# 4

After class, Mr. Bren and I walked back to my office, with a streamer of other students trailing along like a comet's tail. They were all anxious to continue the conversation, Bren especially so. He was keen on explaining that there *were* utopias, at least one real utopia, here on Earth. It was apparent that his own home country was his candidate for this honor.

Four students crowded into my office as I sat at my desk and glanced at the mail.

"You must understand the circumstances, very dramatic, which have led to the establishment of Nusquam," Bren was saying. "And the circumstances of its growth. In 1971, certain shifts in public opinion led to the development of this ambitious project by Premier Toft . . ."

*The blinking light on the phone signaled the presence of new voice mail messages.*

"Is this the inventor Arshil Toft?" Stanton piped up. *If only I knew how to access them!*

"Yes, of course," Bren replied, none too pleased at having to share this colloquy with others. *Well, probably better left undisturbed. Who knew what they might be asking me?*

"The man behind gene-shaving technology and the archetron synapse process?" Doyle asked. *Yes, Mr. Doyle, I thought to myself, you* do *know a lot about a lot*.

"Yes of course," Bren replied again. "It is said that the immense earnings from these patents and designs provided much of the funding for the launch of Nusquam. Premier Toft conceived of the notion to create a 'rational republic' founded upon scientific planning and a devotion to rational policy in all matters affecting the welfare of the population – now, of course, the Nusquami population. After considerable study he and his advisers decided to

site Nusquam in a region of the Pacific with efficient access to trade centers and proximity to deep-sea vents capable of supporting systematic geo-thermal production." "*Site Nusquam in a region . . .*" *Sounds more like he was laying out a subdivision. What kind of country was this, I wondered. But Bren was continuing.*

"Within five years, the basic framework for Nusquam was completed, plants were introduced to the new island . . ."

"Excuse me," Hargreave interrupted in apparent confusion. "What do you mean 'new island'?"

"I am sorry," Bren said. *You don't sound sorry to me, I thought, but then sorrow takes on so many guises, doesn't it?* "But did you not understand that Nusquam is a vast, artificial island, sited and secured in the Philippine Sea? As I explained to our Professor the other day," he said, nodding in my direction. *I must pay attention if they are going to start nodding at me like this, I realized with some alarm.* "Premier Toft lit-

erally created Nusquam. There was no Nusquam before Premier Toft created it."

"And 'government came afterwards,' " I interjected, just to show that I was awake and listening.

"Naturally," said Bren, obviously pleased to have my attention. "Another technological advance by Premier Toft secures the plates of the island's substructure through the use of sonic stabilizers, as well as a network of undersea cables and nautical auto-gyros. The beauty of this system is that it is itself productive of additional hydroelectric power from the motion of underwater currents and resistance to the stable substructure of the island. With these devices in place, the generators were started, and an unprecedented amount of energy was and continues to be created, requiring a large, new capacitor bank to be installed inside the central dome at the center of the island's superstructure. Within three years of the launch, the newly completed layout of the en-

tire island was brought on line, and the concentric train system linking all sectors of the island, the downtown development, and the farmland development were begun."

"Farmland?" Ms. Hargreave asked in visible confusion.

"Oh, yes," Bren replied. "Originally, some of the advisers were said to favor hydroponics and controlled-condition stock breeding, but Premier Toft's insight intervened. These modern methods operate, certainly, in the background, very efficient, very valuable, but it is important for the people to experience in a very physical way a connection to the land." *"The land," I thought, on an artificial island anchored to marine outcroppings!* "And so squads of citizens periodically assume duties on the farms. And within four years the development of the farmland was finished, and the first public auctions of land were held."

"Wait, didn't that trigger some sort of international crisis?" Stanton asked. *Former histo-*

*ry major, I guessed, or maybe something disreputable like poly sci*.

"Yes of course," Bren explained. "Perhaps as a result of the growing evidence of viability of the project, at this time the Government of the Philippines announced that it claimed the territory. Public and private investors also announced that they were prepared to reach terms with the Philippines over the development of new resort areas on the island surface."

"Wait, what? I think I remember this," Stanton said. "Wasn't this when the 'super-surge' incident occurred?"

"No, no," Bren said, looking at me as if to appeal for support. "There was simply an infrastructural adjustment . . ."

"The 'big bolt,' right?" Doyle interjected, seeming to sense Bren's discomfort.

"No, no, nothing like that," Bren insisted, looking to me again. *No use appealing to me, I thought, since I have no idea what the two of you*

*are talking about*. "I may assure you. As we understand it, a delegation representing public and private investors, accompanied by officials and army personnel of the Government of the Philippines were conducting a 'territorial survey' when they inadvisedly traversed the concentric rail grid as a test surge of power was being transmitted."

"How tragic," I said.

"Bodies everywhere, I guess, huh?" Doyle needled along.

"As we understand it, no bodies were recovered," Bren said. "An official report by the Nusquam organizing committee so stated."

"I am surprised that there was no military response to this incident," I said, because sometimes you are expected to say something.

"Of course you must remember, professor, that sonic stabilizers can also be adapted to a de-stabilizing function, not unlike the use of electromagnetic pulses. There was no military response, but a negotiated territorial settle-

ment. Even at this early stage in project development, Premier Toft's vision was clear – We rely on science and technology to achieve the goals of a just and ordered society, where the welfare of the people is 'advanced by the advance of knowledge.' "

"So you avoided war . . ." I said, hoping that this would put a more positive spin on the subject.

"We have achieved the abolition of war, through the establishment of total neutrality and a strong policy of non-interference, enforced by scientific defense," Bren explained. "Our established military force requires that all citizens be enlisted for one year. The Force members are rigorously trained in basic military techniques and technology in the event of a national emergency. They are the basis of a strong defense system to contain the risk of any external attack."

"And so the great territorial dispute was resolved," I said. *There, I thought, closure, tranquility – time for these students to leave, yes?*

"It was dissolved," Bren said, as if that explained anything. "Later that same year, Premier Toft announced that no resorts or private buildings may be produced except as approved by him. The following year, the initial stages of the national housing project was completed, electricity was brought on line, and new capacitors were installed. The commercial districts were nearing completion, and the mixed-use areas were connected to the new fully automated electric power grid. Two years later . . ."

"This would be when?" Ms. Hargreave asked.

"In 1985," Bren replied. "Yes, at that point the concentric rail grid was completed, powered up and brought fully on line, and new capacitors were installed in the tower at the center of the island. New geothermal cores were

sunk into accessible points in the seabed, where drilling was already begun." He turned to look at me. "As I am sure you can appreciate, Professor, this is a continuing process of development, and it is here that public and private investment has been permitted, subject to a binding arbitral regime. In fact, as part of the territorial settlement, the Government of the Philippines committed to the purchase of a $20 billion position in the bond issue that seeded the initial development phase of the seabed energy project."

"And what was the maturity term for these bonds?" I asked.

"Twenty years, but they were liquidated in five years. This means that Nusquam is almost fully self-sufficient. Prefabricated housing of high quality is now produced by our factory district. Water re-circulation infrastructure was completed well ahead of schedule, and now the state no longer needs to rely on imported supplies of staple goods. The Central Bank of

Nusquam was established in 1990, and the national school system was opened the following year."

"So if this was an artificial island . . ." Ms. Hargreave began, reinserting herself into the conversation.

"No, it is quite genuine," Bren corrected her.

"Yes, but what I mean is, it's not a natural formation, it's fabricated."

"Yes, of course."

"Well, if this is an artificial island . . . a constructed island . . . then where does the population come from?"

"Where population always comes from, at least initially of course. From the movement of peoples. The Settlers – Premier Toft, his family, friends, supporters, and representatives of his other investors – and approximately 2,000 workers hired for the initial construction phase, these were the original population. Over those first twenty years others arrived, by

application and approval. By 1992, a new housing construction phase was completed, and thousands of new positions were created for maintenance of the farms, the new sewer system, and the electrical grid, as well as overseers and workers of new projects."

"And what about population density?" Stanton interjected. *Definitely former poly sci major, no question about it, I thought to myself.* "Excluding Antarctica, the Earth's net total land mass has a population density of, what, 50 per square kilometer, so, what, 130 per square mile?"

"Excuse me, please," Bren corrected him. "But that would be 129.28 per square mile."

"Uh, right."

"Approximated, of course."

"Yeah. Well, anyway, that figure is somewhat misleading as an average, since it still includes a lot of uninhabitable areas. But if we take that as a starting point, we can look at population densities along a continuum, with

maybe Bangladesh at the upper end with population around 150 million plus, and a population density of, what, 1,000 per square kilometer and . . ."

"Excuse me," Bren interrupted him. *Oh, thank you, Mr. Bren, I thought to myself, being careful not to make my satisfaction at the interruption too apparent. I* can *keep a straight when needed, you know*. "But I believe that it is established that the most densely populated areas are city-states, microstates, and dependencies. So, for example, Hong Kong and Singapore have densities well in excess of 6,000 per square kilometer. I have studied this at NUST. It is, I believe, the third most dense area, Bahrain, that is only approximated at 1,600 per kilometer, and even here Bangladesh, much larger in land size, is much smaller in density."

"Yeah, OK," Stanton responded, "What I was trying . . ."

"I have studied this subject," Bren plowed on. "These micro-territories share certain iden-

tifiable characteristics. First, a relatively small geographic area; next, high urbanization; finally, socio-economic synergism or 'permeabilities,' so to speak, with economically specialized urban populations drawing upon rural resources outside the area."

"So, is Nusquam also overpopulated?" Stanton asked, in one last attempt to regain control of the ball.

"No, no," Bren responded, and then in a flanking action that can only be described as masterful, he broke eye contact with Stanton, turned to me and said, "Professor, I believe my studies have shown that there is a difference between high population density such as is found to be the case in these micro-territories, and overpopulation, which is not the case because 'overpopulation' is a function of relative scarcity of resources, and this is avoided by permeability of supply drawn from contiguous rural areas. From my studies, I believe that an area with high population density is by some

authorities considered to be overpopulated to the extent that it has overstressed factors such as quality of housing and infrastructure and access to resources."

"So these 'micro-territories,' as you call them," I responded, because it was apparently my cue. "They feed off of the surrounding rural areas?" *What prompted all of this? I think I have completely lost track of the thread of the discussion.*

"Better to say that there is a socio-economic synergism benefiting both the micro-territory and its contiguous rural zone," Bren explained. *This was either meaningless or so heavily impacted as to be impenetrable. Oh, now I remembered how this started.*

"Yes, OK," said Ms. Hargreave, in obvious confusion, "But what exactly is the population, or density, or . . . how big is the population of Nusquam?"

"Yes, of course," Bren responded. "With a current population of approximated 2,380,000, it has a density of 340 per square kilometer."

"So, how does that compare . . ." Hargreave asked.

"This is what is interesting." *I'll take your word for that, I said to myself, patiently waiting for enlightenment.* "With an area of exactly 7,000 square kilometers – approximated at 20 percent the size of Taiwan – Nusquam has a population density that is almost the same."

"The same?" I asked.

"The same as Taiwan."

"I see." *I didn't, or only vaguely.*

"The following year – this would be 1993, you understand – we experienced a significant advance in development as the 'Super-Fac' came on line, and . . ."

"The Super Fac?" I asked.

"The fully integrated, self-recycling factory complex that occupies the huge central ring around Central Tower," Bren explained. "The

remaining factories were scrapped, to create raw materials for the next big project, the Sea-Bed Mines. And within two years, the first full phase of the mines was completed. Production of steel and other metals was slow at first, but this gradually increased by year-end 1995."

"You make it sound like a production facility rather than a country." Stanton objected. "Is there no government, no representation?"

"Yes, of course," Bren responded. "As the population increased in accordance with the development plan, and became practically indigenous, it was expected that a system of social governance would be instituted. And this is a clear example of the way in which the human potential is optimized in accordance with scientific planning and our devotion to rational policy in all matters affecting the welfare of the Nusquami population. In 1996, the Government of the Philippines agreed to acknowledge the autonomy of the island, which immediately began to undergo a period of dramatic change.

The original design team began to institute the transitional procedures to create a parliamentary form of government under the leadership of Premier Toft. This was an important moment in our history, like your Day of Independence. On 30 May 1996, the design team, contractors, workers, and their accompanying families – those that were now citizens of Nusquam – met in the planning sector of the island, as a temporary constitution was drawn up, and a voting system established. The first vote was taken at the conclusion of the meeting, and twelve people were elected to supervise the island's development for the next two years, under the guidance of Premier Toft."

"But who elected Premier Toft?" Hargreave asked.

"Sorry, I do not understand the question," Bren said.

"Well, how did he become premier?" she persisted.

"This was always a part of the original plan of development," Bren explained. "The guiding force in this rational plan of development could not be a matter of chance. 'Incidence, not accidents,' as Premier Toft says. The human potential is optimized in accordance with scientific planning and our devotion to rational policy in all matters affecting the welfare of the Nusquami population." *Yes, of course, I thought, how could I have forgotten.* "In one year's time, the island's urban sector development was finished. The Super-Fac was at this point outputting at ten times the original capacity and would be capable of supplying the needs of the total projected population, net of projected exportation."

"Yes, very interesting," I said, hoping to move the conversation along – and out the door. "So, the initial governing council . . ."

"Supervisory Council."

"Right . . . supervisory council . . . had a two-year term."

"Yes, of course, and in 1998 another vote was held for twelve new members of the Supervisory Council, under the guidance of Premier Toft. Also at this time, total autonomy from the Philippines was affirmed, and the outstanding development bonds were redeemed."

"So Premier Toft continues without reelection," I said.

"Yes, of course. By 1999, Nusquam was virtually self-sufficient and nearly carbon-neutral. And in part as a result of sponsorship from ecological groups in your country, the population continued to increase. Due to the sea-bed mines and the increased load on the generators, a new bank of state-of-the-art 500 million farad capacitors were installed that year, and the old ones were sold to your General Electric."

"GE buys used capacitors from Nusquam?" Doyle asked.

"Oh, but I can assure you, these were of the best quality, practically new." *Still, I thought, what kind of leverage does Nusquam have, off-loading used capital goods onto GE?* "This was an important turning point for us. And two years later, on the fifth Constitution Day, 30 May 2001, Nusquam applied for UN membership. In the next election, the Supervisory Council completed the constitutional transition to an MMP parliamentary system, representing the 8 main districts, with 160 seats." *MMP? Surely he doesn't mean a massively multi-player game. Has politics at last morphed into an online game?*

"MMP?" Hargreave asked in some confusion.

"Yes, of course, as in Germany and many other countries."

"Oh, I see," I volunteered. "A mixed-member proportional voting system. And how does this work in practice? What are the details?"

"The Constitution contemplates that the overall total of party members in the Supervi-

sory Council will reflect the overall proportion of votes received for party candidates in the election, with the one variation that certain members are to be elected by geographic constituency – the eight districts – rather than by party on a Nusquam-wide basis. These 64 district representatives . . ."

"Eight representatives per district?" I asked.

"Yes, of course. These would be deducted from the respective party totals, to maintain overall proportionality of representation with the Supervisory Council. In addition, of course, the district representatives serve as executives for their respective districts, so they have the dual roles of representatives in the Supervisory Council and executives of the district councils."

"And the executive functions at the national level are the responsibility of . . .?"

"Of Premier Toft and the permanent staff of the Office of the Premier." *Naturally – why did I*

*not realize this already?* "Of course, as yet there is only the National Party that has been certified by the OP to sponsor candidates for election, but the Constitution contemplates the possibility of a wide range of views to be represented, in proper proportion within the Supervisory Council and among the district councils. Circumstances may naturally evolve over time as the population increases and diversifies. Super-Fac workers and other technical workers who have been admitted to Nusquam for specific projects, for example, are invited to live on the island until they are dismissed or naturalized at the end of a two-year term, and thus the demographics continue to be fluid. The exact need for these workers is determined by the Development Board within the OP, since the Board regulates all new commercial and industrial initiatives and the creation of new business activities and entities."

"So this board operates as a Ministry of Commerce and Industry?" Stanton asked.

"Yes, of course, and also the comptroller of the national currency, the iota . . ."

"Yoda?" I asked.

"No, iota, i-o-t-a," Bren spelled it for me. "We call it 'the slug.' "

"The slug?"

"Yes," Bren grinned. "Because the symbol is written like this." He took a piece of paper from his binder, and wrote this symbol, and passed it to me:

I could not suppress a chuckle.

"Are those eye-stalks on top?" Doyle asked, in what may have been a good-natured way, as he and the others looked at the drawing.

"No, no, of course not," Bren quickly responded. "But I can assure you that the slug was a source of happy amusement to many of us. In my last year at NUST, our study division had a contest, artistic you understand, for representations of the slug." He took back the paper and drew some more symbols on it, and then passed it back to me. "That first one – that was my entry – was called 'the happy slug.' " It looked like this:

"But I am afraid that this is not very appropriate," he said, with his expression clouding over as with some unhappy memory. "My colleague Arcan was perhaps a little indiscreet."

"Why, what did he do?" Hargreave asked.

"Well, he turned iota into a cartoon of the ... a picture of Premier Toft."

"What did it look like?" Hargreave asked.

"It was nothing but harmless play among friends you understand." An awkward silence. "Please . . ."

"Between us," I tried to reassure him.

"Yes, of course, Professor. I am sorry. It was just this you understand." He took the paper again, penciled a little drawing on it, and passed it back to me. The new figure looked like this:

"I don't understand," I said, staring at the crude figure.

"It is, uh, perhaps somewhat crude, as a picture, and suggests a grim attitude."

"But still," I said, uncomprehending.

"Arcan was called to the Prefect's office, and it was made clear to him that a disrespectful attitude did not suggest a seriousness of purpose on the part of a NUST student. I am afraid that he found it necessary to relocate himself."

"Relocate?"

"His application, all applications of his family, were suspended, and he was compelled to leave upon the expiration of his two years in residence on the island."

"But that's terrible!" Hargreave sputtered.

"I would not say so," Bren replied in a subdued voice.

"But why not?" she persisted, still sputtering I suppose.

"I would not say so," he repeated with quiet emphasis.

There is sometimes a moment in conversation when the speakers find that they have strayed into uncomfortable territory, where si-

lence overtakes them. It is most painful when least intended. And here we were. There are few paths out of this terrain. The abrupt retreat is a particular specialty of mine, hacking my way fiercely through the clinging undergrowth of discomfiture. Somehow, though, I could not do it this time; Bren's quiet demeanor made a hasty withdrawal seem shabby, and I felt that it would be embarrassing to do this in front of the other students. The silence persisted. At last Hargreave, Stanton, and Doyle in turn mumbled their various reasons for going, and Bren and I were left sitting across from each other.

"I am sorry, Professor," Bren said after a few minutes.

"No need," I replied. "Perhaps we should speak another time."

"Yes, of course," Bren said. "But you see there have been developments."

"What kind of developments?" I asked. *He seemed to be unburdening himself, I thought, now that the others had gone.*

"In Nusquam. You see, the Supervisory Council has recently approved a measure reorganizing the iota. A new Central Bank of Nusquam has been established. It will take over the supervision of the national currency, no longer the Development Board, and it will be responsible for creating banks within Nusquam and in the territory of our trading partners as well."

"Private commercial banks?" My interest was revived. "What a marvelous opportunity to see a financial system blossom and grow!"

"Private, yes, but for the most part electronic, you understand."

"Online banks?"

"What we call e-banks, yes."

"I would be most interested in any information you could provide about this."

"Yes, of course, Professor, but more than that . . ."

"Yes?"

"My father has expressed an interest in meeting you, and . . ."

"Your father?"

"Yes, of course, he is a member of the Development Board and is most anxious to have the transition to a central banking system go smoothly. I told him of some of your work, and he wanted to inquire whether you would perhaps be interested to accept a letter from the Board."

"What kind of letter?"

"A letter of invitation to come to Nusquam and consult with the Board on these transitional matters."

"Ah, well, yes, that is most, very . . . I would be delighted to consider such a letter."

"My father will be most pleased, I am sure."

"No more than I. Thank you, Mr. Bren."

"It is an honor for Nusquam, and a benefit for its people." *No more than for me, I thought. At least so it seemed at the time.*