where they

collect on the western shore, except in their townhouses in Ora and Néfa. The hills above the cove could easily accommodate dozens of villas. They could shop in Pértatranisér and go to the theater here. If they do build houses here, lots of little shops will open, and that will attract others."

"Tourists." Thornton used the English word. "That will be controversial on this world at first. Wɛrétrakɛstɛr wouldn't approve."

"Hum. No, he wouldn't. Anyway, Pɛrku likes the idea and plans to build a big villa for himself here. The family doesn't like living in the old palace much, and when Her Majesty arrives they have to leave; when she was here last week they stayed in the Palace Hotel in Pértatranisér!"

He chuckled at that. "I suppose it'll take a few years for this place to catch on, though. What about the idea of establishing an artists' colony here?"

"Your mom's keen on that one, but no one is sure how to do it. She needs to convince a painter or two to move here for part of the year, and if there are wealthy villas here, there will be patrons. I think the artists colony is phase three, with the villas being phase two and clearing the theater phase one."

"But phase one won't lead to phase two."

"Yes, that's another problem with their scheme!"

They both laughed at that. "Strange, to think we've gotten so wealthy we can build houses where we want and make schemes to build art colonies and attract villas."

"It is strange. I think we should be giving away more dhanay, like you did yesterday at Yujdwoakwés."

"And invest generously in more factories. Everyone wants one, now."

“Amos says the requests for help are coming to the Engineering School almost daily, now. He and your dad were talking about a huge expansion of the school—a hundred thousand dhanay—to convert concepts into machinery.”

“We have to do that. The palace is expanding the grant program because the tax receipts grew something like ten percent this year, and they’re wisely mixing in loans so the money has to be spent in ways to generate revenue. Déolu told me almost every village on the North Shore is cooking up some sort of scheme, either to raise lots of goats and slaughter them, or start a cooperative to weave baskets, or build a factory to make ceramics, or something. In the last few years, the idea that people can actually make a lot of money through systematic planning has sunk in.”

“Too bad life involves more than making money, eh?”

“True but considering this world’s astonishing poverty, a bit more money is a great advancement!”

They walked up the shore to the lighthouse and poked around the old ruin, which was fascinating. At one point the structure had lost its top, perhaps in an earthquake; the crushed upper story lay next to the tower’s base. From there, they could look across the cove at the old Sumi temple on the southern side. They’d have to hike up to it some day as well.

They turned and headed back to the inn. As they did so, a steam-powered boat entered the harbor towing three huge trees behind it. They had been dynamited free of the seafloor with depth charges, then the floating tops had been chained to a boat so they could be towed ashore. Not far from the lighthouse was a steam-powered sawmill that

received and processed the trees. About the time Thornton and Lébé reached the sawmill, so did the boat.

They watched as the steam boat entered the cove and turned around, turning the three huge mahoganies with it. Men from the sawmill waded into the shallows, disconnected the ship's chains from the trees—they were too heavy to drift away—and wrapped a heavy chain around the butt end of the trunk of the first tree. Then the steam engine in the sawmill engaged a winch that began to pull the trunk to a wooden ramp and then up it. When the tree was pulled out of the water, they could see quite a contrast: a dark, sodden, partially rotten trunk that had been underwater with barnacles and clams stuck to it, and a bleached, seasoned trunk that had been above the water. A team of three men tackled the tree with axes, cutting off any remaining branches, fishing broken branches from the water, and preparing the waterlogged part of the trunk to be pulled into the sawmill and cut into three meter lengths for the charcoal plant. The seasoned top would be examined for use as lumber or would be consigned to the flames as well if it was of inferior quality.

"This is really amazing," said Thornton. "No wonder Pértatranisér's timber operation is so big."

"I hope they plan to move this spectacle somewhere else if the cove is to become a tourist center. What a bristling mess!"

"True, but it's also interesting, and it doesn't use up much of the cove."

Meanwhile, the ship headed farther up the cove to the inn and the sailors jumped out to grab some lunch. He and Lébé walked over to the dock. Someone there waved. "Greetings, Honored Thornton."

“Greetings.” Thornton walked closer to see who it was. “Oh. . . Honored Skandéstu, right?”

“Very good. I am impressed you remember, you’ve had so many students.”

“I have.” Thornton walked closer and they shook hands. “This is my wife, Lébé.”

“Pleased to meet you.” He shook her hand as well.

“You were studying engineering, right?”

“Correct. I have an uniyɛri in engineering from Mitrui Génadɛma, which included a long term of courses in Mɛlwika. My three months in Mɛlwika were a lot of fun. I wish I could have stayed, but my village—Parchimanja—wanted me back to teach. And with an uniyɛri in engineering, I didn’t really want to teach, but Jathisérvika—next door—needed a boat captain and I had experience with steam engines, so I run this ship and fix the engines as well.”

“What do you have on board, two steam engines?”

“Correct, big Ora ones, and towing three forest giants requires both of them! Each tree weighs ten or twelve gurnis and we make three to five runs a day, eleven hours a day, five days a week. This operation is continuous.”

“So, how much of the old forest is left?”

“A lot! We’ve only removed ten square kilometers of trees so far. Most of it was completely submerged; if you go down along the old path of the Rudhisér you can look down and see the tops of some trees underwater, and might get hung up in some others. Closer to Sumilara, even the tree tops are way underwater and are gradually falling and rotting. As long as the water depth is less than half the height of the trees, harvesting them is worthwhile.”

"Why half?"

"If a tree is about three quarters under water, when you dynamite the base the heavy, waterlogged part of the tree sinks and pulls the top under. But if the tree is less than half submerged, it floats. The bottom half is worth much less, also; all you can do is burn it." He smiled. "We've got about ten years of work left; at that point most of the trees will have fallen into the water."

"I'm amazed there are fish in the water. All that rotting wood should be using up the oxygen."

"The drowned forest is full of fish! They have plenty of hiding places and the fishing boats have trouble going after them. And as for oxygen, there's a huge bubble whirlpool in the sea about a kilometer off the coast. I suppose that's keeping the seawater full of oxygen."

"A bubble whirlpool?"

Skandéstu nodded. "I've never seen something natural like it before, but then, I've never seen one of the Sumilara volcanoes erupt, either!"

"But a bubble whirlpool isn't a natural phenomenon; not one producing oxygen, at least."

"Do you want to come see it? We can pass it on our way out to get three more trees. The round trip takes less than two hours, unless we have a problem."

That was very intriguing to Thornton. He looked at Lébé, who hesitated, then said, "I doubt we'll be here then, but your dad could send a car to pick you up."

"The bus runs every hour; take that," suggested Skandéstu.

"Alright," said Thornton. "I would like to go out and see the bubble whirlpool."

“I can see this area will have more attractions than we thought. Go.” She leaned over and gave him a kiss.

Thornton hopped on board and Skandéstu and his crew of two cast off. The ship was only eight meters long and four wide, the underdeck being filled by two powerful steam engines attached to propellers. The men stoked up the boilers while Skandéstu drove the vessel. Unloaded, it was surprisingly fast; within a minute they were steaming full speed ahead and raising quite a wake behind them. Thornton walked from stem to stern, holding on carefully, admiring the nickel-steel hull. Then he stood next to Skandéstu as the captain extolled the capabilities of his double-hulled vessel.

“She’s a fine ship. After she was finished in Ora, they raced her in the river channel and clocked her at almost thirty kilometers per hour.”

“Wow, that’s fast. I’m amazed she’s fairly small.”

“Basically, she’s a nickel-steel hull to hold two steam engines and a day of charcoal. She needs to be tough. When you’re towing a big tree at five kilometers per hour and the tree hits an underwater snag, the forces are pretty strong. We snap a chain almost every week and sometimes we lose the chain completely. There are a dozen trees out there that we have never been able to recover because we drove part of them into the bottom mud. We have to steer around them until they sink to the bottom and out of the way.”

“Is this ship the only one doing logging?”

“At the moment; sometimes there have been two. We recover about 150 gurnis of wood per day at a cost of about 50 dhanay. That’s forty-five thousand gurnis of wood per year, three quarters of which is burned up to make lime, mostly for road paving.”

"Why are you hauling the wood here, instead of directly to Pértatranisér?"

"Because the mahogany forest off the coast of this lava flow is of particularly good quality and plenty of wood above the water line can be recovered for construction. It's easier to haul the timber by road than by water because of all the underwater obstacles one can hit. South of here, the trees are shorter and more scattered. There's an *incredible* amount of timber we could recover; in the last few years we've barely cleared beyond this cove. There are Fish Eryanɛ who go out from Owyapéla in big dugout catamarans made by hollowing out two tree trunks with fire. They collect floating driftwood or they saw off the top of a tree a meter above the waterline and paddle back with as much as they can tow. A single-engine steam ship operating out of Jathisérvika recovers thirty thousand gurnis a year, which is sold for firewood or charcoal throughout the northern villages of Véspa. Ora has two double-engine ships like ours to supply the iron and steel mill and the city's households with charcoal. They supply southern Véspa as well. Another ship operating out of Mɛddwoglubas supplies firewood and charcoal for Lɛwéspa and the southern shore."

"And that's all of the steam ships?"

"All I know of. I don't think Sumilara has any; they buy charcoal from us."

"You're right about that. On the eastern shore, we mostly use coal for heating, but there isn't much here. I've seen aerial photos of the sea and I have always been amazed at how little of the drowned forest we've used."

"And after every big windstorm, the shoreline gets covered by driftwood. A lot of villagers recover their firewood from the beaches. Some villages even rent tractors to haul the wood home."

They had steamed clear of the cove and out into open sea, or what could be described as a clearing in the sea. Éra had a very steep horizon; from the deck of a ship one could only see a few kilometers, even when taking the height of dead trees into account. But now that they were out of the cove Thornton could plainly see dead forest ahead of them. It took only a few minutes to approach the line of trees, but first Skandéstu pointed to an area to the south. “That used to be a clearing in the forest. You can see the trees south of here are farther apart; that area had been burned regularly to keep the land open and stimulate game. We can steam through there to Pértatranisér fairly easily even though we haven’t removed very many trees. The mahogany ridge is north of here and you can see how much thicker the forest is. And right in between and ahead of us are the bubbles.” He pointed and Thornton squinted. Then he saw the rippling water, with a billion bubbles gently bursting. Foam, created from the bubbles, drifted steadily southward.

In another minute they had reached the roiling water. It was not a real whirlpool, but looking closely, Thornton could see that the water did indeed turn clockwise. The bubbles were usually very small; only occasionally when a few merged together did a large bubble reach the surface. “It must be . . . forty meters wide and fifty or sixty meters long!”

Skandéstu nodded. “Something like that, it’s big. The current in this area runs north to south.”

“Are there any others?”

“The fishermen have mentioned one or two others to me. They aren’t permanent; they bubble a while, then stop, then maybe bubbles appear from another spot. This isn’t natural?”

“No, I am sure it is not!”

“Interesting.” Skandéstu didn’t know what to think about that.

Thornton pulled out his cell phone and took a bunch of pictures, which he immediately uploaded. No one asked him what he was doing. They watched for a few minutes, then headed northeastward toward the dead mahogany forest. Several dugout canoes awaited and the ship headed straight to them. Three trees already had lengths of cord attached to them. “The Fish Eryanɛ are waiting for us to set off the explosions, then they’ll move in and net the stunned fish,” explained Skandéstu. “They’ll pick up stray tree branches floating in the water, too. While we’ve been away, they’ve plumbed the trees and measured out cord that’s two or three meters shorter than the bottom of the sea.”

“Why?”

“Because an explosion a few meters off the bottom is more likely to break the trunk than one at the sea floor. You’ll see.”

Skandéstu steered straight toward the closest tree and closed slowly. He turned the ship away and a crewmember at the rear of the ship grabbed the cord, which was tied to the trunk, and pulled them in slowly. While the third crew member steered, Skandéstu walked to the rear of the ship and picked up a steel bomb the size of a large cannonball. He tied it to the cord, uncorked an opening, lit a match and fired up the fuse, then tightly corked the opening again and threw the bomb overboard. “Go!” he shouted and the crewmember put the two steam engines in gear. During the previous minute, steam

pressure had been building; the ship leapt forward, almost lurching Thornton off his feet. They headed toward the second tree with a rope attached to it about seventy meters away. “The fuse takes two minutes; plenty of time for the bomb to settle against the tree trunk,” said Skandéstu.

Bam! Suddenly the sea turned to a flash of steam and flying water and a great wave lifted into the air, then rolled outward. The great mahogany, nearly a meter in diameter, lurched to the side and fell into the water in an enormous splash. Branches, sheared off, bobbed about. A hundred fish began to float to the top, killed or stunned by the shock wave.

“Wow,” said Thornton.

Skandéstu smiled. “And we get to blow things up ten or fifteen times a day! It’s really a lot of fun. And here we are at the second tree.”

They followed the same procedure and two minutes later, a second mahogany fell. The fishermen ignored the explosion; they were netting fish. The third explosion barely brought down the monster tree it was attached to. “It may still be attached; we’ll see,” said Skandéstu, worried. He backed up the ship toward the middle tree and his men wrapped a chain around its trunk in several places and secured it. Meanwhile, Fish Eryanɛ dugouts paddled over and grabbed two other heavy chains, which they took to the other two trees.

It took almost half an hour to get all three trees secured to the ends of the sixty-meter chains. While the two crewmembers shoveled more charcoal into the boilers, Skandéstu opened up the engines and gradually pulled all three chains taut. The trees

began to move. He smiled, nodded, and gradually poured on more steam. Some of the power went to the three winches to pull the trees closer to the ship gradually.

It took almost an hour to chug back to the cove; they had to follow a zig-zag course to avoid known underwater obstacles that could snag the trees and snap the chains. Once in the cove, they slowed and waited for the sawmill crew to remove the ship's chains from the trees and attach their own, then they docked to let Thornton off. His mother, father, and Lébé were waiting.

"Thanks, Skandéstu," said Thornton. "If I can figure out what sort of phenomenon the bubbles represent, I'll let you know."

"Thanks. Come out any time! The fishing's good!"

Thornton laughed at that. "And pretty easy. May Esto be with you, Honored." They shook hands, then Thornton hopped off and the ship headed back out.

He turned to his family members. "I thought you'd have left by now."

"So did we, but Pɛrku came by and we talked," said Chris. "We may move the saw mill. He's going to build a villa, and Lébé said the two of you want a house, and Pɛrku has already convinced two other local lords to build here, and Kɛkanu will come and open the theater with a concert broadcast live over the radio in the fall. What did you see?"

"I had a fascinating two hours. The explosions bringing down the trees are pretty exciting."

"We heard them from here," said Chris. "What's this about fishing?"

"Each explosion kills hundreds of fish. The Fish Eryanɛ are out there in their dugouts and they choose the trees to blow up based on where the fish are."

Ah. Well, let's get home for lunch." The four of them walked over to the rover and got in. While Chris drove, Thornton called Philos and set the phone on speaker so everyone could listen.

"Hello?" said Philos after a dozen rings.

"Hello, Philos, this is Thornton."

"Hello Thornton, how are you?"

"Pretty well; we're in Pértatranisér for a few weeks on vacation. How is your family?"

"We are all well. We'll be heading to our home planet for a few months, but Sophos will be in charge for a while, and he's doing a very good job. He and Lua have been talking almost every week."

"Yes, and she's very pleased that he can offer us an extremely sophisticated chemotherapy drug. There is so little we can do for people with cancer right now. It'll really help."

"And I gather the pharmaceutical facility is slowly being designed."

"Yes. I haven't been following the plans, but fortunately we can accommodate the project financially. We probably couldn't have done it a few years ago."

"Your family is doing very well, and doing many good things also."

"Thank you. Say, Philos, I just uploaded about ten pictures of a patch of sea a kilometer or so from where I am right now; a patch full of millions of bubbles. Sailors tell me these patches of bubbles move around and that there is more than one. Are they something your people are doing?"

“Yes. They are not a natural phenomenon. We have a little robotic submarine—I suppose you could call it that—with its own power plant. It extends several snorkels to the surface, sucks in air, and blasts it into the sea near the bottom. The rising bubbles oxygenate the water and help turn the sea over as well. The sea has had several hundred of them almost since the beginning of the flood; if it didn’t, the water would be dead and anoxic.”

“That’s what I inferred. Several hundred, huh? That’s quite a lot of them.”

“They’re usually located in places where no one goes. It’s unusual for your people to see them. We’ve been repopulating the sea almost since the beginning. We’ve introduced almost a million species, everything from killer whales to microorganisms residing in the mud. It’s the only way to maintain a diverse ecology on a small world; species go extinct there all the time.”

“Interesting. We’re trying to establish a plan to manage the mammoths in the North Polar Basin because they’re endangered.”

“I suspect they are seriously endangered. You need to do more of that, Thornton, because all we have is frozen embryos, and the mastodons have a culture of sorts that would be lost if the species had to be revived based on the embryos.”

“We’re gradually expanding our ecology program, and I guess we need to expand it faster, now. Thanks, Philos.”

“Thank you, Thornton.”

Reread and edited 6/3/13, 8/16/17, 11/17/24, 9/23/26

282.

Growing Pains

Early Brénménu/late Sept. yr 11/629

Thornton entered the room with a sense of trepidation. The academic accreditation committee looked very serious. Most were family or friends: Chris, May, Lua, Amos, Aryéstu, and Stɛrsɛjiu. The latter two were the heads of the Gésɛlékwɛs Maj and Isurdhuna Génadɛmas, respectively; individually, the six represented business, humanities, medicine, engineering, economics and social science, and philosophy. Thornton was normally a member as well and represented the physical sciences, but he could not participate as a member when bringing a petition about himself.

Chris pointed to a chair, then to the stack of papers Thornton had given them. "This is a very impressive collection. So, sit and make your case."

Thornton sat, a bit unnerved by his father's bluntness. He couldn't tell whether it was because his father disagreed with the proposal or whether he didn't want to be accused of being partial. "The stack represents all my publications since completing my kwétɛryɛri six and a half years ago. On the bottom is my 190-page Master's thesis on the geology of the Arjakwés Valley, completed five and a half years ago. Subsequently, I have written or coauthored eight articles and booklets totaling 330 pages, not including the three articles on the geology of Éra I have drafted for the Mɛlwika Encyclopedia. I have now created twelve advanced geology courses, excluding the eight field geology courses I have taught, which have been very different from each other. I have also set up the Geological Survey, which is producing detailed topographic maps of the entire world,

and I have been the primary author of twenty of them. The maps are folded up in the separate stack. I have also assembled two formal geology textbooks, mostly from translated materials. Of course, all the courses I have taught have required assembling course materials.

"I did a quick comparison by scanning the latest index of the *Royal Journal of Knowledge.* It appears that I have published about fifty percent more pages than Marku, who is second. Furthermore, at this point I have either published on or overseen Masters theses in geology about every part of this world. In total, we're talking about five masters theses other than my own.

"So, in summary, I feel ready to tackle a *koli,* a doctoral degree in Geology. I think the field of geology is the most highly developed field on Éra; no other field has six people with masters degrees. We need to start creating doctorates at some point, and my next big project, I think, should be an advanced text on the geology of Éra. It represents a logical doctoral dissertation."

He stopped; it was a quick summary. The various members of the committee looked at each other.

"How will we know your work represents the standard of knowledge we should expect of a doctorate?" asked Stɛrsɛjiu.

"Good question. The examination committee should include some geologists, to evaluate the content, and outside experts such as May, who have a sense of the standards we should generally uphold. May seems to be the expert in these matters."

"Quality standards on Gɛdhéma vary widely," said May. "A book-length work that is successful as a book—it tackles a thesis, marshals its evidence, explains it clearly,

considers counterexamples, and draws conclusions—is the main concern. Many people can read and judge the success of such a work, especially if technical terms are explained. I would favor a dissertation written as a clear, easy-to-read, advanced text on the subject. We have so few people on this world with an education, we need to write advanced works so that they are readable to people outside their principal field."

"No other sort of dissertation makes sense," agreed Aryéstu. "This world needs useful knowledge."

"I remember, six years ago, we were talking about waiting ten years before we considered establishing a doctorate," said Chris. "What is your response to that?"

Thornton reflected for a moment. "I don't think we expected education to advance as fast as it has. Geology, engineering, and medicine in particular have advanced quickly. Geology has been receiving between twenty and thirty thousand dhanay per year, mostly from the army, to develop maps and land use plans. Engineering has been spending fifty thousand a year to acquire machinery and qualified people and has been turning out machines licensed to factories. Medicine has been spending forty thousand a year on medical faculty and facilities, separate from hospitals. Of the three, geology has been turning out the most publications. Archaeology and history are coming along thanks to crown grants and private funding. Business has been developing as a field and involves a lot of cash. Agriculture is probably sixth in terms of number of people. It's very impressive."

"It is," agreed Chris.

"Philosophy and literature are both consolidating," said Stɛrsɛjiu. "And I think with the new leadership in Mɛddoakwés, we will see that génadɛma grow in strength again."

"Thank you," replied Aryéstu.

"My question is this: does Éra *need* another degree?" asked Amos.

"Hum. There has been an equivalent of a doctorate on Gɛdhéma for a very long time; five or six centuries at least. Five years of education does not constitute proof of true mastery of a field. A comprehensive publication does."

Amos nodded at that. He looked at the others. The family members were no doubt hesitant to give one of their own the chance to add a degree to his qualification; it would be easier to have granted that privilege to someone else. The non-family members were in a very different position; Aryéstu no doubt aspired to such a degree, and Stɛrsɛjiu might desire it as well to consolidate his position as the world's leading philosopher, now that Wɛrétrakɛstɛr had moved over to become a prophet instead.

"What about courses?" asked Stɛrsɛjiu. "How many courses should a doctorate take?"

"Usually two years, then they complete a series of examinations, then write a dissertation. In my case, the two years would be the twelve advanced courses I have created, the eight field geology courses, and the numerous maps, booklets, reports, and articles, which together are the equivalent of four more courses. But if you prefer, we can count my courses again at the end of this school year, because I have a new course and two new field geology courses scheduled. The dissertation will take several years anyway."

“How would we give Thornton a series of examinations on geology?” asked Lua.

Chris chuckled. “He’d have to draw up the exam!”

They all laughed at that. “Any other questions?” asked Chris. He looked around the room; people were shaking their heads. “Okay, Professor Dhoru, you may excuse yourself.”

Thornton nodded and stepped out of the room. No one spoke at first. “Why not?” said Stɛrsɛjiu. “I know the family members can’t say this, but we all know that Thornton is one of the most dedicated intellectuals we have on this world. He’s also one of our most prolific authors. His Eryani is of high quality; you’d never know he was ignorant of the tongue twelve years ago. Certainly his Eryani is of a level we would expect of someone with a doctorate.”

“All of us feel rather awkward about this matter,” said Chris. “But I certainly would agree.”

“If anyone should lead us into doctoral degrees, it is Thornton,” agreed Aryéstu.

“I think his publications speak for themselves,” added Lua. “I’ve heard of universities on Gɛdhéma awarding doctorates to people for their previous publications, regarding them as the equivalent of a dissertation. He has already done that.”

“But we would certainly hold our doctorates to a higher standard,” added May quickly. “I would favor pushing him hard and making sure his dissertation is exemplary.”

“He can do that,” agreed Amos. “I’d favor this proposal.”

Chris looked around the table. “Alright. Let the minutes read that we have accepted the proposal. Any other business? News from Gésɛlékwɛs Maj, Aryéstu?”

“Enrollments for the fall term that starts in a few weeks are already up. The crown has agreed to add two more law professors, the other two judges, and they’re offering new courses, so the law school is expanding to twenty students, all with previous dwoyɛris. Kandékwɛs has supported two more professorships or arranged for crown support, so we’ve expanded our science. Soru’s teaching a course on education and the Statistics Ministry is offering three new courses on surveying and statistics. We’ve been noticed by quite a few people studying to be teachers. So we’re doing well.”

“I’m delighted. Our registrations are up less this year than we expected, but that’s alright,” replied Chris, with a smile. “Randu’s got a flood of Sumi students coming to Arjdhura, too. The ɛjnopéla and Mɛlita branch campuses are seeing big registrations, especially in courses on mechanics. I gather the other provinces are seeing increases as well.”

“We have a modest increase,” agreed Stɛrsɛjiu. “Please, send some mechanics teachers our way! Kɛrda needs them; there will be a lot of demand, believe me.”

“I’ll see what we can do,” agreed Chris. “Thank you, everyone. That was a quick meeting.”

They all rose. Chris turned to Stɛrsɛjiu. “What term would be good?”

“Any. We could publicize such a course in a matter of a few weeks. When can someone come from your family? We haven’t hosted any of you for two years now.”

“I know, and I apologize. Let me work on the mechanics teacher first. I think we can find you someone for Prusménu or Plowménu.”

“Both?”

"No, one or the other. Mechanical experts are in short supply right now because of the huge expansion of the Miller Motor Works. As for my family, we're scheduled through Prusménu, and we'd all worry about getting stuck in Kɛrda in Bɛlménu."

"You shouldn't. In the last two winters, the snowfall has been lighter; it may indicate a change of climate, because the eastern shore is getting the heavy wintertime precipitation. But even if we get heavy snow in the Snowy Mountains, Route 1 is now open to the west as well, and the western highlands get much less snow than the eastern. It should always be possible to catch a bus to Réjéivika, and from there to Mɛlwika."

"That's true. I'll see what we can do, then." They walked out to congratulate Thornton, who had been sitting outside.

Meeting over, Chris headed to the tomi building. In the last nine months the organization's staff had doubled and still was not enough. The acreage handled by granges had shot upward from forty thousand agris to one hundred thousand; the tomi had processed ten million dhanay in local, provincial, and royal tax payments, overseen a million dhanay of medical, educational, mechanical, and construction payments, and performed audits of twenty-five businesses, agencies, and non-profits. Now the tomi was overseeing all the finances of the expansion of Miller Motor Works. It was an immense challenge.

Chris went to his office and spent an hour doing a random check of the tomi's master ledger. It was the only way he could be sure the accounting oversight was competent and careful, and he could not take a chance that money was being mishandled; too much was at stake. When he saw that spending on several construction projects,

including the pharmaceutical facility he was personally paying for, was consistently running high, he called in Luktréstu. “Any idea what’s happening here?”

Luktréstu looked at the columns of figures. “I’ll check with the auditors, but I think they haven’t been able to verify expenses over the last two weeks because of other duties connected with the construction. You know, construction costs have started to escalate in the last few weeks, since the work on Miller Motors started. Too much is being built at once, so there are shortages of workers and materials.”

“Inflation.”

“Exactly; demand exceeds supply. That’s probably the problem with the pharmaceutical facility as well.”

“Okay. Find out whether that’s the issue and make some calls; we want to hold the line if we’re paying for a contract. If the rising prices involve concrete, bricks, lumber, or other building materials, make sure contracts are being extended farther afield to the Bɛllɛdha cement works or to the sawmills in Sullɛndha and Sumiupɛrakwa. No reason to pay more if the supply can be expanded. If glass is the problem, we should look into temporary plastic window covers until the price of glass falls.”

“Got it. Bricks are up as well, but Mɛlita Grange could start to sell some of the ones they’ve been making for internal use. I’ll pursue that.”

“Because we have to be much more careful about expenses than we had anticipated. Crop prices are lower than expected; grange incomes are down; mortgage and tax payments to me will be fifteen percent lower than expected; other investors in the Motor Works probably have the same problem. I don’t know how I’ll afford to finish the pharmaceutical facility, fund an expansion for Soru’s school, partially pay for the

additional dorm wing Arjdhura Génadɛma already needs, and pay the last payment for the new dorm here in Mɛlwika, not to mention the various factories we've promised and the investment in Miller Motors we've already made. We may have to postpone some projects."

"I'm still working on that. I'll get another report about the crop-related payments to you. But even though they're down overall, Ménwika tax payments are up, so it may not be as bad as you think."

"And with higher salaries because of the construction, tax payments to us will go up. But let's not use that as an excuse. We have to pressure Miller to buy from people other than his sons and sons in law because they simply can't keep up with the demand."

"No; *you* have to pressure Miller. No one else can."

"I need you and the other tomi staff to find other suppliers, though. Call the granges about construction workers, too; they know who can commute up and do a good job. When ground is broken next month for the factories in Mɛddoakwés Industrial Park, the situation will get even worse."

Luktréstu nodded. "Agreed. I'll organize three support staff and we'll get started."

"Good. Thanks."

Luktréstu stepped out and almost simultaneously the phone rang. Chris picked it up. "Khélo, Kristoféru here."

"Lord Kristoféru, this is Widubéru over in the Development Corps offices. Earlier today we received a very interesting request for assistance from Brébatroba. That's the new village south of ɛndraidha founded by squatters last year; it's the northeastern-most village of the South Shore. They want to establish a facility for producing feed for cattle,

horses, and pigs, but they might expand into chicken and turkey feed later. They want to raise hay, alfalfa, clover, and grains to produce different sorts of feed. They plan to work with the Kwétékwonɛ, also, who have huge grasslands that can be converted to hay. They are trying to raise fifty thousand dhanay. What do you think? And is there any way you can invest or grant money to the Development Corps so we can help them? We're out of cash."

"I think it's a fascinating idea, Widubéru, and probably an excellent business plan. No one is producing animal feed and it could be sold in large quantities if the price is right. So I'd encourage them to pursue it. But I don't have any spare cash right now, either to invest or to support the Development Corps's investment. I'm sorry I can't help, because I think it'll make money."

"Nothing, huh?" Widubéru was disappointed. "It seems like everyone is tight, right now."

"The harvest was too big and prices are depressed. Ironically, Brébatroba's project is well timed in that a lot of cheap agricultural surplus is available. But the large harvest has cut into my overall income, so I don't have anything to spare."

"They've thought it through. They even want to open an operation to weave burlap to make bags. They're asking the Swadlendha Grange to start growing jute and they're buying it from northern Véspa."

"That's a very good idea; jute fiber can be used in a lot of different things. But I can't help now. I may be in a different position in the spring. Right now construction costs are soaring and mortgage income has been lower than expected."

"Okay, I thought I'd ask. I can probably help them get about half of what they want, and that may be enough for them to get started. Thanks, Lord. By the way, how was Bɛllɛdha?"

"Very good; we enjoyed our two weeks there very much. They gave us almost royal treatment. Liz was able to find someone to set up an 'Aunt's Kitchen' and taught a bunch of recipes to the women who joined. We're investing in the kitchen; about two thousand dhanay, not too much. We hope to establish similar businesses in all the cities. We also found a young tailor with a new business willing to coordinate a women's sewing operation. We opened a small branch of Mennea Tomi in the bank this summer and the tomi is arranging loans for women to buy sewing machines; I'm investing a thousand dhanay, which should be enough get fifty women set up to use twenty machines. We'll see whether it makes money for everyone involved."

"Excellent. You're helping a lot more people with a lot less investment, that's for sure!"

"We need big operations and small ones."

"True. I look forward to another chance to speak with you, lord. Goodbye."

"Goodbye."

"So, honored, why are you teaching us this class?"

The question startled Thornton. He looked at the tall, bearded young Sumi standing against the back wall of the packed classroom. He waited for the question to be translated in Eryani for his benefit, but in this case he understood the Sumi perfectly; the translation gave him a chance to think.

“Because we are all cousins. Not first, second, third cousins. Perhaps its tenth or fifteenth cousins. But nevertheless we are cousins, and I believe we need to behave accordingly. Sumilara needs to know about land use planning and the related geology, and urgently. Her Majesty has changed the rules; now you can study just about everything. The subject is actually being taught here at Arjdhura Génadɛma a few weeks before it is taught at Mɛlwika Génadɛma. Sumilara needs to marshal its resources to compete with the other provinces, and this is an excellent way of doing so.”

“And what difference does our competition make to you? Or are you guilty about your role in our military defeat?”

“I was ordered to serve the army and I did as I was ordered. Now I can do as my God orders and can serve the people. Over the summer I was in the Long Valley, Rudhisér Province, the South Shore, Gordha, and the north polar basin, conducting classes or offering advice. Now I can do the same for Sumilara. Imagine, seventy people on the island who know something about land use planning! And I will be available to provide advice later, just write or call. No other province will have so much expertise in land use planning, not even Arjakwés.”

Someone sitting near the front raised his hand. “I want to thank you for learning Sumi. It seems to me that it provides a true measure of someone who says he is a friend of Sumilara and a cousin to us all.”

“My Sumi is not very good and I am sure I will need translation from time to time! Please excuse my father, who will be offering a business course in a few months, and who speaks almost no Sumi. His courses will be of great use to Sumilara as well.”

“When will you bring your courses to the island?” asked someone else.

"I don't know. Perhaps next summer."

Another man raised his hand. "Do you think geology will find new resources on Sumilara, such as iron?"

"Iron, no; the geology is wrong. But you probably have low grade copper deposits. I've seen very small copper deposits several times, but they are too small to work. No province on this world can be self-sufficient; they all need each other. Sumilara's best strategy is to be indispensable to the rest of the world; then it will have strong economic leverage. It'll make up for the lack of iron and steel."

"We have always been wealthy," agreed a man in the front.

"And I see no reason why your wealth will not continue. But remember, in the last eleven years the world economy has doubled. The average person in Arjakwés and Lɛwéspa now earns more money than the average resident on Sumilara. The average resident of Mɛlwika earns half more than the average on Sumilara. Of course, the average Sumi in Mɛlwika earns even more. In short, Sumilara has some catching up to do. Land use planning will help. So will industrialization, mechanization of agriculture, and modernization of the island's arts and crafts."

Just then, the bell began to ring in the square outside the génadɛma building. "Class is over; see you in three days," Thornton announced. Everyone rose and headed for the door. Randu, who had been translating when necessary, walked over.

"This is very exciting. Thank you so much for offering the course here first! Two of these students are journalists and they plan to write up summaries for the Anartu newspaper and the radio station. I think if they could broadcast this class, they would!"

“Maybe we should think of doing that, some time. There are now two entire radio channels with Eryani-language classes for school children. We should offer college courses by radio as well.”

“It would help a lot of students, though I suppose our tuition would suffer.”

Thornton looked at the packed classroom; students were still filing out. “I think that’s not a problem, even with the high costs of translating reading materials. I can’t believe you got *eighty* students!”

“The expatriot community is wealthy and has a lot of connections; it’s their doing. They’re always putting down the Ninurta and Anarbala Génadɛmas, but I don’t think they’re all that bad. They have limitations, but they want to overcome them, especially now that they have competition. And they will; some of these students will go back to them and teach this very class, probably before this year is out! What I badly need is more dormitory space. I have sixty students staying in a génadɛma designed for forty and twenty more staying in houses all around town. I already need a second dorm and additional classrooms.”

Thornton looked at the heaps of clothes and bedding in the corner of the classroom. “I know. But dad can’t help with that; our finances are really tight right now. Miller Motors is draining us like you wouldn’t believe.”

“It sounds like a huge gamble.”

“We didn’t think it would be, but yes, I think it is. Later in the fall, John Miller plans to shut down all vehicle production for three months so that the workers can help build the new factory. If they help move and install the equipment and set up the new facility, they’ll understand it better. It’s a massive project. Amos has been tied up all

summer designing or redesigning machines, reviewing blueprints, fixing bottlenecks—the factory will need more power than ever, which means electrical transformers, motors, and a hundred kilometers of wire—and generally checking everything. Dad and his tomi are managing every dhanay for the project. But if it works, we'll be able to produce a thousand vehicles a year at two thousand dhanay each for steam cars, and the price should halve over several years. If incomes keep going up, in ten years extended families will have the income to buy their own tractor or truck."

"Imagine that. Well, thanks for the pep talk about Sumilara becoming wealthy again. In spite of the youthful self-assurance you heard, the last decade of growth has left many residents of the island deeply worried about its future."

"I'd worry, too. I hope I answered that question alright."

"Yes, I think so. And it was wise not to mention the Faith."

"It'll come up later in the term. All of them know I am a Bahá'í." Thornton turned to his papers. "I had better get going. I have to get ready for tomorrow morning's class! And three-hour classes take a huge amount of preparation when you give them for the first time!"

"I know. See you tomorrow, then."

Several students awaited him outside the classroom to talk, so Thornton spent a few minutes with them, but then he headed out the front door. His steam car was parked against the building outside the window of the génadɛma's secretary, who was in the position to watch the car. Thornton dropped all his stuff on the passenger seat and opened up the firebox. He grabbed a ten kilogram paper bag of charcoal—good for about 150 kilometers—popped open the vents on the top and bottom, placed it in the firebox, lit the

dangling bottom vents with a match, and closed the door. The lower charcoal bricks were impregnated with tar and alcohol and began to burn immediately, but he had to wait a few minutes, reading, pumping air into the firebox with his left foot, while he kept an eye on the steam pressure valve. The steam car had sat unused four and a half hours, so the firebox and steam generator had gone cold. But in ten minutes the steam pressure had reached the minimum level, so he put the car in gear and headed east.

He wasn't heading straight home; not yet. Okpétu had invited him to ɛjnopéla to see the new three-seat airplane the military had just funded. He headed up Route 1 at a prudent speed—the police were now stopping people they thought were driving too fast, and it was hard to tell whether one was driving too fast or not because no one had speedometers—and in half an hour he had reached the town by the hill of sacrifice. With a large market, high school, clinic, branch campus of Mɛlwika Génadɛma, bank, temple, telephone switchboard, large regional grange, and over a thousand residents, ɛjnopéla had emerged as the most important town in the lower valley, even though it wasn't the largest (Nuarjora and its two affiliated villages being much bigger, but less developed). Lord Aryékwɛs, Okpétu's father, had a villa on the south side next to the base of the temple's pinnacle, and next to it was a hanger and short runway. Okpétu was waiting and led Thornton inside the hanger. "Isn't she beautiful?"

"She is!" he replied. He walked from tail to nose, stepping under the wings and touching the surface to admire it. "This is alien parachute cloth?"

"Yes; it's lighter and stronger than anything we can make, and it doesn't stretch over time or split. It covers a nickel-steel frame. The steam engine is a standard tractor

firebox, but since it runs on alcohol fuel as well as charcoal it can provide a lot more power. The steam generator is twice as large and powers two pistons, which in turn run the two propellers in the wings via crankshafts. The crank shafts are some of the heaviest parts in the plane."

"And you built this yourself?"

"No. I helped design it, the army paid for it, but the actual work was done by a team of six men—three from Miller Foundry and the Engineering School, who put together the engine—and by three craftsmen, who put together the rest of the plane."

"Why three seats?"

"If you want a plane to have serious commercial use, one passenger or equivalent in cargo isn't very much. But two; I can fly up to 300 kilograms of cargo, two passengers, or drop two 150-kg bombs for the army if necessary."

"Very impressive. And you have windows in the floor, for cameras?"

"Under all three seats. I can mount a camera between my feet and take pictures with one hand. I've flown it a dozen times already, mostly in the last two weeks. It's working very well. The engine is solid and reliable. But other than contracts for aerial photography, mostly for the Survey, I have no work."

"Have you announced you'll provide commercial service?"

"I've started to. Flights from here to the Western Shore are limited to a few hours a day when it's daylight at both airports. Ora's dirt runway is inadequate, too; there needs to be a good concrete one, preferably near Pértatranisér half an hour from both Ora and Néfa. So far I took a lord and his wife to Ora once, but that's my only commercial flight."

"How long does it take?"

Okpétu smiled. “About an hour!” They both laughed. “I charge thirty dhanay, total.”

“That’s a lot of money, but it’s a thrill, and there are people who can afford it. You should charge less for rides.”

“I’ve thought about that. Maybe on a pretty Primdiu I could take people up for half an hour each for two dhanay per seat.”

“Offer the rides at the Mɛlwika Harvest Festival in a few weeks.”

“That’s a good idea. Say, why don’t I take you up for a quick ride right now? It’ll give you a better idea of what I can offer.”

“Now?”

‘It’s perfectly safe. You don’t teach this afternoon, do you?”

“No, Mɛlwika Génadɛma hasn’t started yet. I need to prepare for the course I’m giving at Arjdhura tomorrow morning, though.”

“Half an hour! Come on, like I said, it’s perfectly safe. We have beautiful, clear flying weather, no strong winds to deal with, I’ll put in a full load of fuel . . . it’ll be great!”

Thornton looked at the plane one more time. It was an exciting idea. “Alright,” he heard himself say.

“Great!” Okpétu sprang into action. He topped off the water tank, checked the alcohol tank and added several liters, put a charcoal bag into the firebox and lit it, then he and Thornton pushed the plane out of the hanger, climbed into their seats, and closed the clear plastic canopy. Thor was relieved to see the plane had seatbelts; he strapped in.

“It takes just a minute for the steam generator to be ready; this thing responds a lot faster than car engines,” said Okpétu. Meanwhile he checked various gauges and kept up a running commentary describing what he was doing and how expensive and fickle every gauge was. Finally, he was ready, as was the steam pressure. He let it into the two steam pipes leading back to the crankshafts that ran half way up the wings to the propellers, and they slowly began to turn. “The steel pipes are cold; at first all the steam condenses, but in a minute or two there will be good pressure.” Sure enough, the propellers turned faster and faster until they were a whirring blur.

Okpétu released the brake and they began down the runway. He gave the engine more fuel and air and they were pushed deeply back into their seats. The plane almost leapt into the air. Okpétu laughed and tilted the engine up a bit; they gained altitude fast.

“Wow!”

“Exciting, isn’t it? I usually don’t take off that fast, but I want the ride to be thrilling!”

“Just remember, if ordinary for you is thrilling for your passengers, then thrilling for you will be terrifying for them!”

Okpétu laughed at that. He turned the nose southeastward and in two minutes they were over Ornakwés. “There’s Mɛlita!” he said, pointing.

“I see.” Thornton pressed his face against the canopy, fascinated to watch the town rolling toward them. He knew it particularly well from aerial photographs and making its topographic maps. “You know, this is so much richer than a photograph!”

“Of course! It’s incredible what you can see from up here!”

“I should come up to make observations before mapping an area; I could take a few extra pictures, too.”

“You are welcome.”

They flew over the neat squares of green fields that were Mɛlita. The town center was a checkerboard of red tile roofs from overhead, the marketplace a big sprawling mass of red. From a few hundred meters altitude, Thornton could see that most of the town was actively farmed. “You know, aerial photos every two or three months would help us figure out which agris are used and should pay taxes, and which are fallow. That’s always a problem.”

“And that won’t cost much.”

Okpétu flew south, over Gramakwés and Swadlɛndha, then ɛndraidha. From there they turned west and north and followed the coastline. Thornton pointed to the coral islands off the coast and Okpétu flew westward across the bay. It was interesting to look down at the calm waters; he could still see submerged bushes and even an occasional cactus until the water was deeper. The string of coral islands a few kilometers offshore were weed-covered, except where pits had been excavated to remove phosphate rock and guano; the islands had been homes of millions of sea birds, and they were gradually multiplying and occupying the islands again. Around the islands was shallow, light blue water. “I think the corals are growing again,” said Thornton. “That’s fantastic.”

“Look at all the fishing boats; the Fish Eryanɛ work this bay and the offshore waters pretty extensively.”

“And I bet they’ve only begun to tap the sea’s riches.” He pointed. “I see they have a steam-powered boat.”

“I think I’ve seen two or three over here. I suppose the limestone quarry and cement plant are beginning to bring them enough money to buy bigger vessels.”

“Have you seen any bubble circles?”

“Sure.” Okpétu looked around, then pointed. “When you fly from here to Ora, you see quite a few. There are a lot in the middle of the sea. Do you want to fly farther west?”

“No, let’s head north.”

Okpétu nodded and kept the nose flying northward along the coral reef. In ten minutes they reached the mouth of the Arjakwés, where the reefs were lower and there was a gap in them because of the river’s sediments. North of the gap was the Arjdhura peninsula, which was the end of the ancient coral reefs. Thornton couldn’t see any new corals there.

They continued along the coast, which was developing sandy beaches covered with tangles of driftwood. When they reached Akɛldɛdra—the name meant “the edge of the forest” and it was true—they could see the result of clear cutting the woods. Large areas of the sea along the coast were open. “Turn right; let’s pass Sullɛndha and head east,” said Thornton.

Okpétu nodded. They flew right over Akɛldɛdra and its twin town, Pékɛnwika, and their extensive fields, now fallow for the winter. They followed the Gwérkaitakwés, the “Wild Beast Forest River,” until they reached the Pɛnkakwés villages, all linked together by graveled roads and utility lines; from the air the infrastructure was easy to see. “Look, they’re clearing forest, too,” said Thornton. “It’s a shame; there are still thousands of square kilometers of drowned forest we can remove.”

“They have to make a living.” Okpétu pointed. “That’s gullying, isn’t it?”

“Yes; that’s what happens when you clear cut an area. Look, you can see that the Gwérkaitakwés is a little brown downstream of the gullying, too. It must have rained here yesterday.”

“It did. Look, you can see the area’s dams and reservoirs very easily, too.”

They flew right over the largest dam. They could see the reservoir was fairly low; late summer and early fall was the season when they were lowest. Lately, the eastern shore was getting its rain in the colder half of the year. They continued northeastward along a spider’s web of faint dirt tracks until they reached the northern mountains; many of the old trails had been widened so that the hunters could use trucks to range farther afield. They flew over the mountains, already glazed with white, and could see the North Polar Basin very easily.

They turned due east, then southward and approached Mɛlwika from the north. It had utilized its mountains and hills extensively, and the consequences were plain to see; in spite of conservation efforts, there was plenty of gullying, and the rivers looked slightly dirtier than the rivers in Pɛnkakwés. “Even the best planning can only do so much,” observed Thornton.

“I am sure there’s been a lot of cheating. I bet Lord Miller will look the other way. Some of those clear-cut areas are pretty recent.”

“You’re right; those areas over there should have been cleared in stripes diagonally across the hillside. I wish Mɛlwika would stop lumbering altogether; there’s plenty of drowned forest.”

“They don’t have much left to cut in the hills, too! Mɛlwika’s cutting short pines adapted to semiarid, cold climates; not much wood per agri.”

“But they’ll cut every one before moving the operation. I’ll have to talk to people. They’d be better off milling and finishing imported wood.”

They flew right over Mɛlwika; Thornton stared downward to drink in all the details of his home town. The new industrial construction area was a big clear area, ready for a new building.

They headed westward down the Arjakwés to ɛjnopéla. “I bet the students in your land use course could benefit from a flight like this.”

“How long would it take to fly a loop over Sumilara?”

“About as long as this trip; a bit over an hour. If you showed me what they need to see, two students could go up at once. How many students do you have?”

“Eighty, and I’ll probably have thirty or forty at Mɛlwika next term.”

“Eighty would take several days; I could probably take up twenty per day. It’d cost maybe 1.5 dhanay per student.”

“I’ll talk to Randu about it; he has to decide. I think it’s a great idea. A lot of students don’t understand the idea of maps, so this would help a lot. They’d be able to use aerial photos better, too. I can see so many uses of frequent aerial photography or reconnaissance. We need to develop more plans.”

“I’d love that! I want to fly, Honored Thornton, but right now there’s no way to earn a living with an airplane.”

“I know. You should come to the Mɛlwika Harvest Festival; you’ll make money there. If every major city gets an air strip, you could tour the world with Her Majesty’s entourage and attend every festival.”

“That would make money!”

“Definitely.”

Okpétu began to bring the plane down as they approached ɛjnopéla. He circled to see which way the wind was blowing and gauge its speed, then lined up with the runway. The landing was routine. In five minutes Thornton was back in his steam car, heading to Mɛlwika, with lots of ideas.

[reread and edited 6/3/13, 8/16/17, 9/23/26]

283.

Inflation

Mid Génménu/early Nov. Yr 11/629

"Still no protection against flooding by the Isérakwés." John Miller shook his head. He looked to the right at the Isérakwés meandering across its floodplain a hundred meters to the west, then looked left at the city wall of Mɛddoakwés atop a rise to the east. In between was a big, flat, pasture broken by the foundation of a large factory building.

"Lord, as I have said before, we plan to move the city wall in the spring," replied Kandékwɛs, using the patient tone one might with a child. "The Isérakwés really cannot flood any more because of the dam upstream. The bigger issue is protecting the city, and we can't have factory buildings that could shelter attackers within bowshot of the walls. The walls will be moved, and they will be built high and heavy enough to withstand any large flood as well."

"The city has grown beyond the wall on the east, though."

"Yes, it has, but there's still a hundred meter wide green space along the wall. The development around New Square will go up in smoke if anyone attacks."

"Such an attack is impossible now, anyway," said General Roktɛkɛstɛr, who was another investor in the industrial park attending the quick tour, after their lengthy discussion of the progress.

"I suppose," said John. It was clear that his real concern was the decision to build parts of the new vehicles outside Mɛlwika.

“A one hundred meter by twenty-five meter building is big enough to assemble all the engines and drive trains,” said Mitruiluku. “I’d prefer to see it built in Kérékwɛs.”

“Then invest more,” said Miller and Kandékwɛs, almost simultaneously. “Headlights, brakes, gears, door latches; important parts, but expensive to make,” added Miller.

“Which is why I need a higher price.”

“Can’t give that to you.”

“I can’t get people to work in a factory for less than 3.5 dhanay per day; you pay too much.”

“That’s what everyone expects, now,” retorted John impatiently.

“Can the factory really be built and running in six months?” asked Aryéstu.

“That’s the plan; I showed you the timeline,” replied Chris. He still had the 1.5 meter long chart in his satchel. It was updated and reprinted on Thornton’s computer every day, and copies sent to several key people.

“I am immensely impressed,” said Dumuzi. “I have never, ever, seen such a complicated project planned in such detail.”

“Let us hope all the assumptions are right,” growled Lord Aryékwɛs of Ɛjnopéla, a rather reluctant investor.

They walked to the foundation and circled it. Déanu Tritɛjnai, the head of the construction project, was there to give them a tour of the piles of cinderblock, stacks of sheet steel, bundles of rebar, and heaps of sand for concrete making. Part of the concrete floor has just been poured; they all scratched their names in the corner. Then they headed back to Lord Kandékwɛs’s new house for goodbyes.

“Can you come by the génadɛma quickly?” Aryéstu asked Chris, as they were leaving the Duke’s residence.

“Sure; my car is over there. There were no parking places over here and the guards wouldn’t let me park inside the palace complex.”

“No, there’s a shortage of parking spaces there. We can talk while walking, actually.”

“Alright.” They started across Market Square, the city’s old center and still bustling. “Prince Miméjékwu called me over to the palace yesterday. He had just blasted the staff of the Exchequer for paying construction workers so much for the last work on the National Theatre, and for paying so much for materials. They explained to him that prices were rising and he didn’t believe them.”

“Did you explain inflation to him?”

“I did, and he was not pleased. Interest rates are up at Prosperity Bank, so the Royal Development Bank has raised its rates as well. He also said he had investigated and that the construction project was paying thirty percent less for concrete and timber than the government was.”

“It might be. We’re buying a lot of our concrete from Bɛllɛdha and Pértatranisér. Timber’s coming from Véspa.”

“Why so far?”

“Arjakwés province can’t meet demand; it’s too high right now. Villas are being built or expanded all over the place, and we’re spending two million dhanay on this new plant. It’s a huge project.”

“But I understand there’s even a shortage of trucks right now.”

"There is. We're shipping things by water to Arjdhura and trucking from there because there's a lot of unused shipping capacity. Transportation is more, but the lower timber price makes up for it."

"I'll tell him. I assume I can verify this information somehow?"

"Have someone visit the tomi; we'll pull out all the paperwork and show them." Chris hesitated, then added, "Any truth to the rumor that the Crown Prince plans to take another wife, from Sumilara?"

"That's true. It hasn't been announced because the negotiations aren't concluded, but I gather they're close. His wife is not pleased at all; she opposed strongly all summer, but has finally relented for the good of the country."

"I thought just about every king has had three wives, just as Widumaj allowed."

"True, but Mɛméjékwu has not, and his wife has been exposed to the 'new knowledge' through Princess Awstɛr and Duke Kandékwɛs. She wanted him to remain monogamous. Maybe she fears he'll designate a son through the second wife as his heir, for the sake of unity of the kingdom." Aryéstu looked at him. "The more interesting question, Chris, is why the Prince is worrying about the expenses."

"True, that's not one of his usual responsibilities."

"After a year and a half in the Long Valley, he's back here. He has a reliable governor there, Mɛndhrubéru."

"I know, he used be in charge of my tomi! But the Prince is paying him twice as much. He'll do a good job."

"The Prince is now thirty years old and feels ready for greater responsibility. He's served as ambassador to the Tutanɛ, emergency governor of Ora and Sumilara, then

governor of the Long Valley. He's on the joint chiefs of staff. So he's beginning to get involved in administering all sorts of other tasks."

"Like what?"

"He and Prime Minister Wɛranolubu are meeting a lot."

"Is he taking on some of the Prime Minister's responsibilities?"

"I . . . think the Prince believes that if he is to be king some day, he has to know how to be a Prime Minister."

Chris shook his head. "Poor Wɛranolubu."

"It will make his life complicated."

"What else can you pass on to me?"

"Nothing really new. The palace is pretty upset about the underground newspaper being published in Tripola, or maybe Mɛddwoglubas. They'd like to find out where!"

"Mimeographs are now pretty common; I think sixty have been sold. But you can only make a few hundred copies of anything."

"A few hundred well-placed copies can spread news far and wide. You may have noticed that the *Royal Standard* has gotten franker in the last few weeks? They've felt they had to, in order to retain credibility."

"I bet the underground paper is using two or even three originals. Kɛkanu noticed the greater frankness and told me; he reads the *Royal Standard* with incredible thoroughness. It has caused him to loosen up, too. But they're loosening up on social and cultural matters, not ones that are strictly political; consider the article on wife beating that appeared last week. It made the priests furious, but it doesn't threaten royal power."

“That’s true. They’ve become very interested in the economy, too; I have access to the records of the Exchequer and provide a confidential report to the Queen, Crown Prince, and cabinet once a week. I’m working on getting permission to release the summary. It looks like the economy has grown twelve percent over last year.”

“No wonder we have inflation!”

“Exactly. The huge expansion of agriculture did it. It was not completely canceled out by declining farm prices, thanks to the granges pushing new crops. It also stimulated sales of vehicles and consumer goods, and the bulging government granaries caused the army to hire more road builders and the crown to hire more construction workers. People are saving more, too; coinage has been disappearing from circulation, so the crown has had to print more bills and mint more coins. I’ve been pushing them to encourage bank accounts.”

“Very interesting. I’m glad you’re here, in the capital, and have acquired access to the palace. You’re in the position to provide everyone with economic information of varying degrees of detail.”

“I’m enjoying the génadɛma, too; I’ve hired a good, reliable assistant. I’m following your model of mastering an area, then hiring someone to maintain it! I’ll be going to Arjdhura Génadɛma next month to teach economics and Randu and I plan to eat supper together once a week to swap ideas.”

“Excellent. I’m teaching business there this month and enjoying it. The school’s making a lot of money because of the huge registrations! I suspect it won’t last, though, so he and I are talking about adding courses in Eryani, possibly in Nuarjora’s school.”

“Randu’s worried about maintaining registrations, too; as soon as a course ends in Arjdhura, it’s taught in both génadɛmas on Sumilara! But if his school acquires a reputation, it’ll do fine, I think.”

“I agree.” Chris smiled. “It’s good to have you here, Aryéstu. I’m sorry you aren’t working for me any more! Just keep taking courses or creating new ones. I’d hate to see you get stale and become an administrator.”

“My goal is to create two or three new courses every year in economics and take one or two in related areas, for a total of four. That’ll get me two more years of education and my kwétɛryɛri in about five years, and a Masters will be easy to complete after that. I want to earn a doctorate eventually and will follow Thornton’s progress closely.”

“Good. I’ll hold you to those numbers, Aryéstu!”

“Okay.” They had reached the front door of the génadɛma. “Can you come in and have some tea?”

“Sure, for a few minutes. Then I have to get back to the numbers,” said Chris. He followed the youthful president inside and they sat in the school cafeteria to drink tea and chat with a few students and faculty. Then Chris got into his battered old rover and drove home.

He still had most of the afternoon, so he plunged into the finances of the Motor Works; they took two and a half days a week. He reviewed several new contracts and called Pértatranisér to negotiate a lower cement price for one of them. The Kaitɛrɛ had raised the cost of meteoritic iron by a dhanay per tonne, so he called the Kwétékwonɛ and ordered fifty tonnes more from them; the construction alone required over a thousand tonnes of steel. He reviewed orders for fans and called the appropriate division of the

Miller Foundry to ask why their price had increased ten percent, then talked them down by two. He received a report from Luktréstu about three injured workers and their medical progress. Lubanu, the Managing Vice President of the tomi, reported to him about the Miller and Mennea pension plans—together they had two hundred thousand dhanay—and their investment in the new plant. Three granges were investing a hundred thousand each from their pension plans. That made everyone nervous. Much of the money had been withdrawn from the bank, pushing up its interest rates to nine percent.

All these difficult details gave Chris a headache and he went home slightly depressed as the eclipse ended. Kɛkanu's show was about road safety and the plans for wider roads and made him feel a little better. Liz gave him a back rub while they waited for supper and the noisy fullness of the family to arrive. As they sat to eat, Lua arrived.

"Sorry I'm late," she said, kissing Behruz and sitting between him and Jordan at the table. "Pass the bread and stew, please."

"How was your day, dear?" asked Liz. "Talking to Sophos?"

"We spoke an hour before the anatomy class this morning. He explained to me the biochemistry of the new chemotherapy drug he's making. It operates similarly to several that are experimental on Earth, but he has improved on them based on his medical computing software. It makes me rather nervous, but he's pretty sure it'll work on ninety percent of the cancers and tumors we are dealing with, which is better than anything available on Earth. I decided we'll start medical trials with it next month."

"That's a big decision," said Chris. "What will our pharmaceutical facility have to make for it?"

"A few simple things; don't worry, dad, it won't raise significant costs."

"Good."

"But the new fans will," she continued. "Because after anatomy class and after I made my rounds, I made an inspection of the existing Miller facilities. Dad, they don't have anywhere nearly enough air circulation; there's too much dust and fumes in the air in many of his facilities. So the new buildings *must* do better."

Chris shook his head sadly. "Just what we need, more expenses! Why not; we're only going to run 300,000 dhanay over budget!"

"That much?" said Liz, surprised.

"Definitely."

"Fans and a bigger air circulation system aren't that much; maybe twenty thousand more," continued Lua. "You'll save money long term. There are a dozen people in Lɛwéspa with brown lung from breathing cotton lint in the textile plants. This has to be implemented in all the partner factories, dad."

Chris sighed. "That's at least two days of arguing. Okay, I'll see what I can do." He looked at Lébé and Thornton. "Our finances are stretched more than they ever have been before; *ever*. This project has become a monster and if it fails, it will take down us, Miller, and half the economy. We can't be building any additional houses now."

"No?" Lébé was startled. "Thor and I are putting the finishing touches on the house we want in Luktrudéma."

Chris shook his head. "Next summer, maybe. By then the crisis will be over."

"What about the house in Mɛlita?" asked Behruz.

"We signed a contract last month, but it has been delayed because of shortages. So I'm calling the builder tomorrow and postponing it until next summer as well. No one has

ever spent over two million dhanay in six months before. The palace has never spent more than a million dhanay per year on a single project. This world is not designed or ready for such a huge project. Inflation is climbing and shortages of almost everything are appearing, even consumer goods; the additional workers are buying more things and at the same time the producers are encountering a shortage of raw materials. This is going to be a difficult winter, and I worry about next year even more when the huge expenditure ends."

The next morning, Chris headed across the street to the tomi not long after dawn. He had to wait a minute in the crisp early November air to cross the six meter street; several buses rolled by, so filled with construction workers that the central aisles were stuffed with standing men. The villages were providing a lot of workers to the expansion, and many aspired to a permanent full-time job at the Foundry and Motor Works.

He spent two hours reviewing bills and calling east to Gordha and the Kaitɛrɛs to negotiate better lumber and iron prices, then a bit after 9 jumped in his car and drove west. Mɛlita was his ultimate destination; he had to talk to grange leaders there about plans for next year, a distraction from his urgent and demanding work on the industrial expansion. But he had to make a stop first in Tritɛjna.

Of all the villages in the lower Arjakwés, Tritɛjna had changed the most. Before the Menneas had arrived on Éra, it had been the westernmost village in the Arjakwés Valley, a poor, dusty collection of a fifty mud huts and three hundred souls scratching out a living from camels, goats, date palms, and meager winter crops of barley grown with thin winter rains and pots of water extracted from wells dug in the dry riverbed of the

Arjakwés. Half the young men, on coming of age, joined the army, there being no other way to live; half of them survived ten years of soldiering, the minimum term of service that allowed a soldier to take a wife. Half the young women were unable to marry for a decade or more and many of them died while waiting, or left the village. A further blow happened to the village when the Fish Eryanɛ, driven from their seafront villages, settled in the eastern side of their township, nearly precipitating a conflict. The rapid growth of Mɛlwika provided new opportunities and over fifty Tritɛjnans—the youngest and most ambitious—moved away. But then the climate steadily grew rainier, the Royal Road through their land and past their village was improved, they established a grange, and divided up their township's land among the remaining families. Tritɛjnans visited or returned with money from Mɛlwika; people wishing land settled and joined the village. Now Tritɛjna had 350 people, a large crop of new children, a grange building with ten tractors, a successful fruit tree grafting business, electricity, a three-classroom school for 100 children, five buses a day to the east and five to the west, seven telephones, and an almost-complete pasta factory. It was the latter—funded by Chris in partnership with a Tritɛjnan who had returned home after a decade of working in Mɛlwika—that was his destination that morning.

He parked his rover outside the door and stepped inside. Moléstu, the builder—Soru's brother in law—was watching an electrician install an electrical switch while another worker finished plastering a wall and two others installed pasta-making equipment on the other side of the room. "Lord Kristobéru, what a pleasant surprise!" he exclaimed. "I was just learning how to install a switch."

“Good. It has to be done just right; too much or too little tension in the connection can make problems later. May I see?”

The two men moved to the side and Chris took the screwdriver, tightening the wires a bit. “I was an electrician once.”

“You *were*?” That seemed unbelievable to Moléstu.

“I’ve done a lot of different things in my life. On Gɛdhéma there are no lords any more. I was never born one, and I moved around a lot and earned a living doing many different things. It was a useful experience for this place.” He nodded. “You really did do a good job; I probably shouldn’t have interfered.”

“No, that’s alright,” replied the electrician.

“He was showing me how to do it.”

“There are classes in electrician’s work at the ɛjnopéla and Mɛlita granges. Plumbing classes, too,” said Chris.

“Lord, I hope you like the work!”

Chris looked around. “I do; you’ve built a solid, sturdy building, Moléstu.” Chris walked around the space, Moléstu following closely behind. He ran his hand along the plaster work, especially in the corners, which were straight. The concrete floor was smooth; it would be easy to clean. He turned to the bathroom and the single office at the western end of the building; they were finished and well made. He examined the caulking around the windows, and nodded. “You are an artist as well as a craftsman. I will recommend your work to others.”

“Thank you, Lord. I have a good team of workers. I apologize the work has gone more slowly than expected, but as you know, materials are hard to get right now, and I’ve had to replace one worker when he decided he could earn more money in Mɛddoakwés.”

“It’s easy to get on the bus every morning. How are you getting here, anyway? The bus?”

“We were, but now we’re borrowing a truck from Béranta Grange to get here with our equipment. They bring us here every morning and take us home at night for 1.5 dhanay per day, and I can call them to change the time when they come here. It’s expensive, but works pretty well.”

“Good. Moléstu, considering the shortage of workers and materials right now, I think it would be better if I connected you with a factory construction site, rather than have you build my house right now. You’d make more money, and I can save my cash to focus it on factories as well. We can do the house next spring or summer when materials aren’t in such short supply.”

“So . . . you don’t want me to build your Mɛlita house?”

“I do, but not now; next summer. Right now, the costs of construction are going up very fast. When we planned these new factories we didn’t anticipate this would happen. My money has to go to covering the higher costs of completing the factories; I can’t do that and the house at the same time. But next summer, after Mɛlita’s harvests have come in, I want you to build my house.”

“I see. And you can help me get work building a factory?”

“Yes. In addition to Mɛlwika and Mɛddoakwés, factories are being built in Ornakwés, Gramakwés, and Kérékwɛs.”

“Please, not Kérékwɛs!”

“I wouldn’t do that to you. It would take too much of my time to mediate! I’ll make inquiries and get back to you in two or three days. I’m on my way to Mɛlita right now.”

“We’ll be done here in another week, and the pasta factory will be ready to start.”

“Excellent. I gather they’ve started hiring local ladies to work here; older ones and widows, that is.” Chris extended both hands. “You’re doing excellent work and I’ll make sure you have more.”

“Thank you, Lord.”

Reread and edited, 6/4/13, 8/16/17, 9/23/26

284.

Master Plan

Mid Prusménu/ early December, Yr 11/629

Thornton drove to Mɛddoakwés with a bit of anxiety. He never liked summons from the palace; especially from the Crown Prince, with whom he had a strange relationship, partly because they were about the same age. It gave Thornton an instinctive tendency to treat Mɛméjékwu as an equal; but for Mɛméjékwu, not used to anyone treating him as an equal, the gɛdhému's age, attitude, and comparatively vast knowledge was a threat to his ego.

It gave Thornton a lot to think about as he stared at the fallow fields, white with the first heavy frost of the year. He had to drive a bit slower than he was used to; the highway had a lot of steam vehicles, horse-drawn wagons, bicycles, and pedestrians on it that day. He worried about being late as well, so he got off the highway and took the gravel road past the village of Bolériplúdha to approach the capital from a quieter direction.

He struggled to find a parking place and dashed to the Prince's new, fancy palace in the royal compound. He was barely on time, but the Prince was busy anyway. Soon he was ushered into the Prince's office; he was a "modern" man and didn't meet many people in a throne room.

"Welcome, Honored Thornton," the prince said. "Please, come sit." He pointed to two chairs that faced each other across a low table, one noticeably higher than the other. Thornton knew which was his. "How are you and your family?"

“We are very well, Your Majesty. My son Jalalu is eight and doing well; he has started to play soccer. Lébé is very busy. I hope your family is well?”

“Yes, and of course we are preparing for the marriage next month on Sumilara. I will have a palace there as well. How are the plans for the factories going?”

“They seem to be moving forward pretty well. There are challenges to deal with every day; my father is exhausted at night.”

“Plus teaching a course on business at Arjdhura Génadɛma.”

“Yes, two days a week; that keeps him busy as well. The génadɛma is overflowing with students.”

“So I hear. I’ll have to ask your father or Randu which students are particularly gifted. I’ll need staff in Anartu. Are you teaching a land use planning course?”

“Yes, my third one in four months. I taught it at Arjdhura Génadɛma, then again in the fall term, and now the Prusménu term. But this time we’re taking a very different approach. The class had a special afternoon-long meeting with my father, John Miller, Estanu, Duke Kandékwɛs, and Aryéstu to talk about the future of manufacturing in Arjakwés province, and since then we have been working on a five-year industrialization plan for the province.”

“I heard about the course, and I am impressed. How many students?”

“Twelve, and many took my earlier version of the course, so this is an advanced, specialized course for them. This is really more of a regional planning course; it is less geological, more political and strategic.”

“Good. How much expansion are you planning for?”

“A doubling of industrial production in the province. That’s probably not five years; seven or eight, maybe.”

“Still, that’s very fast expansion.” Mɛméjékwu leaned toward him. “How would you like to put together a five year master plan for the entire kingdom?”

Thornton was startled. “Really? The entire kingdom?”

“Yes. Let’s make it a plan for everything to double; that’s probably a better way to plan. I suppose right now, we’re doubling every ten years.”

“More like every seven, Your Majesty.”

“Amazing. Well, I want a plan for the kingdom to double in size; double in terms of taxes and therefore of things to tax.”

“That’s not something I can do, exactly, because I am not an economist—”

“Aryéstu will help, then. Think of this as a committee or a commission to plan two things; a doubling of the economy, and the use of the land to get us there. Can you have something in two months?”

“Two months? A land use plan for the kingdom would take at least that long.”

“Well, let’s see what you can give me in two months. I get married in a month and that will keep me busy for a month, but after that I need something.”

“A good plan requires consultation with a lot of people. Input from the regional assemblies and the Houses of Commons and Lords. Advice from the Prime Minister and dukes—”

Mɛméjékwu shook his finger. “Not the Prime Minister. This is my plan, not his. Weekly meetings with me; let’s do that. You, Aryéstu, and whoever you need to help—your land use planning class and one of his economics classes, for example—your

father, Lord Miller, Pɛrku, Kandékwɛs, etc. Bring them together, assemble ideas, debate them, talk to me about them and I'll help shape them, then you move to another phase of applying and implementing them, bring those plans to me, we shape them again, again and again until we have a final plan. I won't be available for the week before and after the wedding, but I can spare a few hours the other weeks."

"How much do you want to spend?"

Mɛméjékwu considered the question. "I don't know how much a good plan will cost. I trust you and Aryéstu; you are Bahá'ís and are honest with your monarch. Give me an estimate in a week or two."

"Because the plan for the Long Valley cost five thousand. This won't be ten times as much, but it could be twice as much."

"Ten thousand? If it's that much, it's alright. I suppose this plan won't go into the detail as the Long Valley Plan."

"I think that's correct. This plan needs to be basic and simple, then is supplemented by a longer and more detailed version, and maybe even more detailed regional plans like the Long Valley plan."

The prince nodded. "That sounds good. You've got the idea, Honored. Let's talk again in a week, even if it's too soon for any details. Can you come this time next week, with anyone else you want to bring?"

"Very well, Your Majesty," said Thornton, bowing slightly, mystified by the request and its rapid evolution in the face of his questions.

"Excellent. Thank you, Honored Thornton. I appreciate your service to the crown very much." The Prince rose; it was time to go.

“I won’t disappoint you, Your Majesty,” Thornton promised, and he rose to leave as well. He backed out of the room; Mɛméjékwu walked out the other end and left before he did.

Thornton drove straight home and told his father. “Hum,” said Chris.

“That’s it? ‘Hum’?”

“That’s all I’ve come up with, so far.” He reflected further. “I can’t help you very much in the next two months. I’m getting five hours of sleep a night. This operation keeps getting more complicated all the time. We have to be able to make almost two million parts per year in order to assemble a thousand vehicles, which means almost two thousand different machines and two thousand men operating at two thousand work stations on about twenty different locations, tied together by trucks, electric lines, telephone calls . . . it’s staggering. Amos and Yimu are getting five hours of sleep per night, too. Behruz is getting maybe six. John says he isn’t sleeping at all.”

“Dad, you changed subjects on me.”

“That’s true; sorry; you see? Look, we can meet one afternoon a week about it. This plan will involve banking, schools, health care, environmental protection, utilities, the road system, the industrial sector, agriculture, services . . . it’s huge. And all these sectors have to grow together. Agriculture can’t get more efficient without machinery, machinery can’t be built without the financial sector, the financial sector can’t grow without proper taxation and the legal environment . . . they all fit together like a series of gears.”

“I know, it’s huge. I have to call Aryéstu.”

“Make an appointment to see him later today. He’ll freak out.”

Thornton laughed. “I still might. We’ll have to talk to a hundred people, then. Yimanu, Ornéstu, Kandékwɛs, Kérdanu, Estanu—”

“Don’t forget your mother, Lébe, Génésé, May, Saréiduktɛr—”

“And I suppose Pɛrku, Roktɛkɛstɛr, Wɛrétrakɛstɛr, Mitruiluku, heads of granges, Randu, Dumuzi; heck, if you could get Rébu’s ideas, I’d pursue them as well.”

“If this gets too big, the word will leak out.”

“Don’t say who has asked for the report.” Chris scratched his chin. “Mɛméjékwu is making his move. He wants to be Prime Minister, and a way to do that is to have a comprehensive plan.”

“You mean, he’ll use this plan to get Wɛranolubu fired!”

“I think so. But you have to do it, and you have to do your best, because you have been asked by the crown. Leave the issue of a firing to the Queen; the Prime Minister serves at her pleasure, not yours.”

“But dad, Wɛranolubu—”

“Never mind. You aren’t the Prince or the Queen. Our job is to offer the kingdom the best information and advice we can.”

“Dad, this is terrible.” Thornton shook his head.

“I know. Look, get in your car, drive back to Mɛddoakwés, and use that time to calm down. Aryéstu’s morning class ends in an hour and you can always catch him then for a few minutes, if not for an entire hour. You’ve got to get started on this. You have to rearrange your other priorities, cut back, and cut back on sleep, just like the rest of us. In two months it’ll be over.”

“We hope.”

"We hope, because if the Prince likes the job, you never know what he'll ask you to do next."

Lua had never been involved in a supply drop before; she had always left that semiannual task to Thornton. But Philos was still away and Sophos was in charge; and he was interested in medicine, not anthropology. So when the afternoon of the drop came, Lua and Behruz got into their land rover and drove southward down Route 2 for twenty kilometers until they were well inside Médhɛlonɛ territory. There they stopped in the middle of the darkness of the eclipse to await the drop.

I see the ship, now," said Behruz, shivering in his coat and looking up against the stars.

"We see you," Lua reported to Sophos, over the cell phone.

"We see you, too. We're making the drop now . . . parachute away."

"I see it silhouetted against the stars," reported Behruz. The parachute was caught in the slight breeze and blew westward a bit, and hit the grassland about thirty meters from the road. Lua jumped out of the rover and helped Behruz push the big box onto a hand cart and roll it over to the vehicle. They lowered a ramp and got it into the back, then climbed into their seats.

"Thanks, Sophos," she said, picking up the cell phone.

"You're welcome. We're already a thousand meters up and climbing. I hope you can use the medicines, as planned."

“The facility is ready to mix the concentrate with milk powder and make pills,” she replied. “And the additional computer will be very welcome. We’re very grateful. We should be able to save many lives with these medicines.”

Lua turned on the engine and did a U-turn on the gravel road, then headed home. In twenty minutes they pushed the half-tonne box into the house with Thornton and Amos’s help. The computer was inside on top. “It’s mine,” Chris said to everyone and he took it with a smile. He lifted the lid and pushed the button, and the computer began to wake up.

“Well, you’re splitting it with the medical school,” replied Lua. “Or maybe we’re splitting with engineering, I don’t know. If we don’t enter data into the computer about patient conditions, for permanent record keeping, then Sophos won’t have the data for measuring the effects of the drugs.”

“It’s a four-way rotation of three machines,” responded Amos. “Because we’re still using the engineering school’s laptop to design and plan machines, and Thornton needs the survey’s computer to work on the master plan for the kingdom.”

Lua nodded and began to pull out bags underneath the spot where the computer had lain. She held some up. “So neatly labeled. One hundred seventy-three medications, enough to make half a million doses altogether. The next drop in three months will be even bigger and may involve twenty more drugs. We can now treat most kinds of cancer, though the success rate will be lower than on Earth because we lack scanners to see how we’re doing. The next drop in three months will include equipment for making vaccines, and we’ll all get tetanus boosters, among other things.”

“How much will medications now cost?” asked Liz. “That’s something that worries me.”

“They’re still very cheap. The pharmaceutical plant will produce two million doses per year with ten full-time workers. Twenty-five thousand dhanay of salaries averages 1.25 kɛntay per dose.”

“That’s pretty cheap.”

“But the time has come to start charging something,” said Chris. “Maybe two kɛntay per dose, so that spare cash accumulates to fund expansion. Pharmaceuticals are very expensive to produce from scratch, and some day we’ll have to do that.”

“But how will people pay two kɛntay on a poor world like this?” asked Liz.

Chris shrugged. “Things cost money; that’s why granges and factories provide medical plans. Drugs cost, too.”

Soru was curious about the young, diminutive génadɛma student who had asked for an appointment with him. The young man presumably was in his twenties, but looked sixteen. He wore a rather thin coat for the nasty winter weather gathering force outside and carried a thick notebook and several sharpened pencils; he was ready to do a lot of writing, if need be. “I’m sorry to keep you waiting; we had a bit of an emergency in the dormitory. I’m Soru Dénujénésɛ.” He extended both hands and the young man rose and shook.

“Thank you, honored Soru. I am Budhéstu Budhusunu Klɛnvikai. In Klɛnvika I just say ‘Budhusunu,’ but here no one knows my father, so I say ‘Klɛnvikai’.”

"And in Klɛnvika, there's no reason to say you are from there. I understand. But I'd settle on one or the other and not use both! How long have you been at Mɛlwika?"

"I just started three months ago, at the beginning of the fall term. I've been teaching at the village school for three years, so the village finally said I should go get more training and they arranged for me to come to Mɛlwika for a year. I never had high school, so it has been quite a challenge! But I'm learning. And I'm very excited to actually meet you. I heard you on the *World Table* twice."

"Kɛkanu has been very generous in his help to the deaf and challenged." Soru sat in a chair next to him. "I'm glad to see you didn't get soaked by the heavy rain. And now it's beginning to turn to snow; first of the year. But then, it is early Bɛlménu, so it should snow now."

"The bus driver was kind and drove me right up to the door of your school."

"Good. They usually do; our students require it and the drivers take pity on any one else coming to visit. How can I help you? I am puzzled by your request. Who are you doing this plan for?"

"No one; it's a hypothetical exercise for our course that just started last week. It's a big course; there are twenty-eight of us. Each one of us has been assigned two different areas, and we form a team with at least one other person. We have business students in the course as well; it's fascinating because we're all learning about different subjects from each other. Most of them are advanced students; I begged and begged and Professor Dhoru let me in. The idea is to make a plan for the entire kingdom for the next seven years, in which time the economy should double in size. My area is education. I'm

interviewing Ornéstu, you, Randu, Widéstu, and I'm planning a trip home to talk to teachers in Bɛllɛdha and Klɛnvika."

"Very ambitious." Soru leaned back in his chair. "So the question is, where do I think education should be in seven years? First, I hope a compulsory education law is passed to require all children to go to school from age 6 through 14. That would be eight years of school and it seems to me to be a bare minimum."

"What about through age 12 instead? Some are advocating that."

"It'd be a good start, but it isn't enough. Compulsory education through age 14 would require school systems roughly to double in size, and that could be accomplished in seven years. I'd like to see high schools double as well, and génadɛmas. Adult literacy, I read last month, is now estimated to stand at about ten percent; fifteen percent for men and five percent for women. Doubling those numbers in seven years would be ambitious, but frankly is not enough; I'd like to see them tripled or more."

"Adult literacy could triple simply because in seven years the eighth graders will be adults and will help push up the numbers. When the Menneas arrived here almost twelve years ago, I was seven. I was able to start in our village school six years ago when I was thirteen, and my father let me stay and complete the lessons because he saw I was really good at it and loved it. By then, the school had grown so much the teacher needed my help to teach, so at age sixteen I began working with the littlest ones."

"We have a lot of young people coming along who can read and write. The tragedy is that more than half of eighteen year olds still can't. But you are right; close to half of the people your age can read and write. That is quite an accomplishment. The bigger disappointment for me is that about ten percent of the population cannot learn

easily and requires some special assistance. Here in this school we are working with them. A small number are deaf, but we're only beginning to reach them; I estimate that this world has 750 deaf people—about one per 400 people—and we've only helped about twenty of them! We need a school like this one in every province where deaf kids can be bussed every day to study. Special needs children are an even larger group—perhaps ten percent of the population—and require much more intensive assistance, so we're talking about approximately ten thousand children aged 6 through 18 world wide. The problem is that they get a lower priority than normal students. I've traveled to several provinces to talk about special needs children, some of whom are in school. Maybe 150 of them are getting some help. If you are asking where I'd like to be in ten years, I'd like to see a school for the deaf, a school for the blind, and classrooms for special needs children in every province."

"I'll write that down. How much money are you talking about?"

Soru paused to calculate. "A classroom in a city costs about 5,000 dhanay and can hold 25 special students, so that's 200 dhanay per student. We need classrooms for 250 deaf kids, 250 blind kids, and let's say a thousand special needs children, so we'd need to spend 375,000 dhanay just to build classrooms for them in seven years. That's about 55,000 per year; possible. The teachers and classroom support will cost about 150,000 dhanay per year. The crown could cover costs on that scale already, if they wanted to."

Budhéstu nodded while he scribbled. "True; but someone is studying hospitals and figures that if everyone in the kingdom were covered, it'd cost about 1.5 million dhanay per year, not including the cost to build the hospitals and train the doctors and nurses. The money gets used up fast."

"Of course. Educating every child in the world—say 100,000 of them, at 40 per classroom—will cost twelve million for classrooms and six million per year for teachers. Speaking of health, has anyone talked about the need for psychology?"

"Psychology? I don't think so."

"It's the science of the diseases of the mind. The mind can become ill, just like the body. We need probably a hundred psychologists in seven years. Training them requires a Masters at least, so we're talking about 3,500 dhanay each for training and at least 2,000 dhanay per year salary. There's another big expenditure."

"Interesting; I've never heard of psychology."

"I'm teaching a course about it next month at Mɛddoakwés, and I'll probably offer it at Mɛlwika a month or two after that. You should take it. It'll help you understand your students and their school problems. I wish all teachers could take psychology, but so far there are only two of us offering courses about it."

"What would a 'psychologist' do?"

"Help people with their problems and illnesses. It's just like physical illnesses. All of us get a cold every year, but we rarely get seriously ill. Similarly, all of us get some mental stress every year and sometimes could use advice about it, but we rarely have something more serious. Mental illnesses can be extremely difficult to deal with and they rarely result in death, so people try to cope. That reminds me; we need an asylum, a place where seriously ill people can live and be cared for and sometimes be cured. You know how every village has one or two 'possessed' people? They walk around naked, or scream at the top of their lungs in the middle of the night, or claim to see things while

awake, or might be violent? Well, that isn't possession by spirits; it's usually an illness of the mind. Sometimes they need to be taken somewhere to be cared for."

"How many? How much money?" Budhéstu had his pencil poised.

"Hum. . . Let's say one per thousand population, or 300 people in serious need. But I don't know how much that will cost. Somewhere between the cost of a school and a hospital!"

"Alright, I'll write that down."

"This is an awfully ambitious class project! I've never known Thornton to tackle something this big. I hope he's careful about it. If he publishes it, it could embarrass the palace."

"Someone raised that question in class and he said not to worry, he and his father would handle it."

"They have pretty good connections, and a good reputation. That's always the key."

"What do you want to accomplish with this place in seven years?"

"We've been able to expand several times and now have a classroom of 25 deaf children and two classrooms of special needs children, but this province needs at least one more classroom for the deaf, probably five more for special needs, and we haven't even started to help the blind. There's a lot to do just here, and the other provinces have nothing at all. I'm trying to help there, too, but can only do so much. I have a wife and two children, after all; I have priorities."

"Of course. And you are a Bahá'í, right?"

"Yes, I am. Are you?"

"No, but I've started to learn about it. It seems so much better suited for the new knowledge and the world that is being built with it. The ban on wine and beer is strange and difficult, and the fast is coming up."

"The fast is not that difficult. Fasting is not a common practice here, but the widus do it sometimes. Everyone drinks alcohol, but life is difficult and it was a way to cope. Now we can cope in other ways. All these big machines can't be operated after drinking wine and beer. Alcohol isn't compatible with the new knowledge."

Budhéstu nodded. "That's helpful. When will you teach psychology at Mɛlwika?"

"Next month. Let's hope the snow isn't too bad and I can get there! The class will be Dwodiu and Kwéterdiu afternoons."

Budhéstu nodded. "I may see you, then. It sounds like something I should learn about. Thank you so much for your time. I'll take all this back to class and give a report. The class has a 'treasurer' who keeps track of how much 'money' all these projects cost. We have two land use people figuring out where things will go and a construction expert to refine construction cost estimates. One guy works for the tomi and refines salary estimates and other costs, like pensions and health care. We have three students studying English who look up information and translate it into Eryani and another guy types as much of our information as possible into the Geological Survey's computer so we can make sure the money adds up."

"Wow, this is a sophisticated project! Good luck with it. I hope something gets published, so we can all look at it."

“I think something will result from this, at least we hope so. It’ll be fascinating to see. I think a lot of us wish we weren’t taking any other courses this month, because it is consuming us.”

“I love courses like that; you learn so much and have a great time doing it. Let me give you a cup of tea. There’s a bus for Mɛlwika in another half hour or so, and it’ll come to the door, so you’re better off waiting and staying dry.”

Budhéstu smiled. “Thank you.”

Reread and edited 6/4/13, 8/16/17, 9/23/26

285.

The Plan

Mid Plowménu/early February, 11/629

Thornton wasn't able to see Crown Prince Mɛmejékwu for several weeks. When the prince was finally back in Mɛddoakwés, he summoned Thornton to a meeting almost immediately. So Thornton made the quick drive past snow-covered fields to the capital and soon entered the prince's office.

"It's good to see you again, Honored Thornton."

"It's a pleasure to see you again, Your Majesty. Your wedding sounded like a grand occasion; Kɛkanu gave quite a report on the *World Table.*"

"It worked out well. Ninti is charming as well as beautiful, and we get along quite well. Sugé has come to accept her quite happily. This marriage is important for the good of the kingdom. What do the students at the génadɛma think?"

"I'd say there are at least four reactions. Village kids from areas that have never seen Sumis have heard prejudicial things about them, but will set them aside for the Prince's sake. The children of Old Houses fear it will mark the end of the monarchy. Sumis and Bahá'ís are delighted, for different reasons; the Sumis are proud of one of their own while Bahá'ís favor mixing and intermarriage of ethnic groups."

"They do, do they? Interesting. After the wedding we made a quick tour of the island. The damage at the base of Evudingiru is still extensive and there was flooding from all the rainfall."

“Yes, while Sumilara was pelted with rain, we got a lot of cold, dry days. The paucity of snow continues.”

“So I have heard. So, what do you have for me?”

Thornton handed him a fat notebook. He had learned that it had to look fancy; it had a special leather cover. “In the last three weeks, there have been a lot of additions and refinements. Almost all the students in last term’s course have stayed on this term to finish up the project. We’ve brought in my sister, Dr. Lua, to help with the health care plans and Yimanu’s helping with the banking section.”

“I gather the net is being thrown very wide. Several people have come up to me and said ‘Have you heard of the planning they are doing at Mɛlwika Génadɛma?’ It was a bit awkward.”

“I apologize, Your Majesty. If you prefer a different approach, let me know. You can’t interview 285 people for an average of two hours each and expect the project to stay secret.”

“I understand. It’s fine. Your students have been discrete.”

“They don’t know the report was commissioned by someone in the palace; they think it is an independent effort.”

The prince nodded and flipped through the pages, stopping to read occasionally. “The education section is much more detailed.”

“It assumes that all first through eighth graders will be in school. The wording of the proposed legislation has been changed; it would phase in universal education over five years by raising the minimum age in school gradually, to 8, 9, 11, 12, 14. We’ve refined the cost estimates, too.”

“Excellent. A second mentally ill facility?”

“One for each shore. The land use planners have selected locations that are rural and have pleasant climates. Otherwise, the sites were chosen according to the usual criteria we use, to distribute government facilities as widely as possible but put them along good roads. That keeps development distributed and supports as many towns and villages as possible.”

“Essential to get votes in the Houses of Commons and Lords. But I also have come to agree with you after our long discussion three weeks ago about cities versus countryside, that we shouldn’t build up the former and ignore the latter. As long as people live along major roads with bus routes and utility lines, they will participate in the development.”

“That is already true. Only half of the new jobs created by the expansion of Miller Motor Works are in Mɛlwika and Mɛddoakwés; the other half have been taken by bus-riding workers from the villages. They are commuting as much as half an hour each way, according to Mitru Miller. Their wages are high enough to cover the bus fares. We’ve built that into the development section; there’s a map with forty-kilometer circles around each major industrial center, and you’ll see they enclose ninety percent of the population. The ones not included are mostly Tutanɛ.”

The Prince flipped through the section until he found the map and scrutinized it closely, then nodded. “And the banking section?” he asked, turning to it.

“It needs some work. The chart showing the growth in deposits is an extrapolation based on the last seven years and is Yimanu’s best guess. But there’s a section about banking legislation that we are developing. A series of laws that require banks to work

according to certain standards would in turn provide some guarantees to the depositors, backed by the crown. They are based on standard laws on Gɛdhéma. We are also assuming that the world will continue to have two banks—Prosperity Bank and the Royal Development Bank—and that both will continue to open branches, the latter in every post office. Prosperity's looking into opening small branches in village stores."

Mɛméjékwu scanned the legislation pages. "This is complicated; I'll ask Wɛranu to read it and explain it to me." He flipped to the road construction section. "This is new, and tiny."

"The army won't sit down and provide a formal interview with me or any of my students; the project is 'private.' The military expansion section is nonexistent for the same reason."

"Understandable. I'll telephone Generals Roktɛkɛstɛr and Gɛlnébɛlu and ask both of them to speak to you directly and extensively. And frankly. You must have projected a military budget over the next seven years?"

"We assumed a five percent increase per year; based on confidential sources, we gather that's roughly the expansion it has been getting. It's half the ten percent annual growth rate of the economy."

"That sounds right. Excellent." Mɛméjékwu smiled, pleased.

"I wish I could also approach General Pɛrku; he always has good ideas."

"You know who else might provide a useful perspective? General Tritu, Lord of Swadlɛndha. I was talking to him at the wedding and he was telling me about the grange and factory in his town. His attitudes and ideas have changed a lot since he had to retire. Tell you what. I'll write them as well, and I'll provide you with a general letter from me

asking military officers to cooperate. I want a confidential military expansion report for my eyes only, as well as a short, public section."

"Really? That could make me enemies, I suppose."

"I am the official author of the entire report, not you, so maybe it'll make *me* enemies. You are the compiler and adviser, remember."

"Of course, Your Majesty. I do know that, and that's fine with me. This is service to the crown."

"That reminds me." Mɛméjékwu flipped back to the title page. He pulled out a pencil and rewrote the title to "Crown Prince's Seven Year Expansion Plan for the Kingdom." Thornton nodded.

"One more thing." Mɛméjékwu picked up a piece of paper on his desk and handed it to Thornton. It listed every province in the kingdom and a column of numbers. "Yesterday I had a long conversation with my mother—Her Majesty—about the distribution of tax revenues over the next seven years. This first column is the per capita tax revenue of each province, based on our latest information; you already have this. The second number is the percent we will assign to the provincial assembly for local distribution. The third column has the percent we will give the consultative assembly for the realm. The fourth is our discretionary expenditure for the palace; it includes the army, pensions, and such."

Thornton nodded, trying not to stare at the list or react in any way. The discretionary column dropped from sixty percent to forty; the provinces and the Houses of Lords and Commons both got increases of similar size overall; but the poorer provinces got more and the richer ones, less. That was progressive. "Good. We'll figure

this into the planning. Will any of the palace's discretionary spending go to any of the development goals?"

"Perhaps."

"Alright. Next steps?"

"I want the entire report by the end of the month. ɛjnaménu is a time of reflection; it is a good time to have this report out and public, and Her Majesty always makes a New Year's address and perhaps she will use this report as part of it. We need to meet weekly for the next two weeks, then twice a week as the details are finalized. We'll want the report typed and mimeographed; as many copies as a mimeo can make."

"Alright."

"Costs?"

"This report will be reasonably cheap; maybe six thousand dhanay."

"Good. Pull this off and the Mɛlwika Génadɛma gets a big bonus, and I think you and Aryéstu will deserve personal bonuses as well."

The rest of Plowménu—which largely corresponded with terrestrial February—was a whirlwind of exhausting trips and long writing sessions. Talking to Pɛrku, who was in Néfa, took three days, though Thornton was able to stop and talk to General Tritu on the way back. The more questions Thornton asked, the more Pɛrku came up with new ideas. "Tell you what," he finally said, after their third and last six-hour chat. "I was planning to come to Mɛddoakwés in two weeks. I'll extend my trip by three days, we'll get together to review all the ideas, and I'll ghost write the military section."

"Really?"

"Of course; you can't write it! But you can't tell anyone I did it."

"Okay."

That solved a major problem Thornton had, but he still had many others. The report ideally needed about twenty authors, to ensure the contents were thorough and accurate, but then the details had to be reconciled; when he wrote sections he could make sure the amount of money the education section spent equaled the amount invested in it by private business and the government, but there was the problem that the amount might be wrong. With a dozen typists clattering in the background, the entire class and a dozen experts—including Pɛrku—who risked his anonymity to attend—reread all six hundred pages, debated details, reconciled errors, and made a thousand minor edits in a twenty-six hour session. Then they all collapsed in exhaustion after Thornton promised everyone an A+ for a sacrificial effort like he had never extracted from a group of students before.

Before going to bed, Thornton sent both complete copies of the report to the Prince. The next afternoon he brought six others with him to meet with the Prince and his staff, who had gone over it in excruciating detail. The entire report was reviewed again, detailed questions were discussed, the philosophy behind certain legislation was reviewed, and assumptions examined all over again. Ten hours later—at midnight—Thornton and his team left with one copy scribbled all over. It took the entire next day for a team of six typists to make the changes, and the day after there was another round of minor fixes. Then every mimeograph machine in Mɛlwika—six of them—were brought to the classrooms on the top floor of the sciences building and eighteen typists were assigned the task of retyping the entire 600-page report on mimeograph stencils. Maps and other illustrations were hand-drawn onto stencils using all three colors —black,

red, and green—and the cover page was similarly drawn carefully in three colors. The mimeographs were operated twelve hours a day for two days to make all the copies. When Thornton delivered the first twenty-five copies to the palace, the binders were busily binding the rest; altogether, three hundred were made, with fifty assigned to the various school libraries around the world, making the entire report available to the public.

On the first day of ɛjnaménu, Prince Mɛméjékwu appeared on *The World Table* to talk about "his" report, the copies were made public, and *The Royal Standard* released a special edition with an extensive summary. "It'd be nice if he mentioned some of the names of the people who produced the report," Thornton observed when *The World Table* ended.

"Nice, but it isn't necessary." Chris considered. "It is his report; he paid for it; he shaped the final content word for word. It's obvious he is deeply familiar with it; he had background information to some of Kɛkanu's questions. You did your job, son, and well. I'm proud of you."

"Everyone got paid, right?" asked Liz.

Thornton nodded. "The Prince insisted that every student receive 200 dhanay, which was very generous and much appreciated by our poor students. Aryéstu and I each received two thousand."

"Enough to get our house in Luktrudéma mostly built," added Lébé.

"And the génadɛma got two thousand extra dhanay, above its costs," added Chris. "This is as it should be with work for hire when it is done with great care and wisdom."

"But dad, he'll use this report against—" Thornton stopped.

"Wɛranolubu?" asked Liz, filling in the blank. Thornton nodded.

“We don’t know that for sure,” said Chris. “And as I already told you, your job was to give the Prince the best report you could. How it is used is up to the Queen.”

“Why would the report be bad for Wɛranolubu?” asked Jordan, puzzled.

“Because Mɛméjékwu wants his job,” replied Thornton. “I am sure of it, too, from various passing comments he made about the report.”

“Wɛranolubu serves at the pleasure of the Queen, and so would Mɛméjékwu,” replied Chris. “She is the head of state.”

“How can this report be implemented, though?” asked Liz. “From the sound of things, it is immensely ambitious. I thought you were assembling a report about expanding the economy and how to use the land and other resources to do it, but it’s heavily legislative!”

“It has to have a lot of legislation in it as well because you can’t develop a place in a coordinated fashion without laws,” said Thornton.

“And we haven’t been able to get a lot of necessary legislation passed,” added Chris, the excitement in his voice rising. “But as a huge package to grow the kingdom, linked to economic expansion, at least in the minds of the legislators, it could pass. Thor, you may manage to achieve major reform of this place after almost twelve years of slow, calm, persuasion has failed!”

“Well, not me, dad. The laws were from you, Yimanu, Aryéstu, Soru, Ornéstu, Widubéru, Lua, Pɛrku . . . this was an immense collaboration.”

“And you got them to work together. And the Prince paid. He gets the credit in this world, but if this saves lives and makes everyone live better, you get some of the reward in the next world.”

"Here, here," added Liz. "An 'Office for the Advancement of Women'; that would be quite an accomplishment. That's my favorite part."

"If this raises life expectancy to sixty years and lowers the infant mortality rate to thirty per thousand instead of 150 per thousand, where it appears to be now, that would be an incredible accomplishment as well," said Chris. "Then we'll need that Office for the Advancement of Women, because they'll be stuck raising an average of four children!"

When Mɛméjékwu returned to the palace after the interview with Kɛkanu, his mother greeted him very warmly. "I have never heard you sound so regal," she said. "You were in charge of the interview, in possession of the facts, able to answer all the difficult questions, and conveyed excitement."

"The people will be excited, also," agreed Estoiyaju. "This report will now have a lot of support. I am sure of it. The Houses of Lords and Commons will have to affirm it."

"Then are we going to implement it?' asked the Prince. There was frustration in his voice.

"We should go over it and make changes first, Your Majesty," said Estoiyaju. "The report gives too much to the people, takes way too much from the Old Houses and the lords, and diminishes the palace as well."

"Those are decisions I have already made, Estoiyaju," she replied. "We decided to reduce the role of the Old Houses and lords over a year ago. If they want to play a major role in this society, the rules have changed; power now flows from money and not from birth. They can follow them and make their own fortunes. As for the palace, in seven

years we will command more resources than we command today, and we will command far more than anyone else. The prestige of the office will command respect, too."

"But the lords must command respect, too."

She shook her head. "There are too many lords who are drunks or idiots. They will drag down the reputation of the rest. But this family was given the authority to rule by Esto Himself and His great prophet. That is something we have, and as long as we are worthy it will endure." She looked at her son. "I think my worthiness will not be called into question between now and my death, but you must earn your worthiness and you must ensure that your successor is worthy. Implement this report with justice and fairness, consult with the people and their representatives, heal the divisions in this kingdom, and there will be no doubt in the minds of anyone that you are my worthy successor."

"So, you will give me the job?"

She nodded and looked at Estoiyaju. "Call Wɛranolubu. Perhaps he can meet with us after supper."

Estoiyaju nodded and stepped out of the room. The queen and her son retreated into her private quarters where the rest of Mɛméjékwu's family waited. They congratulated him as they sat down to supper. They talked about the details of the report, why it did this or that, why some things were scheduled for the first year and others for the seventh, why some regions got some facilities early and others later or not at all. It pleased Mɛméjékwu immensely because he usually knew the answers. To him, utopia really did seem to be around the corner.

After dinner, the queen and prince went to her office to await Estoiyaju and Wɛranolubu. When the latter entered, he immediately saw the handwriting on the wall. He kneeled. “Your Majesty, I am at your service.”

“Thank you, Wɛranolobu. Please rise and come sit with us.” She pointed to a chair nearby and he sat nervously. “For over three years, you have been one of my most efficient, loyal, and reliable servants. I have come to hold you in high esteem and have great respect for your abilities. You have built up my government to make it the most capable instrument of rule that I am sure this world has ever seen.

“Indeed, you have made possible a great, new step forward; a leap forward for this world. I refer to the Seven Year Development Plan of the Crown Prince. It was launched today, and I think the launch has gone very, very well.”

“I quite agree, Your Majesty. I look forward to reading the entire report, front to back.”

“I would much appreciate your frank and careful assessment, too. I have decided to grant to the Crown Prince the authority to implement his plan. As such, he will need to oversee the budget, the establishment of offices, the hiring of staff, and will need to shepherd legislation through the Houses of Commons and Lords. De facto, he will need to serve as Prime Minister. I wish to give him this opportunity as my heir and as the author of a remarkable, innovative reform. But if at all possible, I’d like to implement this change without depriving you of your position and office.”

Mɛmɛjékwu shifted uncomfortably in his chair at that; the queen had not told him of that idea.

“So, you are asking me to remain in office and serve as his chief assistant and aide?”

“I think that is a fair description of my request.”

Wɛranolubu looked at the prince, with whom he had had a difficult relationship for all three and a half years. Estoiyaju had granted him begrudging respect after a year and a half; the Chancellor of the Exchequer was still not particularly respectful; the army tended to ignore him entirely. “I believe that Prince Mɛméjékwu needs to be the complete master of his house. He has a very capable chief of staff who works very well with him. I would not want to detract from Brébkordu’s responsibilities. I am very grateful for the opportunity to serve you, Your Majesty, but I think I should retire from service at this time.”

She smiled magnanimously. “Very well, I grant you leave from your position as Prime Minister. I will also give you the honorary title of Count of Gédhakwés and Lord of Wɛranowika, a new township on the lower Gédhakwés. Furthermore, I grant you fifty thousand dhanay for exemplary service. I cannot express to you enough my deep and heart-felt appreciation.” She extended to him her hands, a very unusual gesture. He reached out and took them and shook very gently both hands of Her Majesty. He rose and left the room.

After he had left, the queen looked at the crown prince. “Well, Mɛméjékwu, the job is now yours. Do it well.”

Reread and edited, 6/4/13, 8/16/17, 9/23/26

286.

Aftermath

Early ɛjnaménu/Feb-Mar Yr 11/629

"So I left the palace, went home, and cried," Wɛranolubu said to Chris, summarizing the rest of the evening, two days later. "Rudhémé was very sympathetic that night, but the next morning she was practically in a panic over it."

"Why?"

"We have a fourth child on the way and a house with three servants in the capital. The fifty thousand the queen gave me will last five or six years, but then what? I looked at a map. 'Wɛranowika': she named it for me, but it's a patch of uninhabited prairie with no road or power lines, and no one will move there now! The lands south of the river have all been assigned to lordly families, but only half of it has been sold to farmers because there aren't enough farmers to settle it all. Why should they move to an unimproved town north of the river where one can get two crops a year at most? The land may benefit my children, but I don't see it benefiting me any time soon."

"You're right. I'd volunteer to help you establish a grange and a village center, but it would be a difficult business proposition. If the army put in a road and utility poles, it'd help."

"The villages south of Akras have a dirt track with some gravel, but it stops at Nusɛdya, ten kilometers north of Wɛranowika, and they have no electricity or telephone service. They are the last villages in Arjakwés without them. Mɛméjékwu's fancy

seven-year development plan calls for power and telephone lines to reach them in two or three years."

"And the title 'Count of Gédhakwés' won't earn you a living."

"It doesn't include any tax revenue! I'm not a Duke of a province, it's just an honorary position! If anything, it'll interfere. I can't go introduce myself to the lords of the other villages along the Gédhakwés as their 'Count'; they'll laugh and probably be jealous. I'll be expected to do something to help, even if I have no money for it, but any effort to help will be viewed as an effort to take over. If I ignore them instead I'll be accused of doing nothing for an area I am supposed to help."

"If you go meet them, I'd stress being a servant of the area and ask what they want you to work on."

"I have no desire at all to help anyone right now." He shook his head. "The Prince is an ambitious, egotistical man who will stop at nothing to acquire power."

"My friend, if that statement were true, you'd be dead right now," replied Chris, gently.

Wɛranolubu looked at him angrily. "Mark my words, Chris, he's dangerous! He's insecure, and that makes him suspicious and inclined to strike rather than talk."

"I think there's some truth to that observation," conceded Chris.

"I wish I had put together that development plan instead."

"You were outmaneuvered. But I doubt you were in the position to authorize or develop it; am I right?"

Wɛranolubu chewed on that comment a moment, then nodded. "You're right. He spent ten thousand on the report, including bonuses, and he just authorized the money. I'd

have to fight with Wɛranu to get the exchequer to pay a bill like that, or have a special audience with Her Majesty to authorize the whole thing."

"And you'd have huge internal opposition from everyone with any power, because they'd wonder whether their power was growing enough. The Prince could ignore everyone, deal straight with Thornton and Aryéstu, and make the changes he liked."

"So, that's who did the report! When I saw a copy of it yesterday morning, I was shocked by its detail and heft. Two huge volumes! And the secret military part; I could not believe it. The army will be furious!"

"The Prince approached Thornton about two and a half months ago asking for a kingdom-wide report similar to the Arjakwés industrialization report his class was working on. The Prince asked him to include some economic projections and Thornton said only Aryéstu could do it, so he was added, and the project quickly evolved into a comprehensive plan with legislation. When Thornton told me about it, I said I feared this would lead to you losing your job, and Thornton was very upset and said we should do something. But I told him that was a matter for the Queen to decide and that our role was to be obedient. Thornton had been asked to serve the kingdom and the palace, and his job was to do the best he could."

"And he did do his best. It's a very impressive report. I want to get a copy and read it carefully. Who wrote the military part, anyway?"

"That's confidential, but anyone who reads it, I am told, will know it was an insider. I haven't read it, obviously."

"I can probably get a copy and if so, I'll show it to you."

"There's something else to consider, my friend. The Prince, I gather, really loves the report."

"Loves? He is convinced that implementing it will change this world into a paradise!"

"I'm not surprised. The legislation included in the report includes all the laws the House of Commons and House of Lords have debated for several years. A compulsory school attendance law: we haven't been able to get the Mɛlwika City Council to pass that! Now they are part of a huge, comprehensive package of reforms that are coupled with economic progress. There are environmental laws establishing parks and requiring the tracking of pollutants, common stock company incorporation laws, banking regulations . . . there is no minimum wage and no guaranteed access to health care, but if everything doubles in seven years, those will be in the next round. There are restrictions on employment of children aged 14 and less in outfits employing more than twenty people. You could never have pushed these laws through, but the Prince might be able to."

"If he tries. No guarantee he'll implement his entire package."

"True. But the report has been published and will be debated. It has set the standards for debate for the next few years. And it has his name on it. Alas, his name carries more weight than yours."

"True. Chris, I came here to be cheered up, not to be discouraged!"

"I'm sorry, but in my own way I'm trying. *It's not your fault,* Wɛranolubu. The system is stacked against you; royal blood conveys a lot more prestige than being the third son of a lord with no inherited title."

“I wish I had asked for a title when she hired me.”

“You should have, Count Wɛranolubu, but you have it now. So, what do you want to do?”

“I don’t know, Chris! Two days are enough time to grieve, not to plan. Is there anything in Mɛlwika? In Miller Motors?”

“I wish you could come back and be Mayor, but that’s not going to happen. Estanu is alright, but he’s hard to work with and he loves construction projects over day-to-day management. Right now, he gets to plan and build a new school every year; the schools are getting hit by the city’s baby boom. Of course, his brother gets to build many of the schools, or the contract goes to Ménu Miller. They’re the only two big construction outfits in town, but it looks bad. He’s fairly popular and he uses that as a lever.” Chris shrugged.

“And Miller Motors? Who’s running it? Doesn’t the Board decide?”

“The Board decides, but Yimu will run it. He already is, and he will do a good job. He doesn’t have the training and theory I’d like him to have, but he has good instincts and knows when to seek expert advice. There’s no question he’ll be in charge because he and John have a majority of the votes. Miller Motors is a joint stock company, but Miller Foundry owns sixty-five percent of the stock, between the existing equipment and facilities it has bequeathed to the new company and the cash it invested. Miller Motors is worth over four million dhanay, and the inflow of outside investment was 1.5 million, including half a million by me. I own twelve percent of the company.”

“How was it established in the absence of joint stock company laws?”

“Via contract law. It’s a partnership and the partnership contract is ten pages long. Basically, everyone who invests has to sign a contract that contains the entire company bylaws. Clumsy, but it works.”

“Makes it hard to sell out and buy in, too. So, there’s nothing in Mɛlwika.”

“Nothing worthy of your experience. I wish we could start something new and big and hire you to run it, but right now no one has any money at all.”

“I know, Miller Motors has sucked it all up. If it’s a success, though, capital should start to flow again this fall.”

“Yes. The vehicle plant reopens next month—probably late next month, unfortunately—and will start to produce light pickup trucks, then move on to steam cars and light tractors. We have two basic vehicle widths: 1.5 meters and 2.25 meters, and two basic engines, 30 and 100 horsepower. The narrower width will be used for cars, pickup trucks, and farm tractors, the latter using the larger engines. The bigger width will be used for buses, heavy trucks, and construction equipment; we’ll start to make them on the same assembly line in the fall. The new car will be noticeably different and better than the old, and cheaper; not as cheap as we wanted, but maybe 2,500 dhanay. The construction management nightmare will end for me and I’ll start to think about my next project. Meanwhile, I think we should get Wɛranowika started, even if it won’t amount to anything any time soon. There are some people moving to new farms; not many, but some. They could be attracted to your township.”

“Not without infrastructure.”

“Well, that’s the place to start, then. If Her Majesty is willing to give you a township and two titles—not one—she should be willing to get a road and utility lines

installed. They'd cost fifty thousand along the Gédhakwés top to bottom and a third of that just for your town. I'd work on that."

"Me? I'm not going to talk to Her Majesty about anything right now. Besides, that's a decision for the *Prime Minister,* not the queen, and I'm not talking to him any time soon!"

"Fair enough."

"Maybe Thornton could talk to Mɛméjékwu. I suppose he still sees him."

"Not that I know of, but frankly, I've told Thornton to keep his contact with the prince at a minimum."

"You see, you don't trust him, either."

"It's not that." But Chris didn't elaborate. "I'm not sure Mɛméjékwu would be inclined to help you, but Her Majesty would. Kandékwɛs: I'll talk to him. If anyone can bypass the Prime Minister, it's the Queen's son in law. I have to talk to the Lord Mayor tomorrow or the next day about Miller Motors anyway."

"If you can help with Wɛranowika, I'd appreciate it."

"I'll see what I can do. We need to get a road and utility line, and one all the way up the river to Akras; you'd be better off on a through-road than a dead end. If you have that, I can commit resources and time to get a grange established. My granges have an excellent reputation; everyone wants to join."

"I know, Mɛlita filled in a few months. I'd appreciate your help, Chris."

"It's the least we can do for an old friend, especially one hurt by our expertise. I'll ask Thornton to get you the best maps of the township he can make, too. He'll be glad to do it for free."

"Thank you, I appreciate it. Maybe you've given me reason to hope, after all!"

Two days later, Chris drove to Mɛddoakwés with a group of local partners to review the steam engine factory nearing completion in the capital's industrial park. Half the machinery had come from Mɛlwika and was used; the rest was new. For an hour they got a slow tour of the entire operation, so they could see where each part was made and how they were put together to make Miller Motors' two steam engines. It was a very impressive and sophisticated facility. Afterward they all gathered to review the timeline showing which factories were finished, which were almost finished, and which faced serious challenges. The financial update was better news than in previous weeks; they could see the light at the end of the tunnel.

Afterward, Chris walked Kandékwɛs home. "So, what do you think of the Prince's Development Plan?" he said as they strolled through the city.

"I think Thornton and Aryékwɛs did an excellent job. So did Mɛméjékwu, but I am sure his input was less detailed. I had trouble finding out who actually did the work, but Her Majesty finally told me. It's a matter of time before some journalist talks to someone who was in the class and spills the beans, but Mɛméjékwu knows that, so don't worry about that. Who drafted the army part?"

"It's confidential."

"Pɛrku. It must be Pɛrku."

Chris shrugged. "I haven't read that section, but I hear it involved input from a lot of officers."

"I'll show it to you, if you'd like. It calls for more education to produce a highly trained army, and for shrinking the force to 3,000 or even to 2,000. The generals will hate that; fewer important posts to fill."

"But eminently sensible. Do you think the palace will implement the report?"

"Maybe not the military section! But the rest, yes, they will try. I suspect they'll try to get all the legislation passed this spring; *all* of it. Pick it apart and the hundreds of laws will take years to debate, but insist they pass as a package and there will be less discussion."

"Of course, the heavy-handed approach may cause problems later."

"Maybe it will, maybe it won't." Kandékwɛs shrugged. "We're somewhere between monarchy and democracy. The monarchs still expect deference and the people still expect to be told what to do. The lords will be the main source of resistance unless they're bought off. The plan does some of that; it continues the development loans. But that will cause other problems later, if they become an economic class that dominates everyone else."

"They won't, with proper legislation to protect granges and other cooperatives. I'm more worried about Wɛranolubu."

"A sad situation; he was dedicated, hard working, and did a good job. It's hard to retire at age 35."

"And he can't retire to 'Wɛranowika.' It's an uninhabited patch of grass with no road. I can probably get him some farmers—not too many—if it had a road and utilities, though."

“It wouldn’t cost him too much to get them; maybe ten thousand. He’d make it up with land sales eventually.”

“Good friend, it doesn’t seem fair that he should pay for a road and utilities the army will put in eventually. The development plan calls for a gravel road to be put along the Gédhakwés in two years. With one, some of the fifty thousand could be invested in a factory.”

“Good point.” Kandékwɛs considered the situation for a moment. “I won’t talk to Mɛméjékwu about it, though; he has always been jealous of Wɛranolubu. I’ll ask Her Majesty.”

“Thank you.”

“You can’t use him in Mɛlwika? This development plan is quite ambitious and will need people to implement it.”

“I can’t see a former Prime Minister running an office of the city government, can you?”

“True.”

“Lord Mayor and Duke of Arjakwés, I don’t know how you can carry out all your responsibilities. If anyone could use assistance, it is you.”

“You are correct about that. But I can’t employ a *Count*! He’s more than just a lord.”

“That’s true.” Chris considered the problem. “Of course, Gédhakwés is a county within your province, not separate, which makes him a count subordinate to you.”

“True. Perhaps I should think about that idea. I no longer have a good administrative assistant with Wéranobéru’s departure to his new estate.”

"Wɛranolubu won't accept the job of administrative assistant, though."

"I agree. Perhaps governor of the province. I can't be governor and mayor at the same time. Lord Mayor has always been my title of honor and my supreme concern. I *love* this city."

"Wɛranolubu would make a good provincial governor. He knows Mɛlwika and Mɛddoakwés well and could help balance their competitive positions. In the next decade, the entire area between them is going to fill in with development. Someone has to manage the region."

"I know the development plans all too well; if they happen, of course." The Lord Mayor strolled and thought for a moment, then nodded. "I'll call him today."

Budhéstu stopped by Soru's school on the spur of the moment. The idea suddenly occurred to him when he felt the bus slowing for the bus stop near the school's driveway. Inter-city buses normally didn't drive to the school itself. He rose, grabbed his bedroll that held his clothes, and headed for the front door of the bus.

The bus drove away and it suddenly occurred to him that he had done it. Why? He wasn't even sure he had the money to get on another bus, should Soru be away. Never mind; he crossed the busy highway and headed up the fifty meter driveway to the school.

The young, attractive receptionist inside the school's main entrance looked at him strangely when he asked whether Soru was in; people didn't usually show up with bedrolls. She just pointed toward his office. When he reached the doorway, he saw that Soru was indeed in. He looked up from his work, puzzled. "Can I help you?"

“I’m Budhéstu Budhusunu Klɛnvikai. You may remember; about two months ago I interviewed you about future plans to expand services for the deaf and challenged.”

“Oh, yes, of course I remember! That report you helped research and write is the main thing people are still talking about, a week after it came out! Come in. Are you now researching travel?” Soru pointed to the bedroll.

“No. I’m sorry I have this with me. I was just on the intercity bus to Mɛlwika from the north shore and as it reached your school, it stopped to pick someone up, and I decided to get off.”

“Very good. Sit down, Budhéstu Budhusunu Klɛnvikai.” He pointed to a comfortable chair and came out from behind his desk to join him. “You were returning from Klɛnvika, then?”

“Exactly. I had planned to spend the entire month of ɛjnaménu at home with my parents, and there’s this young woman in the village I’ve always been attracted to whom I really wanted to see. So I took the bus home last week. The snow is melting there—we had a lot this winter—and the maple sap is flowing particularly vigorously this year, so everyone is very busy.” Soru nodded; ‘Klɛnvika’ meant “Mapleville’ and was one of the places known for its maple sugar. “Anyway, at first it was good to be home. But most people didn’t care much to hear about the things I had been doing, only a few were interested about the plan—they all had heard about it because they listen to the *World Table,* but they didn’t have much of an opinion about it—and within an hour they wanted my help with the sugaring. I was glad to help, of course. And as for the young woman, after three days of talking with her during the *World Table* I realized that while she was a farmer’s daughter, I was no longer just a farmer’s son.”

“The génadɛma will do that to you. I started it as the son of a deaf handyman and, frankly, a thief and escaped prisoner, and look where I ended up.” He pointed to the office around him incredulously.

“It opens up entire new worlds. The planning course did it, especially, because it was about as interdisciplinary a course that anyone could ever devise; it involved economics, education, geology, ecology, banking, business, health care, and through you, a bit of psychology.”

“You seemed interested when we talked! But you said you’d take my course, and when you weren’t in it, I was disappointed.”

“I’m sorry and apologize for that. The planning course swallowed up all our time. It was extended to two months and ultimately we got five credits for each course; ten credits total, instead of the usual three! We were working sixty, sometimes a hundred hours a week on it. The guys who took a second course had to drop it or take an incomplete. But wow, it was an experience. All of us now have a sense of what makes a modern society work.”

“I envy you, there. I’ve tried to get a copy of the report, but the bookstore is sold out and there are no immediate plans to print more.”

“You can borrow mine!” Budhéstu reached down and unbundled his bedroll, and pulled out a two-volume set.

“You’ve been carrying that around with you!”

“Of course! I wanted to show it off in the village! I managed to convince the lord to borrow it overnight, and the main school teacher perused it for about an hour. Six

hundred pages of reading is impossible for both of them, let alone figuring out the maps and charts."

"And after the reading, there's figuring out what it all means. I'm not sure how the legislators will do that. They just announced this afternoon that the plan would be the main subject of discussion at the meeting of the Houses of Lords and Commons, and their session would start three weeks earlier than usual."

"Really?" Budhéstu was delighted by that.

"How did you manage to keep the secret that the plan was really for the prince?"

"It was easy; we didn't know! Thornton told us at the end of a marathon 26-hour editing session, because at that point it had to go to the prince, be modified, and then he needed all of us to help copy it. *That* was an exhausting task; maybe the worst one of the entire course. But were *we* excited! And the Prince met with all of us and gave us a bonus; that was exciting, too."

"Did you hear that former Prime Minister Wɛranolubu is now Governor of Arjakwés? Duke Kandékwɛs announced that today, too. I was walking to the bus stop from the Gésɛlékwɛs Maj Génadɛma after my advanced psychology class and saw the crowd in New Square, so I walked over and was just in time to see the announcement. Wɛranolubu spoke, too. He looked happy."

"Good. When I heard the prince had replaced him as Prime Minister, I was upset; I felt like we might have been exploited."

"I wondered about that as well. Anyway, here you are. How can I help you?"

"I'm not altogether sure, actually. When I was in Klɛnvika I saw our village crazy—Mitru is his name—and I actually stopped and talked to him, which no one

usually does, of course. He told me about a voice he often hears he calls ‘Esto’ and I listened to him and wondered what was going on in his brain and suddenly it occurred to me I was no longer a farmer’s son, because a farmer would be worried about demons and spirits and possession instead. That was the moment I realized I was no longer just a farmer’s son, Honored Soru. And we have a deaf kid in our village; did I tell you? He’s eleven and I bet that, pretty soon, he’ll be too old to learn much. His mother thinks he can hear, but pretends he can’t so that people will take care of him, so she beats him sometimes. And we have a child with funny features in our village, too, like a few of the kids here. She’s just three. She would have died if it weren’t for Bɛllɛdha Hospital.”

“Down Syndrome. They are sweet children and can learn a lot in a proper classroom. In the past they usually died. Is the mother older?”

“Yes; how did you know?”

“It’s more common for older mothers to have Down Syndrome babies. So, you want to learn how to help them?”

“Yes, I guess I do. This morning I gave Lord Okɛlénu a hundred dhanay to pay off the village’s loan for my education, got on the bus for Mɛlwika, and had no idea what I was going back here to do. But there was no reason to stay in Klɛnvika.”

“Excellent. Perhaps Esto has sent you here, then. Every ɛjnaménu’s the same; theoretically my school is closed and the staff and kids all go home for the month, but in actuality the staff go home and half the kids stay here because their parents want to relax and have fun and don’t want a strange child around. So I have twelve special needs and deaf children and the only staff to take care of them, feed them, clean up their messes, and help them deal with nightmares are myself, my wife, and my niece Blorakwé. And of

course my wife and I have two children as well. Come stay here, help us, you and I can have lots of conversations, you can attend the last half of my advanced psychology course if you want, and I'll even pay you two dhanay per day minus any meals you eat here."

Budhéstu's eyes lit up. "Gladly!"

Reread and edited, 6/4/13, 8/16/17, 9/23/26

287.

Party

Budhéstu settled into a room in the boy's dormitory—there were several private bedrooms for staff there, the boys themselves were usually housed four to a room—and began to meet the residents that afternoon and at dinner. The next morning Soru asked him to help several children plant flowers in front of the school, then help Kanawé in a class with special needs children. That afternoon he went to Soru's advanced psychology class and had a long chat about psychology on the bus. As they continued their conversation in Soru's office, Blorakwé came in, wearing her apron. "Uncle, I'm almost finished with preparing supper," she said. "There are several loaves of bread to put in the oven and a very large stew that's ready to eat. Is there any way, after supper, I can take the bus to Mɛlwika for the Ayyám-i-Há party?"

Soru frowned. "By yourself?"

"I'm pretty sure Marié and Lébu will be getting on at Morituora, and I can be sure to come back at the same time as a group of kids from Mɛddoakwés, so it should be safe."

Soru thought about it, then shook his head. "Maybe Kanawé can go with you."

"No, she said she's not in the mood for a party."

Soru looked at Budhéstu. "Are you in the mood to go to a party at the Mɛlwika Bahá'í Center?"

"Sure. What sort?"

“Ayyám-i-Há; it’s a period in the Bahá'í calendar for gift-giving, good deeds, acts of service to others, and having fun. Tonight’s the last night of Ayyám-i-Há and there’s a party for youth at the Bahá'í Center in Mɛlwika. Anyone is welcome.”

“I know where it is; I attended a worship program there in the fall. Sure, I can go with her and make sure she’s safe.”

“Good. I’ve solved the problem, then.”

They resumed their discussion of psychological illnesses, then went to have supper with the kids. Blorakwé and Budhéstu had to hurry to catch the best bus. “So, what is Ayyám-i-Há?” he asked her again, once they had boarded it.

“On Gɛdhéma, the year has 365 days. The Bahá'í calendar there consists of nineteen months of nineteen days, which totals 361 days, plus four days that are not part of any of the months. Those four days are the Ayyám-i-Há, and as uncle said they’re for service, gifts, family get-togethers, and sometimes parties. They’re also preparing for the Fast, which follows it for nineteen days.”

“But the year here is 390 days.”

“Yes. The difference between 361 and 390 is 29, so here Ayyám-i-Há has twenty-nine days! We treat the first nineteen like a twentieth Bahá'í month and celebrate the last ten days only.”

“So, are you a Bahá'í?”

“I don’t know. I’ve never declared my belief, but Soru and Kanawé pray together with their children every evening and I join those prayers when the residents allow me to do so. I very much appreciate the religion. It is *modern*; it wants everyone to learn to read so they can study and understand the scriptures themselves. There are no priests. The

sacrifice that is expected is not of animals at a temple but of one's own time and effort in service to the Bahá'í community and the world. The organization is elected by the believers from among all of them, the worship and the classes focus on the scripture so we can understand it better, and its laws are reasonable and practical."

"I understand Bahá'ís can't drink alcohol."

"Yes, but as you'll see tonight, they can have a lot of fun without it. They teach equality of men and women, so women should be educated just like men, and they say that marriages cannot be arranged, the couple must decide, though once they do the parents must give permission to marry. So it is neither old fashioned—I'd be married off by now—nor is it as loose as some of the génadɛma students."

"The students do have a reputation, and I saw some pretty wild behavior in the dormitories last fall and winter."

"So, what are you studying?"

Budhéstu smiled. "Now I'm not so sure! I went to Klɛnvika's schoolhouse for three years, then when I was sixteen the teacher said he had nothing else to teach me, but if I could help him with the class I'd have the chance to learn more, gradually. My father agreed, so for three years I was a teacher. Then this fall, just before my nineteenth birthday, I came to Mɛlwika Génadɛma for a year to get training to be a teacher, because Klɛnvika needed more; we have more kids coming to school every year. My plans to be a teacher were upset when I took a course on planning, the course that drew up the Seven Year Plan for the Crown Prince—"

"You were involved in that?"

He nodded. “And it exposed me to a lot of other subjects, including psychology when I interviewed Soru. So here I am, studying it further with him for this month!”

“It is fascinating; so is special education, which is what Kanawé is doing. I’m finishing up my last year at Mɛddoakwés High School and want to go to the génadɛma next year, probably to major in education.”

“That makes sense, you can practice it right here.”

“Exactly. Even my father can understand that. He let me come here at the end of the summer and I guess he’ll let me stay to attend génadɛma.”

“Excellent,” Budhéstu said, though he didn’t know what he thought of the idea of a woman with a college education. “Where are you from?”

“Tɛrskua, a little village in the western end of the valley. We were a pretty poor place and a lot of young people came to Mɛlwika or joined the army, but now we have a grange, new farm lands, a school, electricity, telephones . . . it’s more comfortable and prosperous.”

“Absentee landlord?”

“Yes. The Arjakwés flowed a few weeks a year only. Now it never stops and we have windmills.”

“Klɛnvika sounds a bit bigger; we have eleven hundred people. We were a bit more prosperous, too, because we had maple sugar, and in spite of the spread of sugar cane the demand for maple is growing. But we don’t have much else. We don’t have a section of Mɛlita, for example, to grow winter crops, and some people think that’s a mistake. Our lord—who is not an absentee lord—decided we should make a claim over the unsettled stretch of land west of us, which has lots of maple trees but no possibility of

a second crop per year! We are right on Route 1 and even have a concrete road coming and going, but the villages east of us are now richer."

"You need a factory, or winter farmlands, or something. Some of our farmers have tropical farmlands even though we can harvest twice a year. Life certainly is better and a bit easier, and it seems to be longer, but I sense people are getting restless."

"Really?"

"When all you can do is survive, you don't have time to worry about life's purpose much, but now people have the luxury to think about why they exist."

"I can't say Klɛnvika has changed much where that is concerned, but people are drinking more. The sales of maple liquor have gone way up! I wish they were just making candy. I'm amazed how many génadɛma students drink, too. They'll go back to their villages to be school teachers and will be drunk part of the time."

"Uncle worries about that, too. Alcoholism is a disease."

Budhéstu nodded. He had never heard the term 'alcoholism' before.

The bus stopped in Morituora and several Bahá'í youth got on. Some were high school students; a few went to Mɛlwika Génadɛma and Budhéstu nodded to them, as he recognized two of them. They chatted during the twenty-five minute ride to Citadel Square and the quick walk to the Bahá'í Center, where about fifty young people had already gathered. There were pastries and a big punch bowl full of fruit juice and carbonated water with ice in it. Up front, three young men were playing a drum, a three-string, and a pan-pipe and singing a Bahá'í song, which much of the audience joined in with. Then Jordan Shirazi played the piano—he was quite good—and everyone

sang along. Budhéstu knew only one of the songs, but he joined in and they all laughed together when it ended.

There was a lull in the entertainment while everyone grabbed more snacks and chatted. Chairs had been set up in a big circle with lobes so everyone could see the entire group, but could join smaller groups as well. Budhéstu followed Blorakwé to a group of six mostly high school students, which he found a bit boring, though they were fairly bright and inquisitive kids and he was only a year or two older than them.

Then Jordan stopped by. Seventeen years old, tall and dark-haired like his Iranian father, with a scraggly beard and flashing bright blue eyes like many Eryanɛ, he was handsome, articulate, spoke Eryani flawlessly—most assumed he was Eryanɛ with a little Sumi blood—and very bright. "A group of us are thinking about traveling to villages this summer, teaching the Faith and doing development work. I thought I'd stop by to see who else might be interested. We want a commitment of at least a month."

"Which month?" asked Swadé, seventeen, the older daughter of Saréiduktɛr Dwobrébakwési.

"It could be any of them; Kaiménu, Dhonménu, Abɛlménu. We want to travel to a new village every week; ideally, fifteen villages altogether. We'll try to reach every province. We'll have a house trailer pulled by a truck; the women can sleep in the trailer and the men will sleep in tents."

"Who will chaperone?" asked Primanu, a seventeen year old finishing Mɛlwika High School.

"We're still working on that; maybe Mitrukaru and Kordé."

"She'd love that," said Blorakwé.

“What, exactly, will you do?” asked Budhéstu.

Jordan turned to him and noticed that a non-Bahá'í was present, but that didn’t seem to matter. “We’ll gather the youth of the village and any neighboring villages every day for classes. Our truck will provide transportation for nearby youth. We want about a dozen youths on the trip. Everyone will teach something; it could be basic health stuff, science, math, whatever. But we’ll also have Bahá'í classes going all the time and we’ll encourage everyone to take some of them, too. We’ll coordinate meals and we’ll have devotions every morning, after lunch, and after supper. In the evening we’ll do arts.”

“So, this is to bring the Bahá'í Faith to villages?”

Jordan raised five fingers. “It’ll have five objectives: to bring people into the Bahá'í Faith; to raise awareness of the Bahá'í Faith in a positive way; to demonstrate a new kind of community; to find capable youth able to go to génadema; and to help villages with their development.”

“Really? How would you do development?”

Jordan hesitated. “That depends on who comes on the trip. Who are *you?*”

“Budhéstu Klɛnvikai,” he said, suddenly realizing he had shortened his name to his home town and had dropped his patronymic. “I’m going to be a psychologist.”

“Oh? Good, I hear we need psychologists. Are you a Bahá'í?”

“No, though I’m curious about it.”

“Not everyone on this trip has to be a Bahá'í, but someone who isn’t should be willing to come to the prayer meetings and support the overall mission. This will be sponsored by the Central Spiritual Assembly, not by the Development Corps.”

“I see. Well, I wasn’t volunteering. I’m not uninterested; I just have no idea what I’ll be doing this summer.”

“Of course; I understand.”

Jordan was about to open his mouth to say something else when Budhéstu added “But I suppose if I were interested, I wouldn’t talk about psychology. I was a student in your uncle Thornton’s course that created the prince’s seven year development plan. Now *that* would be something to tell people about.”

“You could talk about that?”

“Sure; all twenty-eight of us who were in the class could because we wrote the whole thing together, so we all know the 600 pages.”

“Including the secret military part?” asked Primanu mischievously.

“No, we only saw the public summary. That report was written by a separate group and I don’t even know who the members were.”

“Darn!” added Primanu.

“I bet a class on the plan would be great,” said Jordan. “As I said, we don’t want to do just Bahá'í classes.”

“When you listed ‘demonstrate a new kind of community,’ what did you mean?” asked Blorakwé.

“Good question! The Faith creates a new kind of community, one based on consultation and working in groups, but one that encourages strong individuals as well. Community, to Bahá'ís, is *not* based on several old standard assumptions: one is hierarchy, where people defer to experts and hereditary leaders; another is following custom and tradition. Bahá'ís reject both of them in favor of a community where all ideas

can be considered and anyone can provide leadership, indeed everyone should provide leadership through consultation and action. Our concept of community also involves a different kind of worship. The dozen or so visiting these villages together will, we hope, be a demonstration of a true Bahá'í community."

"Ambitious," said Primanu, who was clearly impressed by the idea.

"So, who's interested in a month of service?"

"I am," said Primanu. "I hope my original home village—Boléripura, at the mouth of the Rudhisér—could be one of the villages we can visit."

"I'll have to ask my mom," said Swadé. "She wants me to start college courses, but it sounds like I could do them part of the summer *and* go on this trip."

"I'll have to ask," echoed Blorakwé.

"I'll think about it," said Budhéstu. "Consider visiting Klɛnvika on the north shore. It could use something like this."

"You would be welcome to participate," repeated Jordan. He nodded goodbye to the group and headed to the next clump of people. The group started talking about Jordan's ideas and Budhéstu listened a bit, but mostly was immersed in his own thoughts.

The party was a great success and lasted until twenty minutes before the 10:30 p.m. bus for Mɛddoakwés, when everyone walked the departing guests to Citadel Square. From there, Jordan headed home. He found his mother and grandfather sitting in the great room chatting about the hospital.

"Well, we can look at expansion in the fall; by then I might have some money again!" said Chris to Lua. He turned to Jordan. "How was the party?"

"Really good, we had a lot of fun. I counted sixty-three youths."

“Wow!” said Lua. “I didn’t know we had that many in town.”

“Half came by bus from Mɛddoakwés and towns to the west. Primanu even came from ɛjnopéla. Kordé came to me with an idea that we take a youth group to some villages this summer, just like last summer, but she wanted to do something much bigger and longer, so we brainstormed. We want to do a village a week all summer, and we want to do Bahá'í classes and development stuff.”

“Oh?” said Chris. “Good idea, as long as the development stuff isn’t used to push people to study the Faith.”

“No, we were thinking we’d run non-Bahá'í classes and Bahá'í classes at the same time, so if someone wanted to take just the non-Bahá'í classes they’d be able to say ‘no time, you have too many other good classes to take.’ We’d put together a team of a dozen youths and everyone would teach something, from cooking to math to Ruhi to classes on Bahá'í books. At night we’d have music and relax together.”

“You’ll need chaperones.”

“Kordé and Mitrukaru will be married by then and she thinks he can get the summer free, so they’d come.”

“He just became a Bahá'í, though,” said Lua.

“He’d be a chaperone, and one doesn’t need to be an experienced Bahá'í to do that. Kordé and I will run the group.”

Chris raised his eyebrows at that.

“Honey, you’re seventeen,” said Lua.

“Mom, by then I’ll be eighteen. We know how to do this; a group of us traveled together last summer. Primanu will be along, I think, and he went on the trip last summer as well. This is something we can do.”

“What villages would you go to?”

“The Central Spiritual Assembly should give us ideas. I figure we can visit fifteen villages; that’s one per province with several left over. They probably should have local spiritual assemblies in order to follow up with the contacts.”

“This could help a lot of rural communities,” said Chris, nodding. “Your visits last summer worked out pretty well.”

“We’d want the family’s house trailer, so the women can sleep inside it. The men can sleep in tents. We should rotate the cooking and other chores equally between the men and women, in order to make the point that the sexes are equal.”

“Good,” agreed Lua. “What about Sumilara?”

“We’ll go there, too, if we can get translators.”

“This will cost a lot,” said Chris, calculating in his head. “Maybe as much as a thousand dhanay.”

“It can do a lot of good. We want to take a dozen along. We want a truck to pull the trailer. And we want the truck to be able to go to neighboring villages every day and drive the youth over.”

“Who will drive the truck?” asked Lua.

“Mitrukaru.”

“He’ll have to have a driving permit,” said Chris. “It’s a safety issue, Jordan.”

“Okay, we’ll work on that.”

“You sure you want to devote your entire summer to this?” asked Lua. “If you start génadɛma, you can get three to six courses under your belt.”

Jordan shook his head vigorously. “No, I’m not in that much of a hurry, mom. This is much more important. The Faith needs the service of the youth. If I could keep this going after the summer’s over, I would. We all know that what this world needs the most is the Faith.”

“We’re not doing badly, though,” replied Chris, a bit defensively. “We’ve been here eleven years now, and this world has about six thousand Bahá'ís; that’s two percent of the population. We could be ten percent in another decade.”

“Why not in two or three years?” asked Jordan. “This is the time, isn’t it? The world is changing and people are searching. Ten years from now, they’ll be used to a new world and won’t be looking for the Faith. Mɛlwika should have a thousand Bahá'ís! Everyone here is an immigrant looking for a new life!”

“Jordan, we do have to be careful,” warned Lua. “Too sudden growth of the Faith could weaken our school and our hospitals. The Faith could get banned, remember.”

“Still? Do you really think so?”

“Yes, it is possible,” said Chris. “We do have to be careful, Jordan. You could get arrested or thrown in prison. Keep that in mind.”

“I will,” he replied reluctantly.

Two days later, Budhéstu intentionally rose an hour before dawn. Soru, Kanawé, and Blorakwé were starting the Bahá'í fast that morning. The night before he and Blorakwé had stayed at the school and helped get all the kids to bed while Soru and Kanawé had

gone to Bahá'í Feast in Morituora, and they had explained the Fast to him. They were surprised to see him when he entered the school's dining room.

"You don't need to fast, remember," said Soru. "The kids don't know about the Fast; we don't impose it on them, not even to the extent of changing the meal times. This is our own religious thing."

"Yes, I know that, and I don't know whether I will fast, but I would like to get up and have breakfast with you."

"You're welcome, of course," said Kanawé. "We'll also pray together after we eat, even if it is for five minutes; it's hard to pray in the morning because of our two kids waking up and because of the kids in the dorm. We'll also pray together right before we break the Fast at sunset."

"What is the purpose of the Fast?"

"To remember Esto," replied Soru. "It is easy to pay lip service to him as you live your ordinary life, but to change your entire life around by not eating or drinking while the sun is up in the sky; that strengthens your dedication and devotion. It is a symbolic act of devotion and should lead to deeper devotion at other times."

"This is my first fast," added Blorakwé. "I became a Bahá'í just a few months ago."

"What attracted you?"

She considered the question a moment. "First, the good life Soru and Kanawé were living, but then I became very attracted to the life of Bahá'u'lláh. There's a new booklet on His life that was just translated into Eryani and we plan to study it during the Fast."

“Then I’d like to study it as well, if I may,” said Budhéstu.

Reread and edited, 6/4/13, 8/16/17, 11/18/24, 9/23/26

288.

Truck

The Mɛlwika Bahá'í Center was packed for the wedding of Mitrukaru and Kordé. Mɛdhé was beaming; Kanawé was tearful; Soru looked proud of his nephew. The mother and stepfather of the bride were warm and hospitable. Two large extended families mingled with the friends of the bride and groom, many of whom were Bahá'ís.

It was the first time Kanawé's two brothers, Moléstu and Majéstu, had ever been in the Bahá'í Center. They were puzzled by its open space lacking a sacrificial altar, its vast windows of glass, and its simple but elegant white walls. "No sacrifice, huh?" Moléstu whispered to his sister after the groom and bride had exchanged "Verily, we will all abide by the will of God"—the Bahá'í marriage vow.

"No, just the vow and whatever else they want to add to the ceremony."

"I suppose it's cheaper, but is it acceptable to Esto?"

"He doesn't seem to need dead goats. It hasn't hurt any marriages yet."

Moléstu nodded, thinking about that, as Liz Mennea went forward to play a piano piece, a traditional Eryanɛ sacred melody he immediately recognized, but rather than chanting a hymn of Widumaj, much of the audience began to repeat a Hidden Word by Bahá'u'lláh that fit the tune quite well. He listened, absorbing the strangeness and wondering about it.

When the song ended Liz played a recessional and the bride and groom exited the Bahá'í Center, followed by the audience. A reception line of sorts formed outside where

everyone greeted the new couple while tables of food were set up inside. “That was very nice,” Moléstu said to Blorakwé. “Is this the sort of wedding you will want, some day?”

“I suppose,” she replied awkwardly, uncertain where her father was going with that question.

“They chose very nice readings,” agreed Soru. “They make a good match. Kordé’s very practical and has a good sense of humor.”

“And they’re moving into your house here in town?” asked Moléstu.

“Yes, we’re at the school all the time now, so we never get here overnight. I don’t know how long they’re staying, though. Mitrukordu may get a job as agricultural advisor for the lower Arjakwés Granges.”

“I know, I suggested the idea. Every grange needs an agricultural agent. So many new crops are being planted now! We’ve heard there’s demand for three new hot peppers from Néfa, but no one is sure how to grow them. Mitrukaru’s good at advising farmers, too.”

“What are you planting this year?” asked Soru.

“I already have ten agris of corn in the ground; I planted them the last week of ɛjnaménu. I planted two agris of peas a month earlier than that, since they tolerate cold fairly well. After they’re harvested I’ll plant tomatoes. I’ve got eight agris of winter wheat that will be ready for harvest in two months, and then I may plant beans on the land to restore nitrogen levels.”

“No construction jobs?”

“No, not until winter. I’m tired of it, and now that the Motor Works are finished, demand for construction work is down.” Moléstu sighed. “So, for now I have seven

hundred dhanay in the bank. I'm not sure what I'm saving them for; Mɛlitané wants me to spend them on the house."

"I'd hold onto it. You never know when you could use some money."

"Exactly. Most people live right on the edge. So, what's this I hear that Mitrukaru and Kordé may travel around the world this summer?"

"It's likely. A group of Bahá'í youth want to visit villages, offer classes on development topics, basic science and math, and some Bahá'í subjects, and they need a chaperone. Mitrukaru and Kordé have volunteered."

"That's the trip I'd like to go on, dad," said Blorakwé.

He shook his head. "Stick to school."

"Dad, school's off for the summer."

"Then work for Soru and Kanawé or come back to Tɛrskua."

"Just a week or two?"

Moléstu hesitated. "I'll think about that. Soru and Kanawé need you."

Just then, Budhéstu came over to them. "We can go back inside for the reception, now," he said. "Wasn't that a beautiful wedding?"

"It was," agreed Soru. He pointed. "Budhéstu, this is my brother in law Moléstu, Blorakwé's father. Budhéstu has been staying at the school most of the last month and helping while the staff were away."

"Pleased to meet you," said Moléstu, offering both hands to Budhéstu. They shook. They began to walk inside the Bahá'í Center while Soru and Blorakwé went over to talk to the bride.

“I’m pleased to meet you as well. Blorakwé has spoken of you often,” said Budhéstu to Moléstu.

“She has mentioned you. You’re a génadɛma student? From what village?”

“Klɛnvika on the north shore, twenty kilometers west of Bɛllɛdha. I was a school teacher in my home village with no outside education—not even from Bɛllɛdha High School—until I came to Mɛlwika Génadɛma in the fall.”

“Was that difficult?”

“I took my time and started with some remedial courses, then when I started in the génadɛma in late fall I was ready. I’ve taken only four and a half courses so far and plan to take a lot more in the spring.”

“How do you take half a course?”

“I attended half of Soru’s advanced psychology course last month. I’m taking his introductory course this month and will finish the advanced course later. I find psychology fascinating; I think I may focus on it.”

“No more school teaching in Klɛnvika?”

“I don’t think so. The génadɛma is too exciting, and there are new things to pursue.”

Moléstu nodded. “New things,” he sighed. “But I guess I can’t complain about that. I used to struggle raising six agris of winter wheat—one crop a year—and a few agris of dates. No money for anything else, one blanket in the house, no spare clothes, straw and animal dung for the cooking fire . . . and now I have twenty agris, access to a tractor through the grange, two crops a year, and I’m a part time construction contractor. Lord Chris gave me a contract to build a small factory for a business he was a partner in.

Everything had to be in writing; Soru must have spent most of a week with me! But we got it written up and now I can make the proposals myself, and they don't seem to mind my misspellings and scrawly handwriting."

"Klɛnvika was in better shape than Tɛrskua, but now it's definitely the other way around. You're very lucky to be close to Mɛddoakwés and Mɛlwika. There's so much development going on here! There are a lot of professions here that they can't pursue in local villages."

Moléstu nodded. "I'm beginning to see what you mean. I just wish Blorakwé wouldn't get caught up in it. Women are not in the same position as men to contribute to all this development. Look at all the children around here! Mɛlwika seems to be drowning in kids. There's not much point getting a fancy génadɛma education if you're going to spend most of your time feeding and cleaning up after children."

"That's slowly changing, too." Budhéstu hesitated and wondered how much to say. "I just participated in a course that created a seven-year development plan for the kingdom; the plan that ended up being the prince's. We talked to several doctors about health care over the next seven years. One thing they said was quite startling; even shocking at first. On Gɛdhéma, there are many medical ways women can control their fertility. In other words, there are ways they can prevent pregnancy from happening, when it normally would. As a result, husbands and wives can plan when they will have children and how many they will have. Within a few years, that will be possible here as well. When that happens, women will be able to pursue careers and couples will be able to decide when they want to have a child and how they will raise it."

Moléstu stared at him and it wasn't clear whether he was shocked or didn't believe. "But that would interfere with the basic plan of Esto."

"Hospitals have already interfered with the basic plan of Esto. The average woman here used to have five children, but only two used to make it to adulthood. Now usually all will survive; the doctors told us that infant mortality in Mɛlwika is 35 per thousand births instead of 400 per thousand. Furthermore, women live longer, so they might have an average of eight children instead of five. If women don't have fewer children, we will overrun this world."

"I never thought of that." Moléstu sighed. "Majéstu and I are two of five or six children. After I was born, there was a girl, but she was born in the autumn before the rains when the food was least, my mother had no milk, so the baby got sick and died. I think there was another one when I was still little; my mother had a miscarriage that time. Then Majéstu was born, then two girls. One was Kanawé. The other died when she was two. I was maybe thirteen then. That was a year before my mother died . . . And Mɛlitané and I have two children now, but we've had four altogether. A little boy was born just ten months after Blorakwé, but it was fall and we were very hungry, and Mɛlitané said if we kept the baby he and Blorakwé would both die because there wasn't enough milk for both. So I carried him out to a hill and left him . . ." His voice trailed off. "That was very difficult."

Budhéstu didn't say anything for a moment. "My family has similar stories; everyone does. But life has changed, and it is going to change a lot more. That's what I have realized in the last few months. And the Bahá'í Faith has some very good teachings. It says two young people must choose who they will marry, but then they need parental

permission. This is a balance between the old way with arranged marriages and the new way independent of parents that is spreading at the génadɛma. A husband and wife can regulate their fertility as long as they don't terminate a pregnancy—they can prevent a pregnancy, but once they have one, they should bear the child—and as long as they don't decide to have no children at all. Both the husband and wife should be able to read and write, so the mother, who inevitably will have more work to do with the child rearing, can educate her children and can read about their health and what to feed them. Both should be able to earn a living, so that both can work if they want or in an emergency. And because women live longer, they can work after the kids grow up. It's practical."

"But if both work, who raises the kids?"

"They both do, and the kids go to daycare sometimes. In Mɛlwika many mothers take in other children during the day and are paid to take care of them. They seem to grow up fine."

Moléstu said nothing at first, then he said, "So many changes. Are you a Bahá'í?"

"No, though I think I might become one. First, I need to read more. It seems to me it's the religion that meets the needs of this new world."

"Perhaps it does." He shrugged. "I'm glad to see they still chant the hymns, even if they don't sacrifice. And they teach that children should obey their parents; Blorakwé assured me of that!"

"She's a very bright and capable young woman," observed Budhéstu.

Moléstu looked at him. "Yes, so I am gradually coming to realize. A woman who is bright; I knew women could be bright, of course, but I never thought of it as something natural or desirable. She is also beautiful, isn't she?"

"She is."

Moléstu smiled. "Good. I'm glad you génadɛma boys still appreciate that!"

It wasn't until the fourth Primdiu of Bolérɛnménu—corresponding to mid April—when the main assembly line of Miller Motors was finally ready to operate. John Miller hosted a big gathering for twenty investors or their representatives—for five granges had participated—invited Kɛkanu to chant (which also meant he broadcast the ceremony live over the radio), and invited the public to tour the facility and enjoy free bread and cheese in Foundry Square. The assembly line was a 150-meter long building with a conveyor belt, so the chassis moved 100 meters in three hours, mostly past huge bins containing parts. A team of twenty men swarmed all over the vehicle, putting a thousand parts on it. Older buildings where vehicles had previously been assembled had been refurbished to take slabs of molten steel, roll them into thin sheets, and cut and weld them into basic parts. Engines and suspensions were made in Mɛddoakwés; rubber tires in Pértatranisér; headlights and electrical systems in Kérékwɛs; brakes in Gramakwés; gears and transmissions in Ora. Dozens of small parts were machined in Tripola, Mɛlita, ɛjnopéla, Béranagrés, Morituora, Mɛgdhuna, Ornakwés, and Akɛlséra. Seats were made in Gordha.

The highpoint of the ceremony came when the first two vehicles—pickup trucks, mostly assembled the day before—rolled off the assembly line to enthusiastic cheers. John gave the first one to the future industrial museum and the second one to Chris, much to his surprise. John, Chris, Governor Wɛranolubu, and Duke Kandékwɛs all gave speeches, and then it was over. Chris walked over to the truck he had been given and wondered what to do with it.

Liz walked up to him. “So, we have some new property!”

“We do. It’s beautiful, isn’t it? I don’t know what we’ll do with it, but it is quite a piece of work.” He ran his hands over the metal surface.

“Any colors other than dark blue?”

“Yes, we aren’t going the way of the Model T. We’ll have black, red, white, and green paint, too.”

“And they’ll sell, I’m sure, at 2,600 dhanay.”

“There’s already a two-month waiting list because Miller Motors has been shut down for four months. That worries me; with the shut down and the lower price, there should be a six-month waiting list by now. And production won’t reach targets any time soon, either.” He lowered his voice. “Parts shortages from Kérékwɛs. They can’t seem to get up to speed. They had better to soon.”

“How fast can the assembly line put out cars?”

“Right now, it’s set up so a single twenty-man team can assemble a car in three hours; three cars in a ten-hour work session. The assembly line is the most expandable part of the entire operation because it could accommodate ten vehicles at once, so this place can turn out a vehicle an hour; if it ran 24 hours a day, six days a week, that’s almost 10,000 per year, which would be enough to build a vehicle for every family and every business every decade. The problem is making all the parts. None of the various operations currently can turn out enough parts for more than a tenth of that. But demand for vehicles may not be a thousand a year yet, which is what we’re aiming for. As demand rises, though, we’ll get more and more efficient and prices will drop. That’s the beauty of this new system.”

“Unless it bankrupts us first.”

“Exactly, and that is a danger. We expanded too much. That can happen when you have too many players wanting a piece of the action.”

“How serious is the danger?” Liz said, very worried.

“We’ll be fine if the economy is fine. Miller Motors and Foundry have a thousand workers and need 2.5 million dhanay to cover expenses. If they sell a thousand vehicles plus all the other things they usually sell—axes, wheelbarrows, bicycles, etc.—they should earn 3.2 million. And Home Improvement is doing incredibly well; the 2.5 million dhanay in construction boosted consumer spending, so Home Improvement earned 1 million dhanay more than expected last year. So there’s plenty of money to cover salaries and purchases of raw materials, plus paying down outside investments. Of course, there could be quite a fight getting access to that cash flow, and pressure from the investors to make a profit.”

“It’ll be a difficult year, then. No new projects this year, then?”

Chris considered the question. “Let’s wait and see. In three months the harvests will come in, we’ll have a better idea what our family income will be, and we’ll have a better idea how Miller Motors is doing. If we can, we should invest in pharmaceuticals. I don’t know how long Sophos will provide us with drugs.”

Just then John walked over. “So, do you like her?”

Chris put his hand on the truck. “She’s beautiful, John. It’s amazing that in just eleven years we’ve come this far. You’re very generous.”

“Thank you. It is amazing we can make things like this, but I’m not sure I’ve been generous; the first vehicles to roll off the assembly line will have the most problems!”

Chris chuckled. “Good point. Any new ideas on what we can do about bottlenecks?”

“No. You and I need to meet about them. We’re cracking the whip on internal problems, but we can’t do much on outside contractors.”

“Okay. I have a business class tomorrow morning in Arjdhura, but I’ll be back by mid afternoon.”

“I’ll call first.” John walked away, pleased. Chris saw Mitrukaru and Kordé nearby, so he beckoned them over.

“Congratulations again to both of you,” he said. “So, you are back?”

“Yes. Thank you for the gift of five nights in any Palace Hotel. We spent three in Pértatranisér and two in Isurdhuna.”

“And visited Mɛddwoglubas to pray at the temple,” added Kordé. “We spent most of the time adjusting to the changes in time. We had never traveled so far. We knew about the changes, but had never *felt* them before.”

“It isn’t easy. I’m glad you got to see a bit of the world, then. You’re both still going to chaperone the youth group, right? Because the Central Spiritual Assembly met the other day and approved the trip.”

“Yes, we’ll do it,” said Kordé firmly, and Mitrukaru nodded reluctantly.

“Do you know how to drive?”

“I’ve run a tractor a few times,” replied Mitrukaru.

“If you’re going to drive a truck pulling a house trailer, you need a driver’s license.” Chris patted the truck. “We’ll use this for the summer trip, so I suggest you learn how to drive it. Do you have some time this afternoon?”

Mitrukaru smiled broadly. “Yes, I think I can make some time!”

“Good. I want to try it out anyway, since Miller gave it to me. So let’s fire her up, I’ll drive it to the edge of town, and I’ll let you take over.”

“Alright! Thank you!”

“Kordé, you should come along as well. If both of you can drive, it’ll be even better.”

“Me? Drive?”

“On much of Gɛdhéma, everyone over age 16 learns, men and women. If we’re going to use this trip to teach equality of men and women by example, you need to learn as well.”

She gulped. “Alright, then I will.”

Reread and edited, 6/4/13, 8/16/17, 11/18/24, 9/23/26

.

Budhéstu meets Blorakwé's parents and they like him; they start to get to know each other some.

Thornton, Amos, and Aryéstu start a regional planning effort (7 year plan)

Soru gets more involved in psychology, translating articles and organizing a course

Wɛranolubu resigns when Crown Prince becomes Prime Minister. He gets hired to run Mɛddoakwés and Arjakwés.

Crown prince takes a second wife, a Sumi; first wife is furious

New mimeograph machine creates an underground newspaper

Okpétu gets a two seater; takes Thornton up for a tour of the Arjakwés Valley; regular flights are in the offing

Complete land use plan for Long Valley

Fall crop prices are down a lot; Chris has some cash flow problems. Construction of the new vehicle plant is an immense logistical nightmare.

Mɛlita gets a big shopping center, like Pértatranisér, because of all the North Shore farmers and families coming through.

Liz visits beautiful Luktrudéma and is inspired to start an artists colony and resort there. Thornton goes along and learns about the bubble circles; he goes out on a boat

More about industrialization; factories to make pasta in Tritɛjna, candy, dried fruit in Bilara, paper bags in ɛjnopéla, sandals in Wɛranopéla, rugs in Gordha. Chicken production starts in Pért. and turkey production in Mɛlita. Moléstu bids on the pasta plant.

Lébé needs to get away and rest. She and Thornton plan a vacation and discuss getting a house of their own somewhere. They have to take into account security issues.

Started May 5, 2007; finished June 2, 2007. Reread and lightly edited, June 22-24, 2011

and June 2-4, 2013, 8/15-16/17, 11/17-18/24, 9/23/26