

Within the Steel Orb: A Collection of Science Fiction

From the "Major Works" series

CJS Hayward

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Preface

[Within the Steel Orb](#) offers a captivating glimpse of another world, and [Firestorm 2034](#) shows chaos when a medieval traveller is brought two decades into our future. [Yonder](#) invites the reader to step outside of science fiction and question its premises, asking whether science fiction worlds would be a blessing or a curse to be in. All these works offer food for thought and vistas to new worlds.

You are cordially invited to visit the world of [Within the Steel Orb](#) and the other works.

Within the Steel Orb

The car pulled up on the dark cobblestones and stopped by the darker castle. The vehicle was silver-grey, low to the ground, and sleek. A —let us call him a man—opened the driver's door on the right, and stood up, tall, dark, clad in a robe the color of the sky at midnight. Around the car he went, opened the door for his passenger, and once the passenger stepped out, made one swift motion and had two bags on his shoulder. The bags were large, but he moved as if he were accustomed to carrying far heavier fare. It was starlight out, and the moon was visible as moonlight rippled across a pool.

The guest reached for the bags. "Those are heavy. Let me—"

The host smiled darkly. "Do not worry about the weight of your bags."

The host opened a solid greyblack door, of unearthly smoothness, and walked swiftly down a granite hallway, allowing his guest to follow. "You've had a long day. Let me get you something to drink." He turned a door, poured something into two iridescent titanium mugs, and turned through another corridor and opened a door on its side. Inside the room were two deep armchairs and a low table.

"This is my first time traveling between worlds—how am I to address you?"

The host smiled. "Why do you wish to know more of my name? It is

enough for you to call me Oinos. Please enjoy our welcome."

The guest sipped his drink. "Cider?"

The host said, "You may call it that; it is a juice, which has not had artificial things done to make it taste like it just came out of its fruit regardless of how much it should have aged by the time you taste it. It is juice where time has been allowed to do its work." He was holding a steel orb. "You are welcome here, Art." Then—he barely seemed to move—there was a spark, and Oinos pulled a candle from the wall and set it on the table.

Art said, "Why not a fluorescent light to really light the room up?"

The host said, "For the same reason that you either do not offer your guests mocha at all, or else give them real mocha and not a mix of hot water, instant coffee, and hot cocoa powder. In our world, we can turn the room bright as day any time, but we do not often do so."

"Aah. We have a lot to learn from you about getting back to nature."

"Really? What do you mean by 'getting back to nature'? What do you do to try to 'get back to nature'?"

"Um, I don't know what to really do. Maybe try to be in touch with the trees, not being cooped up inside all the time, if I were doing a better job of it..."

"If that is getting back in touch with nature, then we pay little attention to getting in touch with nature. And nature, as we understand it, is about something fundamentally beyond dancing on hills or sitting and watching waves. I don't criticize you if you do them, but there is really something more. And I can talk with you about drinking juice without touching the natural processes that make cider or what have you, and I can talk with you about natural cycles and why we don't have imitation daylight any time it would seem convenient. But I would like you to walk away with something more, and more interesting, than how we keep technology from being too disruptive to natural processes. That isn't really the point. It's almost what you might call a side effect."

"But you do an awfully impressive job of putting technology in its place and not getting too involved with it."

Oinos said, "Have you had enough chance to stretch out and rest and quench your thirst? Would you like to see something?"

"Yes."

Oinos stood, and led the way down some stairs to a room that seemed to be filled with odd devices. He pushed some things aside, then walked up to a device with a square in the center, and pushed one side. Chains and gears moved, and another square replaced it.

"This is my workshop, with various items that I have worked on. You can come over here and play with this little labyrinth; it's not completely working, but you can explore it if you take the time to figure it out. Come on over. It's what I've been working on most recently."

Art looked around, somewhat amazed, and walked over to the 'labyrinth.'

Oinos said, "In your world, in classical Greek, the same word, 'techne,' means both 'art' and 'technology.' You misunderstand my kindred if you think we aren't especially interested in technology; we have a great interest in technology, as with other kinds of art. But just as you can travel a long distance to see the Mona Lisa without needing a mass-produced Mona Lisa to hang in your bathroom, we enjoy and appreciate technologies without making them conveniences we need to have available every single day."

Art pressed a square and the labyrinth shifted. "Have I come here to see technologies?"

Oinos paused. "I would not advise it. You see our technologies, or how we use them, because that is what you are most ready to see. Visitors from some other worlds hardly notice them, even if they are astonished when they are pointed out."

Art said, "Then why don't we go back to the other room?"

Oinos turned. "Excellent." They went back, and Art sat down in his chair.

Art, after a long pause, said, "I still find it puzzling why, if you appreciate technology, you don't want to have more of it."

Oinos said, "Why do you find it so puzzling?"

"Technology *does* seem to add a lot to the body."

"That is a very misleading way to put it. The effect of most technologies that you think of as adding to the body is in fact to undercut the body. The technologies that you call 'space-conquering' might be appropriately called 'body-conquering.'"

"So the telephone is a body-conquering device? Does it make my body less real?"

"Once upon a time, long ago from your perspective, news and information could not really travel faster than a person could travel. If you were talking with a person, that person had to be pretty close, and it was awkward and inconvenient to communicate with those who were far away. That meant that the people you talked with were probably people from your local community."

"So you were deprived of easy access to people far away?"

"Let me put it this way. It mattered where you were, meaning where your body was. Now, on the telephone, or instant messages, or the web, nothing and no one is really anywhere, and that means profound things for what communities are. And are not. You may have read about 'close-knit rural communities' which have become something exotic and esoteric to most of your world's city dwellers... but when space conquering technologies had not come in, and another space-conquering technology, modern roads allowing easy moving so that people would have to say goodbye to face-to-face friendships every few years... It's a very different way of relating. A close-knit rural community is exotic to you because it is a body-based community in ways that tend not to

happen when people make heavy use of body-conquering, or space-conquering, or whatever you want to call them, technologies."

"But isn't there more than a lack of technologies to close-knit communities?"

"Yes, indeed... but... spiritual discipline is about much more than the body, but a lot of spiritual discipline can only shape people when people are running into the body's limitations. The disciplines—worship, prayer, fasting, silence, almsgiving, and so on—only mean something if there are bodily limits you are bumping into. If you can take a pill that takes away your body's discomfort in fasting, or standing through worship, then the body-conquering technology of that pill has cut you off from the spiritual benefit of that practice."

"Aren't spiritual practices about more than the body?"

"Yes indeed, but you won't get there if you have something less than the body."

Art sat back. "I'd be surprised if you're not a real scientist. I imagine that in your world you know things that our scientists will not know for centuries."

Oinos sat back and sat still for a time, closing his eyes. Then he opened his eyes and said, "What have you learned from science?"

"I've spent a lot of time lately, wondering what Einstein's theory of relativity means for us today: even the 'hard' sciences are relative, and what 'reality' is, depends greatly on your own perspective. Even in the hardest sciences, it is fundamentally mistaken to be looking for absolute truth."

Oinos leaned forward, paused, and then tapped the table four different places. In front of Art appeared a gridlike object which Art recognized with a start as a scientific calculator like his son's. "Very well. Let me ask you a question. Relative to your frame of reference, an object of one kilogram rest mass is moving away from you at a speed of one tenth the speed of light. What, from your present frame of reference, is its

effective mass?"

Art hesitated, and began to sit up.

Oinos said, "If you'd prefer, the table can be set to function as any major brand of calculator you're familiar with. Or would you prefer a computer with Matlab or Mathematica? The remainder of the table's surface can be used to browse the appropriate manuals."

Art shrunk slightly towards his chair.

Oinos said, "I'll give you hints. In the theory of relativity, objects can have an effective mass of above their rest mass, but never below it. Furthermore, most calculations of this type tend to have anything that changes, change by a factor of the inverse of the square root of the quantity: one minus the square of the object's speed divided by the square of the speed of light. Do you need me to explain the buttons on the calculator?"

Art shrunk into his chair. "I don't know all of those technical details, but I have spent a lot of time thinking about relativity."

Oinos said, "If you are unable to answer that question before I started dropping hints, let alone after I gave hints, you should not pose as having contemplated what relativity means for us today. I'm not trying to humiliate you. But the first question I asked is the kind of question a teacher would put on a quiz to see if students were awake and not playing video games for most of the first lecture. I know it's fashionable in your world to drop Einstein's name as someone you have deeply pondered. It is also extraordinarily silly. I have noticed that scientists who have a good understanding of relativity often work without presenting themselves as having these deep ponderings about what Einstein means for them today. Trying to deeply ponder Einstein without learning even the basics of relativistic physics is like trying to write the next Nobel prize-winning German novel without being bothered to learn even them most rudimentary German vocabulary and grammar."

"But don't you think that relativity makes a big difference?"

"On a poetic level, I think it is an interesting development in your world's history for a breakthrough in science, Einstein's theory of relativity, to say that what is absolute is not time, but light. Space and time bend before light. There is a poetic beauty to Einstein making an unprecedented absolute out of light. But let us leave poetic appreciation of Einstein's theory aside.

"You might be interested to know that the differences predicted by Einstein's theory of relativity are so minute that decades passed between Einstein making the theory of relativity and people being able to use a sensitive enough clock to measure the minute difference of the so-called 'twins paradox' by bringing an atomic clock on an airplane. The answer to the problem I gave you is that for a tenth the speed of light—which is faster than you can imagine, and well over a thousand times the top speed of the fastest supersonic vehicle your world will ever make—is one half of one percent. It's a disappointingly small increase for a rather astounding speed. If the supersonic Skylon is ever built, would you care to guess the increase in effective mass as it travels at an astounding Mach 5.5?"

"Um, I don't know..."

"Can you guess? Half its mass? The mass of a car? Or just the mass of a normal-sized adult?"

"Is this a trick question? Fifty pounds?"

"The effective mass increases above the rest mass, for that massive vehicle running at about five times the speed of sound and almost twice the top speed of the SR-71 Blackbird, is something like the mass of a mosquito."

"A *mosquito*? You're joking, right?"

"No. It's an underwhelming, *microscopic* difference for what relativity says when the rumor mill has it that Einstein taught us that hard sciences are as fuzzy as anything else... or that perhaps, in Star Wars terms, 'Luke, you're going to find that many of the truths we cling to depend greatly on your own point of view.' Under Einstein, you will in

fact **not** find that many of the observations that we cling to, depend greatly on your own frame of reference. You have to be doing something pretty exotic to have relativity make any measurable difference from the older physics at all."

"Would you explain relativity to me so that I can discuss its implications?"

"I really think there might be more productive ways to use your visit."

"But you have a scientist's understanding of relativity."

"I am not sure I'd say that."

"Why? You seem to understand relativity a lot more like a scientist than I do."

"Let's talk about biology for a moment. Do you remember the theory of spontaneous generation? You know, the theory that life just emerges from appropriate material?"

"I think so."

"But your world's scientists haven't believed in spontaneous generation since over a century before you were born. Why would you be taught that theory—I'm assuming you learned this in a science class and not digging into history?"

"My science course explained the theory in covering historical background, even though scientists no longer believe that bread spontaneously generates mold."

"Let me ask what may seem like a non-sequitur. I assume you're familiar with people who are working to get even more of religion taken out of public schools?"

"Yes."

"They are very concerned about official prayers at school events"

They are very concerned about official prayers at school events, right? About having schools endorse even the occasional religious practice?"

"Yes."

"Ok. Let me ask what may seem like a strange question. Have these 'separation of Church and state' advocates also advocated that geometry be taken out of the classroom?"

Art closed his eyes, and then looked at Oinos as if he had two heads. "It seems you don't know everything about my world."

"I don't. But please understand that geometry did not originate as a secular technical practice. You might have heard this mentioned. Geometry began its life as a 'sacred science,' or a religious practice, and to its founders the idea that geometry does not have religious content would have struck them as worse than saying that prayer does not have religious content."

"Ok, I think I remember that being mentioned. So to speak, my math teacher taught about geometry the 'sacred science' the way that my biology teacher taught about the past theory of spontaneous generation."

Oinos focused his eyes on Art. "In our schools, and in our training, physics, biology, and chemistry are 'taught' as 'secular sciences' the same way, in your school, spontaneous generation is taught as 'past science', or even better, the 'sacred science' of geometry is 'taught' in the course of getting on to a modern understanding of geometry."

Art said, "So the idea that the terrain we call 'biology' is to you—"

Oinos continued: "As much something peered at through a glass bell as the idea that the terrain of regular polygons belongs to a secularized mathematics."

"What is a sacred science?"

Oinos sat back. "If a science is about understanding something as self-contained whose explanations do not involve God and it is an

self-contained whose explanations do not involve God, and it is an attempt to understand as physics understand, and the scientist understands as a detached observer, looking in through a window, then you have a secular science—the kind that reeks of the occult to us. Or that may sound strange, because in your world people proclaiming sacred sciences are proclaiming the occult. But let me deal with that later. A sacred science does not try to understand objects as something that can be explained without reference to God. A sacred science is first and foremost about God, not about objects. When it understands objects, it understands them out of God, and tries to see God shining through them. A sacred science has its home base in the understanding of God, not of inanimate matter, and its understanding of things bears the imprint of God. If you want the nature of its knowing in an image, do not think of someone looking in and observing, detached, through a window, but someone drinking something in."

"Is everything a sacred science to you? And what is a sacred science? Astrology?"

"Something like that, except that I use the term 'sacred science' by way of accommodation. Our own term is one that has no good translation in your language. But let us turn to the stars."

"Astrology is right in this: a star is more than a ball of plasma. Even in the Bible there is not always such a distinction between the ranks of angels and the stars as someone raised on materialist science might think." He rose, and began to walk, gesturing for Art to follow him. In the passage, they turned and entered a door. Oinos lit a lamp next to an icon on the wall.

The icon looked like starlight. It showed angels praying at the left, and then the studded sapphiric canopy of the night sky behind a land with herbs shooting from the earth, and on the right an immense Man—if he was a Man—standing, his hand raised in benediction. All around the sapphire dome were some majestic figures, soaring aloft in two of their six wings. Art paused to drink it in.

"What are those symbols?"

"They are Greek letters. You are looking at an icon of the creation of the stars, but the text is not the text for that day; it is from another book, telling of the angels thunderously shouting for joy when the stars were created. So the stars are connected with the angels."

"Is this astrology?"

"No, because the stars and angels both point to God. The influences in astrology point beyond matter to something else, but they do not point far enough beyond themselves. If you can use something to make a forecast that way, it doesn't point far enough beyond itself."

"Why not?"

"One definition to distinguish religion from magic—one used by anthropologists—is that religion is trying to come into contact with the divine, and magic is trying to control the divine. God cannot be controlled, and there is something of control in trying to foretell a future that God holds in mystery. A real God cannot be pried into by a skill. Astrology departs from a science that can only see stars as so much plasma, but it doesn't go far enough to lead people to look into the stars and see a shadow of their Creator. To be a sacred science, it is not enough to point to something more than matter as secular science understands it; as the term is used in our language, one can only be a *sacred* science by pointing to God."

"Then what is a sacred science? Which branches of learning as you break them up? Can they even be translated into my language?"

"You seem to think that if astrology is not a sacred science then sacred sciences must be something much more hidden. Not so. Farming is a sacred science, as is hunting, or inventing, or writing. When a monk makes incense, it is not about how much incense he can make per unit of time; his making incense is the active part of living contemplatively, and his prayer shows itself in physical labor. His act is more than material production; it is a sacred science, or sacred art or sacred endeavor, and what goes into and what comes out of the activity is prayer. Nor is it simply a matter that he is praying while he acts; his prayers matter for the incense. There are many lands from your world's Desert Fathers to

incense. There are many lands from your world's Desert Fathers to Mexico in your own day where people have a sense that it matters what state people cook in, and that cooking with love puts something into a dish that no money can buy. Perhaps you will not look at me askance when I say that not only monks in their monasteries exotically making incense for worship are performing a sacred science, but cooking, for people who may be low on the totem pole and who are not considered exotic, as much as for anyone else, can and should be a sacred science. Like the great work that will stay up with a sick child all night."

"Hmm..." Art said, and then finished his tankard. "Have you traveled much?"

"I have not reached one in five of the galaxies with inhabited worlds. I can introduce you to people who have some traveling experience, but I am not an experienced traveler. Still, I have met sites worth visiting. I have met, learned, worshiped. Traveling in this castle I have drunk the blood of gems. There are worlds where there is nothing to see, for all is music, and song does everything that words do for you. I have beheld a star as it formed, and I have been part of an invention that moves forward as a thousand races in their laboratories add their devices. I have read books, and what is more I have spoken with members of different worlds and races. There seems to be no shortage of wonders, and I have even been to your own world, with people who write fantasy that continues to astonish us—"

"My son-in-law is big into fantasy—he got me to see a Lord of the whatever-it-was movie—but I don't fancy them much myself."

"We know about Tolkein, but he is not considered a source of astonishing fantasy to us."

"Um..." Art took a long time to recall a name, and Oinos waited patiently. "Lewis?"

"If you're looking for names you would have heard of, Voltaire and Jung are two of the fantasy authors we consider essential. Tolkein and Lewis are merely imaginative. It is Voltaire and Jung who are truly fantasy authors. But there are innumerable others in your world."

Art said, "Um... what do you mean by 'fantasy author'?"

Oinos turned. "I'm sorry; there is a discrepancy between how your language uses 'fantasy author' and ours. We have two separate words that your 'fantasy' translates, and the words stand for very different concepts. One refers to works of imagination that are set in another world that is not confused with reality. The other refers to a fundamental confusion that can cost a terrible price. Our world does not produce fiction; we do appreciate the fiction of other worlds, but we do not draw a particularly strong line between fiction where only the characters and events are imagined, and fiction where the whole world is imagined. But we do pay considerable attention to the second kind of fantasy, and our study of fantasy authors is not a study of imagination but a study of works that lead people into unreality. 'Fantasy author' is one of the more important terms in understanding your world and its history."

Art failed to conceal his reaction.

"Or perhaps I was being too blunt. But, unfashionable as it may be, there is such a thing as evil in your world, and the ways in which people live, including what they believe, has something to do with it. Not everything, but something."

Oinos waited for a time. Then, when Art remained silent, he said, "Come with me. I have something to show you." He opened a door on the other side of the room, and went into the next room. The room was lit by diffuse moonlight, and there was a ledge around the room and water which Oinos stirred with his hand to light a phosphorescent glow. When Art had stepped in, Oinos stepped up, balancing on a steel cable, and stood silent for a while. "Is there anything here that you can focus on?"

"What do you mean?"

"Step up on this cable and take my hand."

"What if I fall into the water?"

Art tried to balance, but it seemed even more difficult in the dark. For a while, he tried to keep his balance with Oinos's help, but he seemed

barely up. He overcompensated twice in opposite directions, began flying into the water, and was stopped at last by Oinos's grip, strong as steel, on his arm.

"I can't do this," Art said.

"Very well." Oinos opened a door on the other side of the room, and slowly led him out. As they walked, Oinos started up a spiral staircase and sat down to rest after Art reached the top. Then Art looked up at the sky, and down to see what looked like a telescope.

"What is it?"

"A telescope, not too different from those of your world."

Oinos stood up, looked at it, and began some adjustments. Then he called Art over, and said, "Do you see that body?"

"What is it?"

"A small moon."

Oinos said, "I want you to look at it as closely as you can," and then pulled something on the telescope.

"It's moving out of sight."

"That's right; I just deactivated the tracking feature. You should be able to feel handles; you can move the telescope with them."

"Why do I need to move the telescope? Is the moon moving?"

"This planet is rotating: what the telescope sees will change as it rotates with the planet, and on a telescope you can see the rotation."

Art moved the handles and found that it seemed either not to move at all or else move a lot when he put pressure on it.

Art said, "This is a hard telescope to control."

Oinos said, "The telescope is worth controlling."

"Can you turn the tracking back on?"

Oinos merely repeated, "The telescope is worth controlling."

The celestial body had moved out of view. Art made several movements, barely passed over the moon, and then found it. He tried to see what he could, then give a relatively violent shove when the moon reached the edge of his field of view, and see if he could observe the body that way. After several tries, he began to get the object consistently in view... and found that he was seeing the same things about it, not being settled enough between jolts to really focus on what was there.

Art tried to make a smooth, slow movement with his body, and found that a much taller order than it sounded. His movement, which he could have sworn was gentle and smooth, produced what seemed like erratic movement, and it was only with greatest difficulty that he held the moon in view.

"Is this badly lubricated? Or do you have lubrication in this world?"

"We do, on some of our less precise machines. This telescope is massive, but it's not something that moves roughly when it is pushed smoothly; the joints move so smoothly that putting oil or other lubricants that are familiar to you would make them move much more roughly."

"Then why is it moving roughly every time I push it smoothly?"

"Maybe you aren't pushing it as smoothly as you think you are?"

Art pushed back his irritation, and then found the moon again. And found, to his dismay, that when the telescope jerked, he had moved the slightest amount unevenly.

Art pushed observation of the moon to the back of his mind. He wanted to move the telescope smoothly enough that he wouldn't have to keep finding the moon again. After a while, he found that this was less difficult than he thought, and tried for something harder: keeping the

moon in the center of what he could see in the telescope.

He found, after a while, that he could keep the moon in the center if he tried, and for periods was able to manage something even harder: keeping the moon from moving, or perhaps just moving slowly. And then, after a time, he found himself concentrating through the telescope on taking in the beauty of the moon.

It was breathtaking, and Art later could never remember a time he had looked on something with quite that fascination.

Then Art realized he was exhausted, and began to sit down; Oinos pulled him to a bench.

After closing his eyes for a while, Art said, "This was a magnificent break from your teaching."

"A break from teaching? What would you mean?"

Art sat, opened his mouth, and then closed it. After a while, he said, "I was thinking about what you said about fantasy authors... do you think there is anything that can help?"

Oinos said, "Let me show you." He led Art into a long corridor with smooth walls and a round arch at top. A faint blue glow followed them, vanishing at the edges. Art said, "Do you think it will be long before our world has full artificial intelligence?"

Oinos said, "Hmm... Programming artificial intelligence on a computer is not *that* much more complex than getting a stone to lay an egg."

Art said, "But our scientists are making progress. Your advanced world has artificial intelligence, right?"

Oinos said, "Why on earth would we be able to do that? Why would that even be a goal?"

"You have computers, right?"

"Yes, indeed; the table that I used to call up a scientific calculator works on the same principle as your world's computers. I could almost say that inventing a new kind of computer is a rite of passage among serious inventors, or at least that's the closest term your world would have."

"And your computer science is pretty advanced, right? Much more advanced than ours?"

"We know things that the trajectory of computer science in your world will never reach because it is not pointed in the right direction." Oinos tapped the wall and arcs of pale blue light spun out.

"Then you should be well beyond the point of making artificial intelligence."

"Why on a million, million worlds should we ever be able to do that? Or even think that is something we *could* accomplish?"

"Well, if I can be obvious, the brain is a computer, and the mind is its software."

"Is it?"

"What else could the mind be?"

"What else could the mind be? What about an altar at which to worship? A workshop? A bridge between Heaven and earth, a meeting place where eternity meets time? A treasury in which to gather riches? A spark of divine fire? A line in a strong grid? A river, ever flowing, ever full? A tree reaching to Heaven while its roots grasp the earth? A mountain made immovable for the greatest storm? A home in which to live and a ship by which to sail? A constellation of stars? A temple that sanctifies the earth? A force to draw things in? A captain directing a starship or a voyager who can travel without? A diamond forged over aeons from of old? A perpetual motion machine that is simply impossible but functions anyway? A faithful manuscript by which an ancient book passes on? A showcase of holy icons? A mirror, clear or clouded? A wind which can never be pinned down? A haunting moment? A home with

which to welcome others, and a mouth with which to kiss? A strand of a web? An acrobat balancing for his whole life long on a slender crystalline prism between two chasms? A protecting veil and a concealing mist? An eye to glimpse the uncreated Light as the world moves on its way? A rift yawning into the depths of the earth? A kairometer, both primeval and young? A—"

"All right, all right! I get the idea, and that's some pretty lovely poetry. (What's a kairometer?) These are all very beautiful metaphors for the mind, but I am interested in what the mind is literally."

"Then it might interest you to hear that your world's computer is also a metaphor for the mind. A good and poetic metaphor, perhaps, but a metaphor, and one that is better to balance with other complementary metaphors. It is the habit of some in your world to understand the human mind through the metaphor of the latest technology for you to be infatuated with. Today, the mind is a computer, or something like that. Before you had the computer, 'You're just wired that way' because the brain or the mind or whatever is a wired-up telephone exchange, the telephone exchange being your previous object of technological infatuation, before the computer. Admittedly, 'the mind is a computer' is an attractive metaphor. But there is some fundamental confusion in taking *that* metaphor literally and assuming that, since the mind is a computer, all you have to do is make some more progress with technology and research and you can give a computer an intelligent mind."

"I know that computers don't have emotions yet, but they seem to have rationality down cold."

"Do they?"

"Are you actually going to tell me that computers, with their math and logic, aren't rational?"

"Let me ask you a question. Would you say that the thing you can hold, a thing that you call a book, can make an argument?"

"Yes; I've seen some pretty good ones."

"Really? How do paper and ink think out their position?"

Art hesitated, and said, "Um, if you're going to nitpick..."

"I'm not nitpicking. A book is a tool of intelligent communication, and they are part of how people read author's stories, or explanation of how to do things, or poetry, or ideas. But the physical thing is not thereby intelligent. However much you think of a book as making an argument, the book is incapable of knowing what an argument is, and for that matter the paper and ink have no idea of whether they contain the world's best classic, or something mediocre, or incoherent accusations that world leaders are secretly planning to turn your world to dog drool, or randomly generated material that is absolute gibberish. The book may be meaningful to you, but the paper with ink on it is not the sort of thing that can understand what you recognize through the book.

"This might ordinarily be nitpicking, but it says something important about computers. One of the most difficult things for computer science instructors in your world to pound through people's heads is that a computer does not get the gist of what you are asking it to do and overlook minor mistakes, because the computer has no sense of what you are doing and no way to discern what were trying to get it to do from a mistake where you wrote in a bug by telling it to do something slightly different from what you meant. The computer has no sense that a programmer meant anything. A computer follows instructions, one after another, whether or not they make sense, and indeed without being able to wonder whether they make sense. To you, a program may be a tool that acts as an electronic shopping cart to let you order things through the web, but the web server no more understands that it is being used as a web server than a humor book understands that it is meant to make people laugh. Now most or all of the books you see are meant to say something—there's not much market for a paperback volume filled with random gibberish—but a computer can't understand that it is running a program written for a purpose any more than a book can understand that the ink on its pages is intended for people to read."

Art said, "You don't think artificial intelligence is making real progress? They seem to keep making new achievements."

Oinos said, "The rhetoric of 'We're making real breakthroughs now; we're on the verge of full artificial intelligence, and with what we're achieving, full artificial intelligence is just around the corner' is not new: people have been saying that full artificial intelligence is just around the corner since before you were born. But *breeding a better and better kind of apple tree is not progress towards growing oranges*. Computer science, and not just artificial intelligence, has gotten good at getting computers to function better as computers. But human intelligence is something else... and it is profoundly missing the point to only realize that the computer is missing a crucial ingredient of the most computer-like activity of human rational analysis. Even if asking a computer to recognize a program's purpose reflects a fundamental error—you're barking up the wrong telephone pole. Some people from your world say that when you have a hammer, everything begins to look like a nail. The most interesting thing about the mind is not that it can do something more complete when it pounds in computer-style nails. It's something else entirely."

"But what?"

"When things are going well, the 'computer' that performs calculating analysis is like your moon: a satellite, that reflects light from something greater. Its light is useful, but there is something more to be had. The sun, as it were, is that the mind is like an altar, or even something better. It takes long struggles and work, but you need to understand that the heart of the mind is at once practical and spiritual, and that its greatest fruit comes not in speech but in silence."

Art was silent for a long time.

Oinos stopped, tapped a wall once, and waited as an opening appeared in the black stone. Inside an alcove was a small piece of rough hewn obsidian; Oinos reached in, took it, and turned it to reveal another side, finely machined, with a series of concentric ridged grooves centered around a tiny niche. "You asked what a kairometer was, and this is a kairometer, although it would take you some time to understand exactly what it is."

"Is it one of the other types of computers in your world?"

"Yes. I would call it information technology, although not like the information technology you know. It is something people come back to, something by which people get something more than they had, but it does this not so much according to its current state as to our state in the moment we are using it. It does not change." Oinos placed the object in Art's hands.

Art slowly turned it. "Will our world have anything like this?"

Oinos took the kairometer back and returned it to its niche; when he withdrew his hand, the opening closed with a faint whine. "I will leave you to find that yourself."

Oinos began walking, and they soon reached the end of the corridor. Art followed Oinos through the doorway at the end and gasped.

Through the doorway was something that left Art trying to figure out whether or not it was a room. It was a massive place, lit by a crystalline blue light. As Art looked around, he began to make sense of his surroundings: there were some bright things, lower down, in an immense room with rounded arches and a dome at the top, made of pure glass. Starlight streamed in. Art stepped through the doorway and sunk down a couple of inches.

Oinos stooped for a moment, and then said, "Take off your shoes. They are not needed here." Art did so, and found that he was walking on a floor of velveteen softness. In the far heart of the room a thin plume of smoke arose. Art could not tell whether he smelled a fragrance, but he realized there was a piercing chant. Art asked, "What is the chant saying?"

Oinos did not answer.

What was the occasion? Art continued to look, to listen, and began trying to drink it in. It almost sounded as if they were preparing to receive a person of considerable importance. There was majesty in the air.

Oinos seemed to have slipped away.

Art turned and saw an icon behind him, hanging on the glass. There was something about it he couldn't describe. The icon was dark, and the colors were bright, almost luminous. A man lay dreaming at the bottom, and something reached up to a light hidden in the clouds—was it a ladder? Art told himself the artistic effect was impressive, but there was something that seemed amiss in that way of looking at it.

What bothered him about saying the icon had good artistic effect? Was the artistry bad? That didn't seem to be it. He looked at a couple of areas of artistic technique, but it was difficult to do so; such analysis felt like a foreign intrusion. He thought about his mood, but that seemed to be the wrong place to look, and almost the same kind of intrusion. There seemed to be something shining through the icon; looking at it was like other things he had done in this world, only moreso. He was looking through the icon and not around it, but... Art had some sense of what it was, but it was not something he could fit into words.

After being absorbed in the icon, Art looked around. There must have been hundreds of icons around, and lights, and people; he saw what seemed like a sparse number of people—of Oinos's kind—spread out through the vast space. There was a chant of some kind that changed from time to time, but seemed to somehow be part of the same flow. Things seemed to move very slowly—or move in a different time, as if clock time were turned on its side, or perhaps as if he had known clock time as it was turned on its side and now it was right side up—but Art never had the sense of nothing going on. There seemed to always be something more going on than he could grasp.

Art shifted about, having stood for what seemed like too long, sat down for a time, and stood up. The place seemed chaotic, in a way cluttered, yet when he looked at the "clutter," there was something shining through, clean as ice, majestic as starlight, resonant as silence, full of life as the power beneath the surface of a river, and ordered with an order that no rectangular grid could match. He did not understand any of the details of the brilliant dazzling darkness... but they spoke to him none the less.

After long hours of listening to the chant, Art realized with a start that the fingers of dawn had stolen all around him, and he saw stone and verdant forest about the glass walls until the sunlight began to blaze. He thought, he thought he could understand the song even as its words remained beyond his reach, and he wished the light would grow stronger so he could see more. There was a crescendo all about him, and—

Oinos was before him. Perhaps for some time.

"I almost understand it," Art said. "I have started to taste this world."

Oinos bowed deeply. "It is time for you to leave."

Firestorm 2034

Acknowledgments

When I read a book, I usually skip or maybe skim the acknowledgements; I find a long list of names of people I've never heard of to be deadly dull. There have been two times that I've read a list of acknowledgments that I've actually liked. One was written by a very witty writer who could, and did, make even technical documentation interesting to read. (Making someone want to read a list of names is only slightly more difficult than writing interesting documentation, and I don't consider myself a good enough writer to do either.) The other time was an acknowledgement that personally named and thanked me, and that was my favorite part of the whole work. Apart from that, I don't think that a list of strangers' names is fair to inflict on the reader. So I'm not going to try it.

Of course this is not solely my work; many others paid a role in it. You know who you are. I do wish to explicitly thank one person, though, whom many authors omit from their long lists. I wish to thank *you*, the reader. Of course the people who helped me write this are important, but they are not nearly so important as the people who take the time to sit down and read it, let the story live in their imaginations, and (I hope) tell a friend if they think it's cool. My work is only half done when, I write down my thoughts and put them on the web. It is finished when you breathe life into the story as you read it, and consider its ideas and make them a part of you. Only then can my story be complete. I therefore give

my thanks to you, the reader.

In the Glade

"I still do not understand," Grizelda said, "why you asked your father not to find you a wife, if you are not going into a monastic order. And why he listened to your request."

"As Solomon said, he who finds a wife, finds a good thing," said Taberah, and then paused. A quotation from a written source came quickly to him, but a more substantial reply would take a moment's thought. *I am at home among most all of the people I have visited, Taberah thought, but I am not like any of them. And explaining myself is difficult.*

Grizelda stopped and looked at him; her pale blue eyes bore a gaze that was intense and probing, and yet not piercing. Her hair was pulled back from the sides of her head, and fell darkly onto her blue dress. The people at the castle spoke highly of Grizelda; some said she had a mind like a man. Her husband, Melibée, stood at her side, listening. They were in a forest glade outside the town walls, and were nearing the banks of a river.

Taberah nimbly climbed a tree, and tossed down two large pears. Then he climbed down, an even larger pear in his teeth.

"One good need not be the only good; even God, when he was the only good, chose to become not the only good. That is what creation means. For a man to have a wife is not the only good; there is also good in a man being single."

Melibée spoke up. "But then why not enter a monastery? Surely that is a good place."

Taberah shook his head. "Being celibate is good, a good that monastic life embraces; it does not follow that being celibate requires entering a monastery. I see another option; marriage and monkhood are not the only possibilities."

Grizelda began walking again, followed by the others. "There is still something in it I question. The different kinds of heretics often see other options, and the Church has condemned them. I know you don't have condemnation from the Church, but I don't see why you don't."

Taberah thought for a moment about whether to explain a logical principle, but decided not to. "All of the monastic orders were also started by people who saw other options; if you will think on the saints' lives, you will see that God led them outside of what everyone else was doing."

Grizelda stopped, and asked, softly, "You claim to be a saint?"

"Hardly," Taberah said. "I try to serve God, but I do not reach that standard. The reason I brought them up is that they are examples of how God wants us to live life. They play by the same rules as us; they just do a better job. I am not married because I am serving God in a way that does not involve marriage, at least not yet; I seek to follow him."

Grizelda began to speak when there was a thunderous boom. The ground shook, and a luminous being stood before them. Around the being was a presence, a reality of terrifying glory, as solid and real as if the weight of a mountain were pressing down on their spirits, and then more real. It was like a storm, like the roaring of a lion. The three friends fell to the ground in fear.

The Presence spoke with a voice like roaring water. "Fear not! Stand up!" As the quaking bodies heard those words, the command gave them the power to rise, and they did rise, and bow low. Again he spoke: "Never!"

As the friends stood in awestruck fear, the being turned towards

Taberah and said, "Taberah. Will you go wherever God leads you? I have been sent to call you to come on a voyage, to a land you do not know and have never heard of, a voyage you may never return from. Will you come along?"

Taberah closed his eyes. In an instant, time stopped, and Taberah was thinking, neither in his native Provençale nor erudite Latin nor any of the dozen other languages he had worked with, but beyond words, beyond language. He looked into his own heart, and into God's, and a single word formed on his lips, without effort or volition: "Yes."

There was a tremendous flash of light, and Grizelda and Melibée fainted.

An Encounter

Taberah looked around. Four immense young men were throwing around a dinner plate — or at least that's what it looked like on first glance. They were brawny, and the plate had something unearthly about it —

One of the men shouted something, and hurled the plate at Taberah. He dodged, and then watched in amazement as it bounced off a tree but did not shatter. It was red, and it had an unearthly symmetry, symmetry like he had never seen before. He went over and picked it up; it was light, and felt vaguely like leather or wood.

One of the men walked over, and said something in a language he did not recognize. Taberah said, "Taberah," and looked at him. The man extended a finger towards him and said, "Taburah," and then took the artifact and tugged on his arm. He was standing on the edge of a forest, and was being led into a clearing with buildings. The architecture was alien, and looked like a slightly grotesque simplification of what he was used to. There was a strange precision to the buildings, and a smell like smoke and roasting flesh — though he could see no firepit, nor any animal.

The man took him out into the open field — the grass was strangely short and uniform in height, lacking the beautiful variety in the fields he was used to seeing. He bent over, and plucked a blade of grass. It had been clipped. Not grazed by animals, but painstakingly clipped.

Looking around, he saw the men tossing the strange plate between each other. It sailed through the air, almost as if it had wings. One of them caught his eye, and tossed it over. Taberah snatched it out of the air with one hand, and then tried to throw it. It fell like a stone.

One of the men came over, and made the motion of throwing it with exaggerated slowness. It was different from how one threw daggers, or stones, or much of anything else; it vaguely resembled skipping a rock. Taberah took the plate and held it properly; one of the men took it and turned it upside down. Holding it upside down, Taberah tried to imitate the throw he'd seen; the plate wobbled and fell to the ground. The people clapped.

One of the people said something that he didn't understand; seeing Taberah's incomprehension, he repeated his words, only louder. When Taberah didn't understand that, they beckoned him over to where the smoke was coming from. There was some sort of miniature fire, above which geometrically shaped pieces of meat were roasting; one of them gave him a large piece of meat — they were all large — wrapped in bread, with some brightly colored liquids poured over — some sort of decoration? He wondered what the feast was, that they were eating meat, and had such a sumptuous banquet. The meat tasted slightly strange, although fresh, and the bread was finer than anything he had ever tasted. It didn't have any pebbles, and it was softer than cake.

Not knowing the local language, Taberah expressed his gratitude with his eyes; he listened intently to the conversation, trying to see if he could make sense of the language. Every once in a while, he heard a word that sounded vaguely like Latin, and by the end of the conversation he had figured out these people's names. The man standing by the fire was very old, so old that wisps of silver hair were beginning to appear among the black locks of his temple. He looked mature, regal, venerable. He must be a king, owning the small palace nearby and the ones around it; he could look in the windows (fitted with *glass* — and glass so smooth you could barely see it), and see the illumination of a thousand candles. Or was he a servant? He looked mighty, built like a great warrior, and was even taller than the other men. And it was a lordly thing to give food to anyone who came. He was cooking, but the demeanor of the other men

treated him as their elder, and not just in years. By the end of the conversation, Taberah had conveyed his name, and knew their names. After the effort of listening to the conversation and trying to see if he could hear any words related to ones he knew, he sat down in one of the chairs — at least he thought it was a chair; it was sturdy, but so light he could lift it with one hand.

Taberah sat down in this chair, happy to sit and think as the others romped on the plain. Where to begin thinking? The language had Latin words, but it did not sound like any Romance language; that was confusing. And these people owned massive wealth, wealth far beyond anything his lord owned, and different goods than he had seen before. And they were immense. But that was only the surface of what he was sure was there. These people seemed to treat him hospitably, but what struck him wasn't exactly hospitality so much as something like friendship. Why were they treating him as a friend when they had just met him? When he watched them, he was puzzled at seeing respect in the younger men's treatment of the elder, but not etiquette. How could this people have respect without having its form? They did, but how? Or was their etiquette merely strange? They were not accustomed to wayfarers; they didn't look like heathen, but they didn't recognize Latin — or Greek, or even Arabic, for that matter. And what would motivate anyone to cut grass at a uniform, mathematically precise height? What strange symbolic gesture would be manifested in that way? Or was it a symbolic gesture? It seemed more like a rash vow. Or was it something stranger still?

To the eyes around him, Taberah looked lost in thought. And he was — he saw certain things that were human, but there were other parts that he could not understand at all. What did they mean?

First Clues

Aed looked on the stranger as he gazed. He was unbelievably short and scrawny, not to mention gamy; his clothing looked like a getup from the Middle Ages, a tunic and hose with irregular stitching and any number of holes. He could readily believe it when he walked by and saw lice. He had a thick, scraggly head of hair with a very thin beard. And yet, for all this, Taberah was quite attractive. He had a merry, comely face, with a deep, probing gaze. It was a penetrating gaze; Aed had the feeling that if he stared at a piece of paper too long, it would catch fire. Taberah had been listening intently, and was now off in his own little world.

I must look up one of those charities that deals with foreigners, Aed thought, as he seems quite lost. For now, he can have the guest bedroom. It's a good time it's summer; I have a little more free time to deal with him. He looks a little older than my children. Aed began to gather up the food, called his son and daughter to help, and then they went in; it only took the stranger a couple of times to learn the gesture that meant, "C'mon! You're invited over here!"

The stranger looked with some bewilderment over the contents of a room, and then his eyes lit up over a chess table packed in the corner. He started to pull the pieces off and walk over to the table; Aed stopped him, pulled out the table, and arranged a game before them. *The international game, he thought. We don't know a common language, but we have a common game.*

Aed's first thought upon seeing the stranger play was, "He has seen

this game before, but does not know how to play." This was revised to, "He does know how to play, but he cheats — making moves that are almost legal and always to his advantage." Then a moment of dawning comprehension came, and he realized that the stranger was not cheating — he just didn't understand that chess was played over a grid. Aed groaned, and picked up the pieces and arranged them on the table, understanding why Taberah had made such a bizarre action as to take them from what he now understood was taken as a storage place, and decided to play it his way.

Aed was rated at 1975, although on a good day he could give almost any chess player a run for his money. He was therefore stunned after he lost five games in a row. The young stranger was very, very cunning, and saw things that would never occur to him. After the fifth game, he felt quite tired, and he could see that the stranger was tired—

—and was therefore quite stunned as, in the living room and in the presence of his teen-aged son and daughter (his wife was away at a conference), Taberah took off all his clothes and lay down on the floor. He sent his daughter Fiona out of the room, and then covered Taberah with a blanket that lay at hand. Taberah's face told a thousand words; shocked as Aed was, he saw at once that Taberah's action was not sexually provocative, or for that matter done as anything significant; he apparently saw that he had made a social blunder, but was at a loss for what. He did not feel any shame or guilt, but perhaps regret that something he had done had upset his generous host — and gratitude to be given a blanket, and puzzlement at why his host had invited him into his house but not to crawl into his family's bed. Puzzling, but Taberah had enough to think about already, and was sure that tomorrow would have enough puzzles of its own.

Aed, for his part, could see how to send him out, but not how to tell him to put his clothes on first; he went to bed, grumpily thinking, *He may stay tonight because he's here, but tomorrow night he's spending at PADS. What kind of manners is it to strip in front of your host's daughter?* ... He had a feeling of shock, of wrongness, of indignation at a transgression against reality; he told himself that this was culture shock, but that did not make things easy.

He drifted in and out of sleep, and was awakened by the sound of someone vomiting. Habits of a father, habits stronger than the weight of his grogginess, marched him out to the living room, where he stared in horror. Taberah was shaking, shivering in a cold sweat.

What shocked Aed most was not that one side of Taberah's face was wet with his own vomit.

What shocked Aed most was that Taberah looked so miserable that he didn't seem to even care.

The Hospital

The hospital was a nightmare. Taberah had no insurance, no paperwork and no legal guardian; it was only because of the dire nature of the emergency that he was admitted at all. In the absence of identification or any ability to speak English, the hospital was by law required to file paperwork with the Bureau of Immigration and Naturalization Services; an embarrassed hospital representative explained that Taberah was in the eyes of the law an illegal immigrant and nothing more; if there was a way for him not to be deported to his country of origin, he didn't see it.

Aed came back each day for a week, during which his whole parish was speaking with him; his conversation with the doctors was alarming.

"I am baffled by this young man's condition. He is sick, but no test has been able to tell what he has. It might be a virus."

"Do you have any ideas of what it is?"

The doctor looked slightly embarrassed.

Aed stood in silence and prayed.

"Uh, have you read Ahmik Marison's *How the West Was Lost From a Medical Point of View?*"

"Never heard of it."

"Off the record, this young man is suffering from one — or several — of the conditions that ravaged the American Native population when European settlers came."

Aed stood in stunned silence. This did not make any sense at all. Or (he had the exacting honesty to admit to himself) it made sense in a way he couldn't believe.

An Anthropologist's Visit

"Noah, he doesn't speak any English." By now, Dr. Pabst and Dr. Kinsella were at the doorway to Taberah's room; they turned in, and saw him looking with interest at a book. Taberah looked up and said, "Grace and peace from God our Father, and the Lord Jesus Christ." His accent was thick, but mostly understandable.

"I'm an anthropologist and not a linguist," Noah said, "but that sounded an awful lot like English to me."

Aed opened his mouth, closed it, and said, "This isn't the first time he's surprised me." He explained about Taberah playing chess, and undressing.

Dr. Pabst turned to the young man. He said, "Do you understand me?" The man scrambled off his bed with remarkable speed, and crouched in front of the anthropologist, and said, "I thou under stand."

Dr. Pabst simplified his language, and spoke slowly, separating his syllables. "How speak English?"

"English, that is what?"

"This language."

"Language, that is what?"

"How we speak now."

Taberah's eyes lit up. "I am in read Bible."

The anthropologist scratched his head. The young man appeared not to be lying, but even for a genius, learning a new language was difficult, and learning from a book written in the language without any people to help, unless—

"What you call Bible in your language?"

"No Bible in language."

Noah scratched his head. Then he said, "Have you read Bible before here?"

"*Biblia Sacra Iuxta Vulgatam Versionem*. I not know not how to say in English."

Aed said, "The lad is tired from concentration, and perhaps he shouldn't have jumped from his bed to —" Dr. Kinsella cleared his throat, "—under stand you. Perhaps we could talk out in the hallway?"

In the hallway, Aed said, "So, what nationality is he?"

Noah said, "I haven't the foggiest idea. He looks Western European, perhaps Mediterranean, by ancestry, Third World by nourishment. His accent is that of a Romance language, but I don't know. Picking up an alien language by studying a text in that language is next to impossible; the Mayans have left behind three codices that we still haven't deciphered for the most part. Or at least, it's almost impossible unless you already know the text in another language. I don't know how to coalesce my observations into a coherent picture. He — is it OK if I change the subject slightly to recommendations?"

"Certainly."

"He's very bright and is picking up English quickly. He probably knows multiple languages, which makes it easier to pick up another; I'd get him three Bibles — one in the Latin he knows, one in a literal

rendering in modern English, and a free translation to contemporary English. And continue to visit him. My summer class starts tomorrow, so I won't be able to visit, but in brief: speak slowly; in-it-ial-ly break up the syl-la-bles; pay attention to what words he uses. (And, when he understands it, speak as you would to another American.) Contrary to intuition, he might understand you better if you use big words."

"What?"

"He already knows Latin, or perhaps some other language or languages derived from it; there are a lot of common roots in the bigger words. They came over with the Norman invasion of England; small words change much more quickly, and many of our small words are Germanic in character. And you know the artificial intelligence findings that big words are impossible for a computer to deal with, and small words doubly impossible? What is easy for us and what is easy for him may be two very different matters."

"Yes, I see," Aed said.

"Oh, and one more thing. Keep me posted; if you want, I may be able to send in a grad student. He's a puzzle, and I like puzzles. Maybe something will click about him."

"I'll keep the grad student in mind; maybe later, when I have more to tell. Actually, why don't you give me the net address of a student whom I will be able to talk with? I'll probably have some questions. Or should I ask you?"

"Feel free to ask me. Just keep it down to a few minutes a day."

Trouble

After a phone conversation with Dr. Pabst, Aed began to understand how the universality of good will he believed in coexisted in an arbitrariness of manners; he restrained himself from knocking on the door before entering, and saw Taberah bright-eyed as he entered.

"Hell!" Taberah said eagerly, jumping up. He had a long tether from his intra-venous tubes, and he was becoming stable on his feet. (He still felt slightly dizzy as he rose.)

"What?" said Aed and the other visitor.

"Hell! Hell!" Then Taberah saw their puzzlement, wondered what was wrong, and then reminded himself of how important pronunciation was. "Hello!" he said.

Aed laughed, and said, "Hello! Taberah, I'd like you to meet my wife, Nathella. She is—"

Taberah grinned, said, "Beautiful!" and jumped up, pressing up against her and kissing her on the lips.

Nathella stood in paralyzed shock for a second, then drew back and ran out of the room, Aed on her heels.

She slowed to a brisk walk after they reached a second corridor, and said, "I don't know why you let him in our house. I don't want to see him again. There are differences between cultures but that lust is

again. There are differences between cultures, but that just is unacceptable in any culture."

Aed said, "I am sorry he did that. I was not expecting that when I brought him in."

They walked on in silence, Nathella setting a fast pace in silent fury.

"You're holding out on me," she said. "You're not telling me something."

"His eyes," Aed said.

"What?" Nathella said.

"Did you see his eyes?" Aed asked.

"I assure you, I was quite occupied with his lips!" she snapped.

"What do you think was in his eyes?"

"Lust. Selfishness. A lack of any caring and decency."

"I saw his eyes," Aed said.

They walked on in silence, now a bit more slowly.

"You're waiting for me to ask you what you saw in his eyes. Out with it," Nathella finally said.

"I was watching his eyes, and I didn't see the faintest trace of greed or lewdness. I saw a rambunctious energy, the same rambunctious energy Clancy uses when he's picking on Fiona."

"Are you saying that what that man did to me was right?"

"No; I'm saying that he didn't know what he was doing."

Confusion

As Aed walked back, he processed through a memory, and realized the look in Taberah's eyes after Nathella had run out of the room. He looked like a hurt puppy. Aed had promised his wife not to have the man back on their property without talking with him and then talking it over with her.

The conversation that ensued between him and Taberah was maddening. It wasn't just the language barrier, even though they got a good half hour into the conversation before Aed realized that Taberah thought Aed was talking about something else entirely. It was rather that Aed was just beginning to see an alien conceptual map, an alien interpretation of the world. After clearing up the initial confusion, Aed managed to paraphrase "You don't have the right to go around kissing women on the lips," in different ways until Taberah appeared to understand, when he got to the second difficulty: "What is a right?" Taberah seemed not to think in terms of rights, to find them an alien philosophical concept; this difficulty was not surmounted so much as circumvented, in being told, "It is wrong to go around kissing women on the lips." That was met with a third difficulty: "Why not?"

After a long and involved conversation, Aed pieced together the following observations:

- Taberah regarded his actions as being a very warm greeting, meaning roughly what Aed would have meant in sending someone he'd just met a virtual card. Taberah could envision a concept of "too warm

and friendly, to the point of being unpleasant and unwelcome" if Aed led him to see it, but it was not a natural concept, much as "paying too many compliments, to the point that they are an annoyance that occupies too much time" would be an understandable but not natural concept to Aed — when Aed complimented a friend on her shirt, it never occurred to him to ask "Is she receiving so many compliments that this one would be unwelcome and repetitive?"

- Taberah was saddened to have made a *faux pas*, but bewildered as to what was wrong about what he did. (He initially wondered if she was upset because he had not greeted her with words first.)
- Taberah did not regard the breast as being a body part that especially symbolized sexuality, and would consider a woman not wearing a shirt to be less significant than one of the nurses in long miniskirts — to the extent that he found seeing body parts to be arousing, which was not much.
- If Taberah's reasoning on one line were translated into 21st century concepts, they would not so much be "A man has a right to invade a woman's touch-space," so much as really a non-concept of "There is not enough of a personal touch-space for there to be an invasion necessary to a question of whether a man has a right to do so" — in many regards, like Aed regarded tapping shoulders.
- Taberah had a very different understanding of sexuality and touch; his line of acceptable touch was drawn so that it included a great deal of touchiness in contexts that Aed's culture did not even consider regarding as acceptable.

Taberah looked crestfallen when Aed told him not to touch women without asking permission; Aed revised this to, "Don't touch people in a way you haven't seen," knowing full well that this would lead the door open to further confusion. When Aed told Taberah in an authoritative tone of voice, "Don't kiss anyone you don't know well," and then thought and added, "Don't touch women's breasts," the hurt Taberah cried for a few minutes, and then asked, trembling, why he was not ever to give a woman a hug. Aed was puzzled as to why Taberah would make such a connection, and then when he saw the very straightforward reason why, it seemed that his explanation of why it was OK to touch a woman's breasts with his chest but not his hands caused more confusion than it alleviated.

Aed's head was spinning when he left the room. He was barely able to call his friend Noah and explain what had happened.

Dr. Pabst cursed himself for not coming himself, and had his graduate student teach the first day of class so he could try to provide the young man with band-aid coaching for at least one cultural land mine.

Taberah sat, shaking in sadness. He knew he would make mistakes, but to make such a big mistake so soon, and then not be able to understand why he was wrong — this was the most confusing place he had ever been in. He closed his eyes and cried himself to sleep.

Immigration and Naturalization Services

Aed had barely slept, and when he returned early the next morning with Dr. Pabst, he found three men in dark suits standing near Taberah. "Good morning. I am Dr. Kinsella, a professor at the University. Who might you be?"

One of the men showed a badge and said, "Salisbury, Bureau of Immigration and Naturalization Services."

A chill ran down Aed's spine. "May I ask what your interest in this young man is?"

"This patient is an illegal alien. We are here to deport him to his country of origin."

If I thought, I could make enough publicity to hurt the INS badly if they deport this wayfarer, Aed thought, but even then felt a prompting of intuition, that is not the way. Still, he continued thinking, I could say, "I can't stop you from deporting this man, but I can see to it that you will have publicity that hurts you. Do you have authority to stop the deportation? No? Would you rather give me contact information for someone who has such authority now, or have me find out as I create publicity and then contact him and have you fired?" If I think further, I can probably think of something truly Machiavellian...

Even as he thought, he struggled, and Aed resolved to follow his conscience. "I'll be praying for you; I'm an interested party, and if you need to get in contact with me, the hospital has my net address." He decided it better not to give the INS agents a brain dump of the interactions; a description of a rocky adjustment to American culture was sure to hurt the lad. Dr. Pabst didn't think there was any advantage to staying, so they left. Aed returned home and brooded.

Taberah was not well; he was mostly over his sickness, but the INS agents had pressured the hospital staff for a release as soon as possible. He left the hospital weak and slightly unsteady on his feet.

His first ride in a moving room, he had been too miserable to notice what was going on. Now, he was able to observe, see what he had to learn. The room was bouncing around, but not nearly as much as a galloping horse — even though it was moving faster. Through an arrangement of squares and a glass window he could see the city and countryside whizzing past; the speed was unpleasant, and it nauseated him. If he hadn't tried hard to control himself, he would probably have thrown up.

The two men were in the compartment with him, along with some men who looked vaguely like Saracens, only with redder skin, who seemed to be ill at ease. The two men looked — not exactly like soldiers; there was a noble bearing and heroic resolve to even commoners who took arms to war with a neighboring city-state, but these men looked more like mercenaries set to guard. He tried to speak with them, but they would not speak to him; even in the hospital, they had spoken with the hospital staff but never addressed him personally.

Two of the red-bronze Saracens began talking, and he found with delight that they spoke with a familiar accent. He could not recognize the language, but he felt that he could learn their language quickly.

He tried to see what else he could grasp — with his mind; there were some kind of thin shackles about his wrists, which set him ill at ease — was he being taken to the torturer's for whatever crime he had committed against Nathella? There was noise about, a strange alien noise; everything about his surroundings was alien. And the bouncing room made it

about his surroundings was alien. And the searching room made it impossible to think.

Taberah realized he was ready to throw up, and he focused his attention on trying not to throw up.

Aed was sitting in his living room, staring sadly at the chess pieces on the table. Taberah's king had been knocked down, even as the pieces stood to checkmate Aed. Nathella walked into the room, leaned against Aed, and said, "Do you want to talk about Taberah? I've — adjusted; I can deal with his rambunctiousness."

Aed said, "The INS is taking him to be deported. I don't want to talk about it."

Nathella put her hand to her mouth, and then held Aed. "I'll be waiting in the kitchen, when you're ready to talk. I'll be praying," she said, and kissed him.

Aed sat and stared at the dusty bookshelf for a while, and then picked up Taberah's king and set it down. He stared, and realized that he had placed the king in check from one of his knights.

Aed looked at the king and said, "Did you have to leave before I knew you?"

The game gave him no reply. Aed went to the computer room, got in to the computer, and went to a dreamscape where colors and shapes shifted. He watched the forms flow. Maybe that could distract him. No; time dragged, and even the fantasia of images could not fascinate him.

An avatar appeared before him. He looked; the avatar said, "May I speak with you?"

Muttering, "This had better be good" under his breath, Aed said, "Who is it?"

"Salisbury, Bureau of Immigration and Naturalization Services."

Aed winced. He doubted he could go through an interview without hurting both himself and Taberah. "Yes?"

"We have had a number of translators try to talk to the young man, and none of them is able to identify his language beyond something coming from the Romance family. We have run genetic tests on him, and France, Spain, and Romania among other countries have all said not only that he was not born there, but that they do not have any close relations on file. We are therefore unable to identify his country of origin, and are releasing him to your temporary protective custody. Are you at your home?"

Aed caught himself, and said, "Yes, we will be waiting."

After talking about a few technical details, Aed went upstairs. Someone had bumped the table, and tried to set the pieces back up where they were — Clancy? If he did, he was in a hurry; the pieces were not in a similar state. This looked a little different. Taberah's king was now in check from both the knight and a rook, but he had a few moves left to stave off checkmate. And they were not playing on a grid; there were uncertainties. Could Taberah escape?

Home Again

Taberah spent a few days in the hospital, regaining his strength, but the staff could see that he was eager to escape its confines. He avidly read the three Bibles, plus a Latin-English dictionary Aed had procured; Aed for his part was reading a book Dr. Pabst had given him on the art of crossing cultures, both for his own sake and to be able to explain things to Taberah. He had never kissed a man on the lips before — not even his own son — but when he saw how delighted Taberah was at Noah giving him a kiss, he set his mind to enter Taberah's world as much as possible. He slowly realized, with certainty, that his willingness to do one thing against his gut reactions was only a shadow of what Taberah was willing to, and had to be willing to, do. He was not surprised when Noah explained to him that culture shock is one of the top causes of suicide, ranking with divorce.

Getting him home from the hospital bore an unexpected surprise. Taberah was happy to be walking out of the hospital, and then stiffened when he saw that they were walking towards Aed's car, a sleek hybrid between a minivan, a sport utility vehicle, and a station wagon. Noah said, "He's had more trauma in the past two weeks than most of us have in a year; is there any way to circumvent a car trip?"

Nathella looked at Aed for a moment, and said, "We can walk."

Aed winced. "It's eighty-five degrees, and we're eight miles from home. It will take two hours to walk home!"

Nathella said, "I'll walk with him. He has a lot of extra energy. Why don't you drive home and make lemonade?"

Aed said, "Um, you want to be alone with him, even in public? I know he hasn't given us his last surprise."

"I'd rather take whatever risks there are than force that child through a car ride. And trusting people can make them worthy of being trusted. Honey, did he ride in a car with the INS?"

"Uh... I'll walk, too, and we can get the car later."

Noah said, "If you give me your keys, I'll get my son, and we can drop your car off at your house."

Three hours later, the trio arrived at home, hot, sweaty, tired, and parched. They made a gallon of lemonade, and then another; it took two and a half gallons of lemonade to fill them all. Aed expected a conversation of some sort, but Taberah was happy to sit in a chair and smile and fall asleep.

Aed expected it would be an interesting endeavor to teach Taberah to take a shower.

Logical Rocks

Taberah read avidly; he wished to derive as much benefit from the four books he had been lent (*four!* — the *Vulgate Versio*, the *Revised New American Standard Bible*, *The New Message: Complete Text, Revised*, and *Harrah's New College Latin and English Dictionary, Revised*) before they had to be returned to the patron who owned them. He very much wished to meet the man. It was about a week before he began to see that his hosts wanted him to talk with them from time to time — mostly out good manners; he had never been in the possession of even two books at the same time, and never encouraged to read outside! — and another week before Aed sat down with him to try to explain to him that there was life outside of books.

Then Taberah became a fount of unending questions, questions as startling as those Clancy and Fiona had asked as a child — and yet questions that showed the intellect of a sharp adult. They were, nine times out of ten, questions about things he would never think about, and questions he had no ready answer for. At times Aed thought it would have been easier to answer, "Why do things look smaller when they are farther away?"

One day, Aed was sitting in his chair and thinking about how quickly his children were growing up — and he was beginning to think of Taberah as a child, or a foster child at least — and realizing that things had been silent for too long. This was longer than the silence after Taberah had realized that a screwdriver can unscrew the screws that were holding the blender together...

"Aed!"

"Yes, Taberah, what is it?"

"Aed, what is this?"

The sound of his voice was coming from a specific room, it was coming from —

Oh, no! Aed thought. *Anything but that. I am ready to explain anything but—* but his feet had carried him to the room Taberah was in.

"Aed, what is this?" Taberah repeated.

A dozen replies flitted through his mind: a moving picture, something to think with, a hobbyist's delight, a shortcut in talking with people —

"This is a rock that can do logic."

"What?"

"This is a rock that can do arithmetic and logic very, very quickly."

Taberah said, confused, "How numbers they and logic they make a picture move?"

Aed sighed. "Taberah, can I answer another question? This one's awfully hard to explain."

Taberah slowly said, "Yes. What question to answer?" But his eyes betrayed him.

Aed thought, and asked, "Do you know that clock in the living room?"

Taberah said, "Yes. Why have you a clock? And not you use it to pray? It rings bells, but I not you see not pray."

Aed said, "One question at a time, please. Do you know what it has inside?"

"I have seen opened one clock."

If he'd opened the grandfather clock, he had put it back in working order. Aed respected the lad's abilities, but this seemed too much. Or had he opened another clock? "What did you see inside, child?"

"Springs rods gears moving *beautiful!*" Taberah said, his eyes glowing with excitement.

"Do you know how clocks work?"

Taberah said, "Yes," followed shortly by, "No. What?"

Aed moved his forearms like the hands of a clock. "Know why hands turn?" he said.

"Yes! Fixed hands, stopped turning."

Aed said, "You can do many things with gears and pulleys. You can store numbers, add them, make decisions: if this rod is here, turn. A computer is like that, only it uses things besides gears. It uses pictures on tiny rocks. And it is very fast."

Taberah looked at Aed, and then looked at the computer screen. He was trying to believe him, but just couldn't see a connection.

Aed said, "See this wall? Look very closely. There are arranged pieces of color. They are called *pixels*. Do you see them?"

Taberah squinted, and touched the surface. "I see."

Aed said, "The computer uses numbers and rules to decide what color to make each pixel. All of them together make a picture."

Taberah closed his eyes in concentration. He moved his hands, sorting out concepts. Then —

"Why is the picture moving?"

"Because the computer is making many different pictures, one after another, and together they look like they're moving. The moving picture is made up of still pictures like the still pictures are made up of pixels."

Taberah stared at a small patch of the wall as colors flowed. His face met with a dawning comprehension. Then he said, "The computer very, very intelligent! I want talk with computer."

Aed shook his head. "You can't, son."

"Why not?"

"The computer is not intelligent."

"But you said it can do logic!"

"It can do logic, but it's not intelligent."

Taberah ran out of the room, and returned holding the Latin-English dictionary. He flipped through several the entries, several times, and then looked at Aed in puzzlement. "I don't understand."

Aed said, "Can you write?"

Taberah said, "I can write Latin. I not know not the script of your books."

Aed said, "One moment." He returned, holding a notebook and a pencil.

"Write down, with logical rules, how to talk in a conversation. In your language," he said.

Taberah's jaw dropped in shock. "Write *that* on paper?" Taberah would as soon scratch the surface of a painting as write something that unimportant on precious paper.

Aed scratched his head. He didn't see what could possibly be so

offensive about an innocuous attempt to write rules. "Ok, don't write that. But can you think of rules for a conversation?"

Taberah began to translate a Quixotic code of etiquette.

"No, not those rules. Logical rules."

Taberah looked frustrated. "But polite is reasonable!"

"Explain to me how to talk using only if-then-else and while-this-is-true rules, and words you decide ahead of time."

Taberah's gaze bore into him. Then, "I can't. That isn't how I talk."

"That isn't how anybody talks. You can't talk that way. But that's the only way a computer can work. Computers can't think."

"Then how create beautiful moving picture?"

"Some people spent a lot of time thinking of clever ways to explain how, using only math and logic. There are a lot of things we can do, but a lot of things we can't do. We have an old phrase, 'silver bullet', which refers to a way to make everything easy with computers and fix all problems. The term is kind of a joke; calling something a silver bullet is a way of saying that it's supposed to do something impossible. And the same thing has happened with the effort to make computers think — it's called artificial intelligence, and people have learned a lot from trying to do it, but they haven't succeeded. A very great mind named Alan Turing proposed the Turing Test: a computer is intelligent if you can't tell it from a human when you talk with it. No computer has been able to make it."

Taberah looked irritated, flipped through memories of conversations, and said, disgustedly, "Bad reason! False reason!"

"What, Taberah?"

"Is bad think. What human is and what human talks like is much different thing. If logic is not whole human reason, talk is not whole human reason." He flipped through the book, and read out, "Confusion,

accident, substance." He closed the dictionary. "Is accident confused with substance. And is possible cheat Turing Test."

"Cheat on the Turing Test? How? How can you talk like a human without understanding human reason?"

Taberah closed his eyes, and said, "Moving picture? How? How can you move like world without understanding world?"

Aed thought for a moment, and said, "I see how you can think that. But decades of attempts have failed to produce anything that can even cheat on the Turing Test. Most people don't try."

Taberah looked in the book. "Fifty attempts are not many."

Aed said, "Not fifty. Over fifty years' worth."

"Why number attempts in years? Is not sense."

It took a good two hours more conversation to answer all the questions Taberah came up with, and afterwards Aed padded off to his bedroom, exhausted, but at least happy to have gotten *that* conversation out of the way. He drifted off to sleep in blissful happiness that tomorrow was Saturday, and he could sleep in until noon.

At 10:00 he was awakened by a voice calling, "Aed! Aed! How to use computer?"

Thinking About Logical Rocks

"Taberah, can I please get a couple of hours' sleep? This is Saturday, and I'd like to sleep in."

Taberah was puzzled as to why one should sleep in on a particular day, but thought this a poor time to ask. "Okay!" he said, and went to try to memorize parts of the dictionary. He was beginning to feel accustomed to the books — their size, their print, their light weight, their smooth sides — at least, although he was still puzzled about why someone had bothered to make a book for the sole purpose of keeping track of words. Were there not scholars who could be asked about these things?

Aed woke up some time later, and looked at the clock. It was 13:00. Taberah had given him a fair amount of time. He lay in bed, ruminating about how to explain how to use a computer. Taberah knew enough of how a computer worked — explaining memory and parallel computing should not be that much harder — but how to explain how to use it?

Space would be the first major obstacle to overcome. The computer gave a virtual reality environment, with the walls of a room as screens; when you put on a pair of goggles, it was as if the walls were transparent and you could see through them to the world, as if the walls were only a glass box. But space behaved differently than in the real world. Aed thought for a moment about the mathematical abstractions by which the space worked — the classic introduction described taking a tessellation of cubes, and then cutting them apart and connecting the sides arbitrarily. You could take two windows of a bedroom, and attach them so that

looking out the North window gave a view as if you were looking in the East window, and vice versa. It was fantastic and dreamlike; it allowed portals between different areas of space, so that there were no difficulties in taking a room in Chicago and making a doorway open out of a subway closet in Paris. Aed remembered the first time he played a game with a labyrinth connected in this manner; he had been awed when he walked around a pillar again and again and never came to the same place twice.

Space might be the first obstacle, but it wouldn't be the only obstacle. How could he describe the richness of the environment? And how could he describe its weak points?

Aed thought over the many things that contributed to the richness of the environment. There were:

- Jump points. These were like travel locations, but with all manner of portals to interesting places. One was a long hallway full of doors, through which a person could step into other areas. Another was a library full of books which, when opened, would expand into other places. (How would he explain to Taberah that objects were putty-like, able to expand and contract, that you could push a button and have a menu pop out?) Another still was a slide show, where you could jump into the show at any point and be where it portrayed. There were others; there was not yet a standard.
- Programming workshops. Programming constructs behaved like any other object; one could assemble them as objects, algorithms, constructs, patterns. It was also possible to take programmable objects and pull off the skin to reveal the structure underneath, and tinker with it. It had taken Aed a long time to get used to this interface — it was a bigger transition even than moving from text-based languages to graphical development and intentional programming — but even then he objectively realized that it was a simpler environment to use, and now it was second nature. Aed realized another thing to explain to Taberah — that objects were not permanent; they could be modified, extended, simplified, cloned at will, and the many implications — there was nothing that had the status of gold, of being something valuable because it was scarce. Taberah had enough difficulty understanding that paper was cheap;

what would he make of this?

- Virtual brothels. Aed winced at the time Taberah would stumble on one of these; the freedom to avoid porn was hard to come by; it was like avoiding advertisements when he was growing up. There were perennial attempts made to curb porn, but — even when it was widely acknowledged fact that the vast increase in rape since the web's second successor appeared was due to sexual addicts who got their start online, and then ravaged real women because porn could only go so far — they always fell on the rocks of a freedom of speech argument. Aed grumpily muttered to himself that household appliances were in some sense sculpture, in that their designs involved commercial artists, but the banner of freedom of expression did not make for any exemptions from environmental regulations in manufacture; it was recognized for the commercial product that it was. Why wasn't porn recognized as a commercial product? Had the news ever carried a report of a pornographer who lost business because of making an artistic statement that was less arousing? Had there ever been a site where the valerie was glaring in hate at the voyeur? It seemed a funny form of expression that could only express itself in ways that coincided with a calculated commercial product. But the courts had argued that brothels popping up everywhere you wanted them and everywhere you didn't want them was sacrosanct free speech, and 'censorship' (that pejorative term) was tantamount to violating the Constitution. Well, not exactly. The phrase, "The illegal we can do right away, the unconstitutional takes a little longer," was obsolete, because the Constitution was a dead letter. In *Roe v. Wade* in 1974, the Court had made a strained argument finding an unnamed right to privacy to make the question of an unborn child's right to life irrelevant, skirting even the issue of whether that entity was a person or a part of another person. When the decision was reviewed in the late 1990s, the ruling recalcitrantly acknowledged that the 1974 ruling was wrong, but said that it would be wrong to take away the sexual freedom that young people had gotten used to. In *Purdie v. Braverman* in 2024, fifty years after *Roe v. Wade* to the day, the courts had ruled infanticide legal, "up to a reasonable age", and specified neither what a reasonable age was, nor even a contorted lip service argument as to why the Constitution

justified infanticide — perhaps because they could find none. It had not surprised Aed two years later when the courts legalized euthanasia, with only the vaguest and most confusing guidelines as to when it was permissible and when consent was even necessary — he shuddered when he remembered the definition of implied consent. Now, it was 2034, and the date had passed when Aed was no longer surprised by anything the courts did. He — Aed suddenly realized that he was not thinking about computers. He tried to focus his thoughts — what else after brothels?

- Society for Creative Anachronism re-enactment arenas. These places set up an environment to resemble that of a time and date in the past, and then people attempted to live and interact as people of that era and place. Even the avatars looked like people from those times — avatars were another thing to explain to Taberah. An avatar was the moving image which represented a person in the world — like the piece that represented a king in a game of chess. The image was completely customizable and configurable, with the effect that many people looked like a supermodel, although it was not uncommon to encounter unicorns, dragons, mermaids, cybernetic organisms, anthropomorphic robots... but never a person who was fat or ugly. Human-like robots had never materialized, any more than the anti-gravity devices imagined of old; the development of technology had shifted direction towards a primary focus on information technology, but this and all manner of fantasy appeared in the virtual worlds. Aed reflected that there was a good sense and a bad sense to the word 'fantasy', and both of them were amply represented in the virtual worlds.
- Bedrooms. A bedroom was a place with one person's very personal touch; there were elements there that would never surface in an institutionalized setting. There were not exactly bedrooms *per se*, so much as creatively developed spaces that had personal sharing. Because it was possible to let someone in a room without being able to easily do damage, you could go and visit people's bedrooms. There were quite a lot of interesting sites to see.
- Clubhouses. If a bedroom expressed the spirit of a person, a clubhouse expressed the spirit of a group of people. These had both function and decoration to them, and almost always had something

of a personal touch.

- Museums. There were museums of almost every sort to visit. Because a painting could be in more than one place, and it was not nearly as expensive to build them, there was a much more vast diversity of museums, many which were much more specialized. The low expense of creation made for a much greater diversity, with many more excellent things available, but also a much lower average quality. Sturgeon's law applied *a fortiori*: "90% of everything is crap."
- Special museums which had disassemblable and scalable models of human and animal bodies and machines. Aed's children had not dissected animals in school; they went into museums where it was possible to strip off skin, strip off muscle, double the size, half the size, make everything but the skeletal and nervous systems translucent...
- Role play arena. In the 20th century, the basic unit of time-consciousness was the decade; now it was the semi-decade, or semi. Role play was one of the trends that was in this semi, and there were virtual worlds for all kinds of different role playing games.
- Dreamscapes. In these places, there were a number of momentary images, represented by blocks something like the Capsella toys Aed had played with as a child. One put them together in a particular way, and then set the composed dreamscape in his pack. Then nothing happened, until you hadn't done anything with the computer for a while. The computer would then begin "dreaming" — start a random walk that began with one block, and shift, images flowing, to a neighbor, and then a neighbor's neighbor... Aed had seen some truly beautiful artwork that way.

Aed wondered, "What time is it?" Then he looked at the clock. 15:00. Yikes! He got up, got dressed, and looked for Taberah.

Taberah was reading the bilingual dictionary with rapt concentration.

Using Logical Rocks

Aed walked over to the computer room, grabbing two pair of goggles. He showed Taberah how to put one of them on, and then said, "Sit down and wait here for a moment."

In a few minutes, an avatar appeared before Taberah and said, "Take my hand." Taberah reached for it and grabbed, but felt nothing. He was confused. The scene changed, and he saw that he was inside a sunny field, with forest to the east.

Taberah asked the avatar, "Who are you?"

The avatar said, "I am Aed."

Taberah said, "But you not resemble not Aed. You look — your clothes are different, and skin different, and —"

Aed said, "Never mind that. Do you see my hands?"

Taberah said, "Yes."

Aed said, "Move your hands like mine."

Taberah did, and found himself moving rapidly through space. His stomach lurched; he put his hands over his eyes.

Aed said, "Take your hands off your eyes, son."

Taberah did, and saw he was a good fifty hands off of the ground. He braced himself for the fall, and put his hands over his eyes again.

Aed thought for a moment, and said, "We're going to try something different. It takes a little while to get used to moving about, but you'll learn. In the mean time, I'll let you see through my eyes."

Instantly the perspective changed. Taberah looked down, and saw a pair of hands pull a book-shaped object from a pocket, with a picture on front. The hands pulled on the book and expanded it, then pressed buttons, flipping through pictures. Taberah saw a picture of a stag, and said, "Ooh!"

The picture expanded, and they fell through it. They were in a forest glade; a stag was looking at them curiously.

Then Taberah saw himself walking rapidly to a door with a picture over it; he said, "Too much of fastness!" and the pace slowed. He was through, to a dark forest with unfamiliar plants, and a large snake slithering towards them. Afraid, he said, "Snake!" and saw himself walking towards another door with another picture, and he looked around. The landscape was alien; it was rough terrain covered completely by snow, and he saw fat black and white birds walking around, and some big black fish-like animals on the ice.

Taberah looked intently at all that was around him; it was strange, but none of the animals began to threaten him. After a few minutes, he said, "I have sick of sea." He wasn't feeling very good.

There was moment of nothing happening, then a jar of perspective, and then stillness. Taberah closed his eyes to shut out the view. Then he heard Aed calling, and touching his shoulder. He was holding a tiny cup of the thinnest glass, with something that looked like wine. "Drink," he said.

Taberah drank it, and the nausea began to go away. Had he been given a magic potion? He was confused, but pushed this question to the back of his mind. He wasn't sure yet what was magic in this land and what wasn't — that seemed a confusing question here, and the people

treated the moving rooms as something as believable as a horse! Aed asked him to step out and sit on the sofa.

Aed was trying to think of how to explain the way space worked. He was expecting a question about why there was a door, all by itself, in the jungle, and the moment you stepped through it, you were in Antarctica. When Taberah remained silent, he asked, "Taberah, was there anything you found confusing about that world?"

"Yes, movement."

"Ok. Anything else?"

"Yes, doors."

Aed went into a long and involved attempted explanation of how different parts of space were connected, and saw the confusion on Taberah's face growing with each step. Finally, he said, "Taberah, why are you confused?"

"What is it that the pictures?"

"Huh?"

"Pictures on doors. Why?"

Aed said, "I don't understand. Could you rephrase that?"

"Pictures. Doors. Top."

Aed said, "One moment," and went over to the computer to look at one of the doors. "Aah," he said, returning. "Those are advertisements."

"What is advertisement?"

"An advertisement is a message from a company telling a customer about one of its products."

"I not understand not. For what is it that advertisement needed? Is it that townspeople not tell not where merchant is?"

that to his people not tell not where merchant is.

Aed thought for a moment, and said, "Advertisements exist to stimulate sales, to help a company sell things to people that otherwise wouldn't buy them."

Taberah looked even more confused, thought for a moment about wording and grammar, and said, "And which of the seven deadly sins is it that this custom embodies?"

In the ensuing discussion, Aed slowly realized that Taberah had not been troubled by the nature of space. He had been able to accept as perfectly natural a portal between two different regions of space, and Aed wondered what kind of conception of space his culture had to let him accept that at least quite placidly. The first time he had entered that kind of virtual environment, Aed had been thrown off by the conception of space. And he had felt nauseated, his head spinning after — suddenly he found Taberah's "sick of sea" more understandable. And he began to see something that he had not thought about, not for a while: that advertisement does not exist for the customer's benefit, but for the company's benefit, so that it can get more money out of the customer; this practice clearly ran contrary to Taberah's way of thinking, and at the end of the discussion, Aed walked away, for once, with his head not spinning, and thinking not only that Taberah's way of thinking was understandable, but that he might have a point.

A New Friend

The next few days saw animated discussions, a lot of reading on Taberah's part, and a few more minutes using the computer — at Aed's urging; Taberah wanted nothing more to do with it.

Taberah was sitting on the ground outside, drinking a glass of nice, warm water, when he saw a large, black, almost grown Newfoundland puppy come wandering by. And gulped. Such a beast would be a prime candidate for a dog race.

Dog races, in his homeland, occurred when people would gather together stray dogs, tie metal pots to their tails, and then let the dogs go. The dogs would start to walk, then hear the sound of the pots scraping against the stones of the road, get scared, and start running to get away from the noise. When the noise grew louder, the terrified dogs would run, and run, and run, and run — until they dropped dead from exhaustion. The winner was the boy whose dog ran the farthest before dying.

Taberah hated the dog races with a passion. They made him sick; after his protestations, his lord issued a rule that no dog races were to be held while Taberah was around, but that was the best that had happened. He was humored at best; nobody else save Grizelda shared his objections to the races. Most people were so blazé that they didn't see what the big deal was in the first place. Yes, it was his homeland, but it wasn't his homeland. It was the place he was from, and the place where he had spent most of his life, but he wasn't at home there. In a way, he could adjust to almost any place — was adjusting to the kingdom he was in now

(what was it called, and who was its king?) — but in a way he was never at home. There was always something about him that didn't fit. Why was he the only one who cared about dogs? Francis of Assisi was venerated, but the people who venerated him did not imitate his treatment of animals. Well, he could try to save at least one dog from the races —

Hastily setting down his glass, Taberah sprinted at full speed after the dog, which ran away from him, barking. He continued chasing the dog for a full hour, his toughened feet pounding on the asphalt until they were sore, until he dropped in exhaustion, panting and thirsting. It wasn't until he stopped that he realized the exquisite pain in his feet. He looked down, and realized his feet were cut. Where was he? The buildings looked different; the outside looked more like buildings than outside. He was by a room of sorts with two walls missing, but with a ceiling. It was raining; he crawled over to a puddle, and began to lap at it.

He looked up, and saw the dog drinking from the other side of the puddle. It came over and sniffed at him; Taberah hugged and kissed it. Beginning to feel chilled, Taberah crawled under the shelter, holding the Newfoundland next to him. He could not get to sleep, both because of all the moving rooms passing by, and because he had plenty to think about.

Taberah felt happy and comfortable as he had not felt in a long time. The wealth he had been in was strange to him; it did not seem real. Out, even in a strange, semi-open place (why would someone build two walls and a roof of a room, and then make the inside part of a thoroughfare?), finally next to another warm body (even if only a dog's), Taberah felt happy. He settled into a slumber, thanking God for bringing him to a place that felt a little home-like.

Midnight Oil

Aed drove around, trying to see if he could find where Taberah had gone. Fiona had run and told him that had seen a dog and bolted; as he drove around, he called the police and summarized what had happened. The dispatcher explained that he could not be classified a missing person until he had been gone for twenty-four hours; that was twenty-four hours in which to brood. The family looked until three in the morning, and then went home because both Aed and Nathella were too tired to continue driving.

At four in the morning he was awakened by a call. Groggy, Aed turned on the videophone and said, "Yes?"

A police officer in a car sent a still shot and said, "Officer Shing, State Sheriff. Is this the man?"

"We found him sleeping under a bridge, along with a dog he refuses to part with. He had lacerations to the soles of his feet; the EMT thinks he ran barefoot over broken glass. We have taken him to Mercy Memorial Hospital; he is presently in the emergency room, waiting for treatment."

Aed said, "Thank you. Why did you take him to Mercy? I don't understand that. Mercy is almost fifty miles away from here."

Shing replied, "Mercy is the closest hospital to where we found him. Is there anything else we can help you out with?"

Aed thought for a moment, and said, "Not now, but I might call you

Aed thought for a moment, and said, "Not now, but I might call you if I think of something else. I'm going to grab a few coffee beans, and then go to pick him up. Is there anything else I need to know?"

The officer said, "No, but you might want to take him shopping for some clothing and shoes. He's wearing a ragged getup, and — the hospital will be able to tell you about his special needs to heal from the lacerations."

Aed said, "Thanks. Over and out."

Nathella rolled over and said, "You weren't thinking of getting him without bringing me, were you, honey?"

Aed said, "Get dressed, and come along. I'll get the coffee beans."

Two voices from below said, "Me, too!"

The emergency room was fairly quiet; doctors were removing glass shards from Taberah's foot and stitching up the cuts. Taberah looked confused; there was something in his eyes that even Nathella didn't understand. He was under local rather than general anaesthesia, but he still started nodding off to sleep.

He received some soft "shoes" made of bandages, and the doctor told Aed to keep his feet bandaged and give him high top athletic shoes a couple of sizes too large. When it was time to go, everybody climbed in to their van, the dog brought along as well. Aed tried to ask why this attachment to a dog (it belonged to a neighbor, and periodically ran loose), but could find out nothing beyond that Taberah did not want it to be raced. Aed let that be; he wanted to get back to sleep, and wait until tomorrow to tackle the puzzles. Taberah agreed not to leave the house without having someone else along, and seemed relieved to learn that this kingdom didn't race that type of dog. He was even happier to find out that the dog belonged to someone nearby, and would be taken care of; he wanted to meet the neighbor the next day. "Very well," Aed said, "but we need to get some sleep first." This time, Taberah joined everybody else in sleeping in until the afternoon.

I Can't Believe...

Nathella and Fiona were working in the kitchen; good smells came upstairs. The Kinsellas (and Taberah) settled down for a late dinner, a family complete, such as it were.

They sat in silence around the table; there was a simple joy in everyone — or almost everyone. After Dr. Kinsella said grace and the food was passed around the table, Taberah broke the silence by saying, "Nathella, would you pass the *I Can't Believe It's Not Better?*"

Nathella smiled and passed the spread, and made a mental note to buy butter the next time she went shopping. As she passed it, she saw something in Taberah's face. "Taberah, are you homesick?"

Taberah looked at her. "What is 'homesick'?"

Nathella thought for a moment and said, "Homesick is when you aren't comfortable in one place, and you miss the place that is your home."

"I don't know if I'm homesick. Maybe. Yes. No. I don't know if I have a home; maybe if I understood the word better..." His voice trailed off, but the others remained silent. "It's just a bunch of little things, like strange foods and too soft bread without any rocks and no touching, not even wrestling, and... Or maybe that's not a little thing." He stared at his food.

Clancy said, "Cl'men out back dinner. We can roughhouse in the

Clancy said, "Come out back dinner. We can roughhouse in the back. Fiona and I wrestle a lot, only not recently. We've been busy with you, and we didn't know you liked to horse around. Fiona's in the house to be picked on," Fiona made a face at him, "and I'll flip you around. I would pin you, but you need to be soft on your feet."

Taberah's face brightened.

Nathella said, "Is there anything we can do that will bring you a little piece of home?"

Taberah hesitated, and then said, "Have you no wine in this country?"

Nathella smiled gently and looked at him. "Yes, we do, but not in this house. I'm an alcoholic."

Taberah asked, "What's an alcoholic?"

Nathella said, "Do you know the word 'drunkard'?"

Taberah said, "You're not a drunkard! I haven't seen you drunk. I haven't even seen you drink wine."

Nathella said, "Not now, but once my life was given over to alcohol. Escaping alcohol was the hardest thing I ever did, and if I start to drink, I won't be able to control it. It would control me. So I can't have alcohol in the house."

Taberah looked disappointed. He said, "Then it is good of you not to drink."

Nathella said, "Thank you, Taberah. Maybe sometime when I'm visiting with one of my friends, Aed will buy a small bottle of wine for you two to have. He likes a good drink, and he will have a beer when he's out with his friends. But he doesn't drink in the house. He doesn't want to tempt me."

Taberah smiled. He was warmed with a patient assurance that he would have wine, and was in no particular hurry. He looked around, and

then his gaze settled on Fiona. "Why are you homesick, Fiona?"

Fiona smiled, and said, "I'm not homesick, at least not for a place. I wish it were Christmas, with the family and gifts and wassail and — ooh! the music. I miss the music."

Taberah said, "What kind of music?"

Fiona said, "One is, O come, O come Emmanuel. Do you know it?"

Taberah thought for a moment, and then thought a little more, and said, "Could you sing it for me?"

Fiona sang, in her thick countertenor,

O come, O come, Emmanuel
And ransom captive Israel
That mourns in lowly exile here
Until the Son of God appear.

Rejoice! Rejoice! Emmanuel
Shall come to thee, O Israel.

Taberah said, "I think I know it. Let me sing it as I know it." He took a sip of milk, and then stood up on the chair, and began to sing:

*Veni, veni Emmanuel!
Captivum solve Israel!
Qui gemit in exilio,
Privatus Dei Filio.*

*Gaude, gaude, Emmanuel
Nascetur pro te, Israel.*

*Veni, o Sapientia,
Quae hic disponis omnia,
Veni, viam prudentiae
Ut doceas et gloriae.*

*Gaude, gaude, Emmanuel
Nascetur pro te, Israel.*

*Veni, veni Adonai!
Qui populo in Sinai
Legem dedisti vertice,
In Majestate gloriae.*

*Gaude, gaude, Emmanuel
Nascetur pro te, Israel.*

*Veni, o Jesse virgula,
Ex hostis tuos ungula,
De specu tuos tartari
Educ et antro barathri.*

*Gaude, gaude, Emmanuel
Nascetur pro te, Israel.*

*Veni, Clavis Davidica,
Regna reclude caelica,
Fac iter tutum superum,
Et claude vias inferum.*

*Gaude, gaude, Emmanuel
Nascetur pro te, Israel.*

*Veni, veni o Oriens!
Solare nos adveniens,
Noctis depelle nebulas,
Dirasque noctis tenebras.*

*Gaude, gaude, Emmanuel
Nascetur pro te, Israel.*

*Veni, veni, Rex gentium,
veni, Redemptor omnium,
Ut salvas tuos famulos
Peccati sibi conscios.*

*Gaude, gaude, Emmanuel
Nascetur pro te, Israel.*

Taberah sat down and was very still. The room was very still — one could hear a pin drop. His singing voice was a tenor, but there was nothing flimsy about it; it was rich and powerful, like silver, like something between a stream and a waterfall, and for the moment he had looked like a bard. It was hard to believe that such a mighty voice, filled with silent strength, could come from such a tiny body — and yet, somehow, after that song, Taberah did not again look tiny to the Kinsellas. Nothing about his physical appearance was changed, but none the less the way he looked to them was different.

Aed finally broke the silence by saying, "I never knew you could sing like that, Taberah, and I should very much like to have you over for Christmas. Is there any way I can thank you for that song?"

Taberah said, "Over for Christmas? All twelve days?"

Aed thought. School resumed classes from winter break on the third of January; getting permission to take time off through the seventh would involve some major administrative headaches. "All twelve days," he said. "I'll make sure of it."

Taberah said, "Then what I would most like for my song is to go out and wrestle."

Clancy bolted out of his chair and had Taberah in a fireman's carry before anyone else knew what was going on; Taberah was out of Clancy's grip and bolting out the door before Clancy knew what was going on. It wasn't until later that Aed wondered how he could run with healing, stitched lacerations in his foot; soon they were all outside, a crazy, happy, moving, squirming bundle of arms and legs with grass stains on its shirts. And Taberah was happy, happy as he could ever remember being.

It was only a few minutes before they were all sitting and panting; Taberah did not understand why they wanted to rest so soon, or why they didn't give him more resistance in the fray, but he basked in the afterglow. The memory of that moment would be a treasure to him as

undergrowth. The memory of that moment would be a treasure to him as long as he walked the paths of the earth.

A Guided Venture

Nathella said, "We need to give him some of Clancy's old clothes so he's decent, and then take him to one of the old-fashioned clothing stores — he won't be able to try stuff on online. Clancy, would you come with to help him with the clothing?"

They arrived at the store, and Nathella said, "Here we are, to get some clothing. You can take anything in the store."

Taberah looked, and bright colors caught his eye. He went over and started to stare at a rack of shirts.

"Not there," Nathella said. "Those are children's clothing."

Taberah thought it strange that there should be special clothing for children, but said, "I am a child. You're a child. Clancy's a child. Want children's clothing."

Nathella, who had felt almost guilty about her age since her thirtieth birthday, said, "That's sweet, honey, but I am not a child. Neither are you. And Clancy's not really a child any more."

("Thanks, Mom!")

("Shut up, dear.")

Taberah looked puzzled. "Are you not born of a woman?" he asked.

Nathella said, "Uh, of course I — ooh, I see. Taberah, we use the word 'child' to mean someone who's younger than Clancy, and 'adult' to mean someone who's older than Clancy. Clancy's — in between."

("Thanks, Mom!")

("Shut up, dear.")

Nathella continued. "And children wear different clothing than adults."

Taberah said, "Why?"

"Because children are different from adults."

"Why?"

"Have you seen a tadpole?"

"Yes."

"Have you seen a frog?"

"Yes."

"Do you know that tadpoles turn into frogs?"

"Yes."

"But tadpoles and frogs are different, right?"

"Yes."

"Children and adults are different in the same way, right?"

"How?"

Nathella did not reply to the question. Clancy, in a particularly mischievous mood, would be able to ask a series of questions like that while keeping a perfectly straight face, and he often managed to catch his

rather. But she could sense a complete honesty in Taberah's questions; they were as honest as a child's. And as unending. She was beginning to realize that he did not perceive anything approaching a sharp demarcation between childhood and adulthood. "Come over to this section. I want you to pick out a shirt from one of these racks, and a pair of pants from one of these racks."

By the second or third try, Taberah had picked out clothing that would fit him; it seemed a bit loud to her, but she did not want to argue with that. He went into a fitting room, and, with Clancy's help, put the pants on properly and the shirt on backwards. He came out, and said, "I like it. Let's pay for it."

Nathella said, "Hold on, Taberah. I want to pick up a week's worth of clothing."

Taberah said, "This clothing will last for a week, more."

Nathella said, "I want to buy you enough clothing so that you can wear different clothing each day and not have to wear the same clothing for a week."

Taberah's jaw dropped. He had a vague realization that the others' clothing looked different over time, and he knew that some of the people of his home town were wealthy enough to have two sets of clothing — one for summer and one for winter. He had not, in his greediest dreams, ever wanted to wear different clothing each day. He asked, "Why?"

The trio arrived at home, carrying a large bagful of clothing. Aed asked, "Hi, guys! How was the shopping?"

Clancy asked, "Would somebody stop the room, please? I'd like to get off."

I Envy...

Taberah asked Aed, "What is your trade?"

Aed recalled a moment in graduate school where one of his colleagues had said, "I envy people in nuclear physics. They can tell other people what they do for a living." He said, "I teach — do you know logic?"

Taberah said, "Yes."

Aed asked, "Have you done geometry?"

Taberah said, "Yes."

Aed said, "What I do is like geometry and logic; logic and geometry are examples of it."

Taberah said, "Give me an example."

Aed thought of the three rules of a metric space, then thought how little those rules illuminated what he was thinking — as little as a list of chess rules gave any obvious feel for deep strategy. Aed had learned long ago that it was possible to understand the rules of a game completely without having the foggiest idea what its strategy was like — human understanding never included instant sight into logical depths, any more than good eyes enabled you to see infinite detail despite distance and twilight! In the classroom at the university, Aed would have to bow to custom and labor over the basic rules, but Taberah was not a student at school and — "I am studying collections of objects where you can tell

school, and I am studying collections of objects where you can tell how far apart two objects are."

"Like geometry!" Taberah said.

"Yes, but it includes many things that do not have the structure of a space. Like words. 'Man' is close to 'woman', farther from 'dog', farther from 'tree', and farther still from 'rock', and very far from words like 'move'.

Taberah said, "Yes! That's how to cheat on Turing test!"

Aed winced and said, "Uh, how?"

Taberah paced the room in thought. "Can computers record conversations?"

"There are many, many conversations on record. I can download a collection of them now, if you wish."

"Well, first find out how to measure the distance between two words," Taberah said.

Aed nodded. The artificial intelligence literature had found a way to map the distance between words by measuring frequencies of words occurring before and after them in a histogram.

"Then have something that will look through conversations, matching up by words and grammar, and return the closest match!"

Aed looked at Taberah hard, and then said, "Son, how'd you like to learn how to program?"

Hacking Away

Aed led Taberah into the computer, and then left him; Aed's avatar soon appeared nearby. "Put your hand on that picture on the wall," Aed said, and when Taberah reached out, he was in a large room, with alien artifacts on the walls and shelves.

Aed flew through the room, touching partially assembled objects; they vanished, leaving an open space to work in. "The first thing to do," he said, "is to make a Turing test room. Touch that bin over there."

Taberah touched it; it grew to fill half the room, and then its sides vanished. "See that red thing? Take it out of the bin, and then touch the button on the bottom of the bin; it will shrink back to its normal size. That is a room object; say 'Options.' See that popup menu? That's the thing that looks like a sheet of paper. Turn on the one that says 'Maximum occupants'; set the number to three. Then press the 'recording' button. I'll come back and record messages for the three users; the first user is the tester, and the second and third users are trying to convince the tester that they're human. Initially they'll both be human; later, one will be an avatar for our program. Pick up a dialogue slate; say, 'Record: Which user do you think is human? Now touch choice one, and say: Contestant one. Choice two: Contestant two. Choice three: Can't tell.' Ok; expand the room, and place the dialogue levitating in the center, in front of the tester's door. Wait, put three doors on for the user to enter. Oh, that looks funny because you have a bug. You have the buttons switched. You should —"

After the room was completed, Aed summoned the chancellor of the university and asked him to make an announcement of a Turing game. He recorded the announcement, and, after the chancellor disappeared, said, "This will give us some time to work out the artificial intelligence decoy. If you give me a moment, I will find the metric for words..."

It took Aed and Taberah a long time to get to sleep that night; it took them a long time to stop tinkering, but even after that, they were filled with an excitement of discovery, of uncertainty, asking, "Could this be? Have we really discovered what we think?" Their excitement was raised in the morning when Nathella said, "Why don't we go downtown this evening for a Tridentine mass? Taberah, it's in Latin; I think you'll enjoy it."

Taberah was not sure why the Kinsellas went to mass every week; it had not been any special holiday, so far as he could tell, and he could never get out of them a straight answer as to why they went to mass when there was no particular reason to do so. But now he was in such high spirits that he wanted to go.

Another Era

Nathella walked in to the massive church. It was plain, and all was still. As the liturgy began, the stillness was not broken; the majestic Latin spoken by those up front only augmented the silence. Each step was majestic; she lost herself in its familiar details.

After the service, she put her hand on Taberah's shoulder, and asked him, "So, whatchya think?"

Taberah's eyes were misty. He closed them, then opened them, saying, "I don't understand. I did not see the guest of honor. Was he a theologian?"

Nathella said, "What?"

"Was the guest of honor a theologian?"

Nathella reminded himself that Taberah sometimes approached matters strangely. "I would rather think of him as God who told stories. What do you think?"

Taberah said, "Not Jesus, the person the — now I remember the word — funeral is being held for. Was he a theologian?"

Nathella withdrew, slightly surprised. She said, "Why do you think this was a funeral?"

Taberah said, "It was so mournful. People were silent; they did not

say anything, and the person up front was impossible to hear. There weren't any changing songs. And I didn't hear any instrument music, no organ. And this church had its walls stripped — no statues, no color in windows. Does this building have anything besides funerals?"

Nathella accepted that Taberah's perception of the Latin mass was very different from her own. No, that wasn't quite right. He wasn't responding to the Latin, *per se*; it was something else that accompanied the Latin. It — she decided to stop musing and respond to him. "At home we have a machine that can make organ music; would you like to come home?"

At home, they sat down on a sofa and set the computer to play music. Taberah listened to the sound, the familiar sound of an organ — no, it was not; it had range and voices and a perfection of sound such as he had never heard, and such speed! Then it unfolded, into two voices, three, four. Taberah felt dizzy with the complexity, or more accurately, giddy, drunk; he heard wheels within wheels within wheels within wheels. It was alien in many ways; most of all, he felt that he had never encountered such a mind. He never knew that such music existed. When the moment wound down after several pieces, he said, "I awe," and then, "Who was that?"

Nathella smiled and said, "That was Bach."

"May I speak with Mr. Bach? I would very much like to meet him."

"Honey, Bach has been dead for almost three hundred years."

At this, Taberah was surprised. "If Bach is dead, how did he play that?"

"Bach wrote his music down, then someone else played it on an organ, then the computer kept and transported the sounds so we could hear them."

"How can a rock transport sounds?"

"Aed, would you explain that?"

As Aed explained, Nathella observed Taberah. He no longer seemed so completely homesick; his face bore the excitement of discovery. Taberah was adapting to his new land.

Angels Dancing

"And all they were doing," Nathella said to Aed, "is endlessly debating 'How many angels can dance on the head of a pin?!'"

"That's the best question," Taberah said. "That's a very good question."

"What?" Nathella and Aed said together.

"'How many angels can dance on the head of a pin?' is a good question."

"Why?" Nathella said.

"Do you know how many angels can dance on the head of a pin?" Taberah asked.

"Um, I don't know. Five? Twelve? Seventeen? I have no idea." Nathella said.

Taberah looked displeased. "I don't think you understand the question. Say seventeen angels can dance on the head of a pin, but not eighteen. Why?"

Nathella said, "I don't know. That's why it's a silly question."

Taberah said, "Ok. How many people can dance on the head of a pin?"

Nathella answered, "If the pin was lying on the floor, one."

"Why not two? Why not three? Why not five?"

"Because people have bodies, and they'd bump into each other."

"Do angels have bodies?"

"No; they're spirits."

"Can angels bump into each other?"

"No; there can be as many angels in the same place as want to be, because spirit — ooh! Two, or five, or seventeen, or an infinite number of angels can dance on the head of a pin at once, because they don't take up space the way we do."

Taberah smiled. "Is that a silly question?"

Nathella hesitated, and said, "If you are asking an abstract question, why embed it in a concrete and silly-looking facade? Why not ask it abstractly?"

Clancy burst in the door, out of breath, and said, "Hey, Mom! How many field service engineers does it take to screw in a light bulb?"

Nathella was about to say, "I'm in the middle of something, dear," when Clancy said, "Two. One to find a bulb, and one to pound it into the socket."

Nathella giggled for a moment, then her face showed confusion, which slowly turned into dawning comprehension. Clancy watched her, and said, "*Et voila!* It took you long enough this time, Mom!"

Nathella said, "It's not that, honey; I got the joke immediately. It was just that Taberah had asked an abstract question in a way that looked simple and silly, and I had asked why he did that, and now I realized that our light bulb jokes work the same way. The canonical 'How many morons does it take to screw in a light bulb?' 'Five. One to hold the bulb

...how long does it take to screw in a light bulb? Five. One to hold the bulb, and four to turn the ladder,' is only incidentally about ladders or even lightbulbs. It's about stupidity trying to do things in an ineffective and unproductive manner, and it provides an illustration. Wouldn't you say so, dear?"

Aed said, "I was just thinking about what impact such a presentation might have on my teaching at school. A concrete capture of an abstract idea is harder to make than an abstract decision, and much more powerful to understand. Whether I have the political strength to get away with a non-standard treatment of content is —"

Clancy cut him off. "What was the question Taberah asked? Was it something like 'How many angels can dance on the head of a pin?'"

Beyond a New World

Taberah was sitting on the lawn, resting, thinking — when he realized that he had never explored the computer. He had gone to a couple of its rooms when Aed had led him, but he had never set out to see what there was to be seen.

That was strange. When he was little, Taberah had explored every building he was allowed in with a sense of fascination; he still remembered the wonder with which he had imagined a door opening, beams of light showing from behind. He asked Aed if he could explore the computer; Aed would have liked to accompany him, but was thinking about a problem he was researching. So Aed said, "Go ahead. Touch the picture with a gold border."

Taberah went in; he was in a gallery of pictures, and reached out for one of them. He was drawn to it

was through it.

Taberah looked around. He was in an immense labyrinth; he started to fly around, the walls shifting and changing as he walked. There were statues, and fountains, and shadows lurking; there was something strange about it that felt like home.

Taberah turned a corner, and looked around. He was in a circular room with no doors; after looking around for a moment, he saw a knob at the side of a large black disc in the middle of the floor. He reached for it,

and pulled; downwards was a brick tunnel, reaching into fathoms of darkness. After thinking a moment, Taberah left the annulus and tumbled down.

It was dark, or almost dark, around him; it looked like a room with candlelight. As his senses adjusted, Taberah heard crickets chirping, and realized there was the sound of the ocean; he looked around, and saw starlight. Which reminded him — but he would have to do that later. He started to fly about, and realized that he was in a huge forest. He came to the water's edge and dove down.

It was scary to see the water close above him; Taberah held his breath before reminding himself that he was just surrounded by moving pictures. He went in and down, in and down.

After a little while of pitch darkness, Taberah could see a faint blue light. He flew towards it, and saw color dancing. He saw thin slivers moving by twos and threes — fishes, he thought, and then went closer and saw that the swimming creatures were mermaids and tritons. Then he recognized the light: it was a vast city of sunken stone, an alien ruins. A mermaid swam by; he reached for her hand, and then he realized that he could not touch her. He followed her around, through streets and doorways and tunnels, between walls with runes glowing blue-white. The mermaid swam off; he opened one door, and saw a decorated room which made him forget he was underwater. Then he saw a strange picture on the wall; it puzzled him. He reached for it —

What is This?

"Aed!" Taberah called. "Aed! What is this?"

Aed came running, muttering under his breath, "This had better be good!"

Aed looked at the screen — a nude female avatar was writhing in sexual ecstasy — and, after staring a moment, turned the video off. "That's a valerie," he said. "I should think that her purpose should be obvious enough."

Aed looked at Taberah, and then realized that he had misjudged the look in Taberah's eyes. Taberah had been staring at the valerie in fascination, but not exactly lust. He had rather been staring in puzzlement, and in the same horrid fascination that he had seen on Clancy's face, looking at a car wreck. Aed began to realize that an off the cuff response was not going to work here. After collecting his thoughts, Aed said, "Well, what do you think the picture was about?"

Taberah said, "I do not understand. She looked on her face like a woman wanting to be bounced, but she had her clothes off, and what a horrid body! Her breasts were enormous; they were ten times as large as beautiful breasts, and the rest of her body looked like a muscular boy's body, or a man's." He paused a moment, and then his face was filled with a flash of insight. "Aed! Was this valerie made for lust by a pedophile who wanted to pretend that he was looking at a woman instead of the boy's body he was looking at? He must have been trying very hard to fool

himself, to have put on such huge, ugly breasts! But why make a picture to lust at in the first place?"

Aed mulled over this response, and mentally compared the valerie's body with his wife's — and then looked into his own reactions. "Taberah," he said, "a valerie looks like that because that is what my nation thinks a beautiful woman looks like. I don't know how to explain it, but even though I try to love and honor my wife, the trend is strong to me; the valerie looks better to me."

Taberah turned green, and said, "Why? And I still don't understand why to make pictures for that purpose. Do you not think God's way of making women is beautiful?"

Aed thought for a moment and said, "Taberah, the culture we are in is sick. It is dying. This is one of many signs of its sickness."

Taberah said, "Then why not heal it?"

Aed said, "I don't know."

In the Stars

After taking some time to rest — Taberah was still quite confused — he asked Aed, "When was the day of your birth?"

Aed said, "It's really not that important."

Taberah said, "Why should a man of your age not want to tell when he was born?"

Aed said, "I'm old enough, Taberah. Why do you want to know?"

Taberah was puzzled; Aed had attained a very respectable age, and Taberah could not understand why he looked uncomfortable about it. Maybe to explore later...

"I want to go outside at night," Taberah said, "and gaze upon the stars and the crystalline spheres, and know the influence of the planets when you were born upon your life and at the present day."

Aed took a moment to parse this sentence, and said, "You want to cast my horoscope?"

"Yes."

"I thought you were a Catholic."

"I am."

"Then why do you want to cast my horoscope?"

"In order to understand you better."

"Don't you think there's something wrong with astrology?"

"What?"

"What do you think astrology is?"

"Natural philosophy, exploring the interconnected world in which we live."

"Taberah, astrology is not science. It's magic, or like magic. It belongs to the occult."

Taberah was trying to sift this apart. "Why?"

"It is divination. It does not work according to the basic laws of science. Astronomy is science; it studies how the heavens go. But it does not believe in influences, any more than looking at the entrails of a chicken will tell the future."

Taberah said, "Aed, what's the difference between science and magic?"

Aed was caught completely off guard. The disowning hostility of science to magic, *The Skeptical Inquirer*, the use of the word 'scientific' to mean 'rational' and 'working' and 'magic' as a pejorative metaphor for technology that did not appear to behave according to rational principles — Taberah might as well have asked him to explain the difference between light and darkness. But his question deserved an answer; science does not include divination — no, that would exclude weather forecasting; science provides theories and laws about how the world works — so does magic; science is about exploring the forces of nature — no, magic claimed to do that as well; science is reductionistic and magic holistic — no, that was, if true, looking at the surface rather than the nature of things, and that wasn't true; it excluded psychology; science produces predictable results according to its theories that — well, that

also rules out psychology as science...

"Taberah, what can astrology tell you about a person?"

Aed listened to Taberah's explanation, and slowly stopped fighting a realization that this made more sense than what he was taught in his undergraduate psychology class, particularly behaviorism — he felt he would be much better understood by Taberah's astrology than by a behaviorist account. Astrology at least accounted for the stuff of common sense — emotions, tendencies, thoughts, good and bad timing — while behaviorism reduced him to an unbelievably simplistic account of just a black box that does actions. Listening to Taberah's account sounded goofy here and there, and the idea that the influence of the stars and planets controlled matters was straight-out hogwash, but Taberah's explanation overall gave him the impression of a rational account believed by a rational mind.

Science did experiments rigorously, and its standards did not validate any claims of magic — no, wait, the dice were loaded on that question; in Taberah's explanation, Aed saw a wisdom that just wasn't found in psychology; science did not meet the standards of interesting magic. No, that was not quite right; when did science really begin flourishing? At the same time as magic began flourishing, and often in the same people; Newton's discovery of physics was almost a vacation from his work in alchemy. The two enterprises were born out of the same desire, to control nature and gain power, and in both people would readily engage in practices that had been hitherto regarded as impious and disgusting, such as digging up and mutilating the dead. Still, there was a difference, a difference which Aed felt if he could not think. They —

Aed came to himself and said, "I can't tell you the difference between science and magic, Taberah. I can't tell you, but I do know it. You shouldn't be doing astrology. You shouldn't be doing divination. If you're not sure of whether something is science or magic, you can ask me." Aed thought about buying him a psychology text, but decided not to, at least not for the moment. The psychology text he'd read, he was beginning to realize, was parochial and in many ways backwards; of course it was written by psychologists at respected schools, but the zeitgeist was —

Taberah would encounter enough of it on its own, without having it embedded in something Aed told him to have replace his belief in astrology. Aed felt vaguely guilty about destroying a treasurehouse of lore, but let this go to the back of his mind. Once Aed had explained a simplified version of physics and astronomy, it was with some deflation that Taberah saw why Aed placed astrology among divination, but not weather forecasting.

Taberah stepped out that night, and lay on his back to look at the stars. He could not see many of them, and those badly, because of all the light. It seemed to him that something had departed from their song, but he could almost see something new. It was beautiful that the planets should revolve around the sun and not the earth; just as there were nine orders of angels — the highest six of whom gazed continually on the glory of God, and only three of whom were sent out among men — there corresponded nine planets, six of which were further out in the Heavens, the third of which contained life, and all of which revolved around the Light! His head went dizzy when he realized what it meant that he lived on a planet, and the sun was a star.

The Trial

A representative from the Turing Society called Aed. "We hear that you have a program that is trying to pass the Turing test. I would like to administer the Turing test to your program at 2:00 PM on Tuesday, with observation. Is that acceptable to you?"

Aed's heart jumped, and he had to force himself to stand still. "Yes. I will look forward to it."

The test room was modified to support an arbitrary number of lurkers, and excitement built around the university. Quite a number of eyes were watching as the tester strode into the room. One of the contestant avatars looked like a unicorn; the other looked like a dragon. The tester managed to conceal her surprise, and said, "Good morning. How are you today?"

The unicorn said, "I am doing quite well. You?"

The dragon said, "I've had a lousy day, but it's getting better. I love playing the Turing game."

The tester said to the dragon, "Have you ever lost the game?"

The dragon said, "I've lost once, to a salesperson. I was really mad when the judge said I was a computer."

The tester repeated to the dragon, "Have you ever lost the game?"

The dragon repeated, "I've lost once, to a salesperson. I was really mad when the judge said I was a computer."

The tester asked the unicorn, "What about you? Have you ever lost the game?"

"Yes, frequently. I guess I don't sound very human."

The tester repeated her question to the unicorn. "What about you? Have you ever lost the game?"

The unicorn hesitated and said, "Um, is there a reason you're repeating the question?"

The tester did not answer. Instead, she said to the unicorn, "Tell me a bit about yourself."

The unicorn said, "Uh, I like woodworking, and I like to collect things. I've got a roomful of bottle caps, and I have one of the biggest collections of visual textures on the net. And I like fantasy."

The tester turned to the dragon and said, "What about you? How are you like?"

The dragon said, "I'm an optimist. It's too sunny out to be crabby. And I like collecting stamps."

The tester asked the dragon, "What is your philosophy of life?"

The dragon said, "My philosophy is one of many sides. There are many sides to life; there are many sides to being a person. I am many different things as the occasion merits."

The tester turned to the unicorn and asked, "What is your philosophy of life?"

The unicorn said, "Could you ask me another question? I'm kind of nervous now, and I'm having trouble thinking straight."

The tester said "Ok What is the one question you most fear me

The tester said, "OK. What is the one question you most fear me asking you?"

The unicorn shivered, and said, "The one you just asked?"

The conversation continued for two hours, unfolding, unfolding. It was about that time that the tester asked the unicorn, "What was your scariest childhood moment?" and the unicorn told a story about getting lost on a camping trip, and then twisting an ankle. Then the tester turned to the dragon, and said, "How about you?"

The dragon said, "Personally, I'm partial to seltzer water. And you?"

The tester pushed a button and left for the conference room Aed was in. She said, "You have quite an impressive achievement there, but you have a long distance to go before passing the Turing test. I tried to give two hours' testing to be sure, but I knew the dragon was a computer within five minutes of speaking with it. The clues that gave it away were —"

Aed cut her off and said, "Sorry, you guessed wrong."

"*What?*" the tester asked.

"You guessed wrong."

"Can you tell me with a straight face," she asked, "that the dragon was a human? Do I look that gullible?"

Aed gently said, "No, I'm not saying that the dragon was human. I'm saying that they were both computers. The dragon was merely an old version of the program."

The woman's jaw dropped.

Aed added, "I should also like to say that most of the ideas were my guest Taberah's; I mostly helped out. The achievement is his, not mine."

Detained

A knock sounded on the front door. "I wonder who that could be at this hour," Nathella said. "A reporter?"

She opened the door. There were several men outside, holding badges. They looked familiar, and smug; one of them said, "Officer Salisbury, Bureau of Immigration and Naturalization Services."

Nathella sank back. Aed said, "What are you doing here?"

Officer Salisbury said, "We have come to detain Taberah, before transporting him to his country of origin."

Aed thought for a moment about an English translation, and said, "What right do you have to do this?"

Salisbury said, "We are enforcing the law. If you —"

Taberah popped his head in the window and said, "What is this?"

Officer Salisbury said, "You need to come with us."

That shoots any remnants of search-and-seizure concerns, Aed thought. "Could he have a moment to gather up his possessions, at least?"

"That won't be necessary," the officer said. "We do not transport possessions beyond clothing worn. We are not a shipping service."

Aed, Nathella, Clancy, and Fiona each gave him a hug, their eyes filled with tears. Then Taberah was handcuffed and led away to a car. Nathella could see Taberah steeling himself against the ride.

Wrong Person

In the middle of the night, the videophone rang. Aed got up, turned off the video, and said, "Yes?"

The voice on the line was unfamiliar. She said, "Hello, is this Aed Kinsella?"

Aed said, "Yes."

The woman said, "I'm calling to tell you that you and Taberah Kinsella have won the 2034 Turing Award for your joint work in artificial intelligence."

Aed blinked, and said, "I'm sorry; I think you have the wrong person."

The woman laughed, and said, "I'm positive I've got the right person. Can you get Taberah?"

"I'm sorry; I can't; Taberah is being 'detained' by the INS."

"What? Who are the INS? Do the police know about them?"

"Yes; the INS are part of the police. They are the Bureau of Immigration and Naturalization Services, and they just took Taberah. He is now en route to a jail, to have his head and his beard shaved, be stripped and put in a de-humanizing uniform, and sit in a cold cell with nothing to do while he waits for the INS to decide what country to deport

him to."

The woman was silent for a moment, and said, "What country is he from?"

"I don't know. Dr. Pabst, an anthropologist I know, said that he doesn't seem to be from any culture currently existing. He has learned English, but besides that — why?"

The woman said, "Please wait a moment; I'll get back to you."

Aed had just crawled back into the covers when the phone rang. It was a journalist. And then another. And then another. After the first dozen times trying to explain that it was Taberah's work and not his, and that Taberah had been taken by the INS, he unplugged the phone.

At four in the morning, the doorbell rang. And then rang again. And again. Aed swore, and fumbled about for Nathella's keychain — a keychain with pepper spray. He threw on a bathrobe, and padded out to the door. "Who is it?" he shouted through the door.

"Officer Salisbury, returning Taberah to your house."

"*What?*"

"When we came last night, we did not realize that he held a United Nations passport. We apologize for the inconvenience."

Aed opened the door. Taberah looked weary, frightened, relieved, and very happy to be back. Aed picked him up, and held him in thanksgiving. Then he said, "Let's both of us get some shuteye; we've got a speech to write."

A House Abuzz

There was a great deal of excitement around the house; friends and colleagues from church, the university, and other places stopped by, and some of them brought meals. Aed was excited by the activity; Nathella was wearied, and climbed into bed as soon as the last party had left.

One of the things that Aed insisted was that Taberah and all of the Kinsellas would appear through avatars, and that Taberah be referred to by a pen name — John. This was big enough news that Aed did not want strangers on the street recognizing them from a compucast or rebroadcast, nor calling them up. While Aed was in the living room explaining details of the work to his colleagues, and Nathella and Clancy were occupied with the hospitality, Fiona was occupied with Taberah. The two of them were in the computer, talking about what Taberah's avatar should look like.

The question was a bigger question than it seemed at first. The avatar should not be recognizable as him, but it should reveal him, his bearing. "It should be a mask," Fiona said. "It should be like a Halloween costume, changing yourself in such a way that you shine through."

"What's Halloween?"

"Later, Taberah. We don't have time to explore that now, although you'll see in a few months. Now, to start off with, do you want a human-looking avatar, or a fantastic avatar?"

"I think I'd like a fantastic one."

"I — I don't know. Could I look at some of each?"

"Fiona said, "Hmm... There is something alien about you. Would you like to see what aliens look like?"

Taberah looked at several bodies of aliens, and recoiled. "Those aren't aliens," he said. "They're humans made to look grotesque. That's not what being alien is about."

"Ok," Fiona said. "How about fantasy? Do you like fantasy?"

They looked through a faun, a centaur, a unicorn, a dragon. "How old do you want to look?" Fiona said. Taberah didn't know. "Not that knight in armor; that would only be for going out to war. Not — *there!*" he said, with excitement.

"You don't want that," Fiona said. "That's a court jester. They acted like fools for other people to laugh at."

"I want that! I was a court jester once!"

Fiona wondered about Taberah's statement, but this was not time for long questions. She looked through colors, and guided Taberah towards a jester's outfit that was darker and had more muted colors. It was unmistakably a jester's outfit, but it had an air of gravity about it — which Taberah liked. "Ok," she said. "Now what do you want to eat?"

"Roast boar," Taberah said.

"Taberah, boar is awfully expensive, and there will be a lot of people there. I —"

"Give me two swords and I will kill one!" Taberah said, grinning.

"No, Taberah. You can't do that."

"Why not?"

"To start with, there aren't any boars here. You'll have to think of something else."

"Roast pig with an apple in its mouth!"

Aed stepped in. "Taberah, would you come out for a minute? There are some people who want to see you."

Fiona said to Taberah, "We can't have pork. There will be a lot of Muslims at that dinner."

"Is this country overrun by worshippers of Mahomet? Is there no one to drive them out?"

Aed stopped in the hallway. "Taberah, a couple of things. First, Muslims are not worshippers of Mahomet, any more than Christians are worshippers of John. They believe Mahomet was the greatest prophet, but not the man-god we believe Jesus was. Second, Muslims are citizens here. They are powerful, and their power is not all to the good — it is awfully hard to do things that Islam disapproves of, and there have been not-so-subtle manipulations against Christian evangelists speaking to Muslims, for one thing — but they are people, citizens of this country like anyone else, and not invaders. It is sad that Christianity has let Islam take its place, but the solution is not to run them off. Third, we may have wine available at th—"

Taberah interrupted. "Spiced wine, piping hot? And cider?"

Aed said, "Spiced wine, piping hot, and cider, if you want, might be possible, but the food has to be something that Muslims may eat." Aed declined to mention the headache that would be involved in getting alcohol served...

Taberah said, "Do Muslims eat hamburgers?"

Aed threw up his hands and said, "I have guests waiting. Why don't you have *filet mignon*? It's the same kind of animal as hamburger, only much better."

Taberah was tired after the people met. He had not realized the intense energy it takes to connect with people from another land — he

and the Kinsellas had gotten used to each other through intense contact. Nathella picked up on his fatigue faster than anyone else; she encouraged him to go to bed and get a good night's rest before the big day. Everything was in place; Aed had finally managed to convince the Turing society that he did not deserve the award, and accepted the privilege of introducing Taberah. Everyone slept lightly — everyone but Taberah; he slept like the dead, and got up to protest the stiff clothes he wore to the banquet.

Accolades

Taberah was cheered at the meat and drink; the meat reminded him of home. He was equally delighted to sit down and drink wine with Aed, and his spirits did not flag although people asked him questions that struck him as rather odd. At the end of the dinner, Taberah was pleased to have (so far as he could tell) avoided making any *faux pas*. He felt a sense of accomplishment, and felt at home.

The chairman of the Turing Society looked at Aed and pointed to his watch, and Aed nodded. He took a sip of water, and then climbed up the steps to the podium.

Nathella could not see that her husband was nervous, but she knew it. He had thrown out his introduction a dozen times. Neither of them were worried for Taberah, though; Aed and Taberah had worked out a speech, which Taberah memorized with remarkable facility.

"I would like to begin this introduction," Aed said, "by apologizing for giving an introduction not worthy of the occasion. I would very much like to give a traditional introduction, in which one perhaps starts by saying 'The person who is going to speak is a man who needs no introduction,' and then spends five or ten minutes detailing education, awards, and accomplishments. It would perhaps sound grander if I were to say that such an introduction was inadequate to him, but the truth is that I don't know enough about him to give an introduction of that sort. I don't know if he went to school at all; he appeared on my doorstep, became deathly ill, and has since then been turning my world upside

down.

"His first surprise for me was in chess. I am rated at 1975, and when I invited him in, him looking dazed and confused, he took my chess pieces to the table (at least after I let him), and began to play his way — at first I thought he didn't understand the game or was cheating, but then I realized he wasn't playing on a grid. He beat me five times in a row.

"Different members of our family have had conversations with him that left our heads spinning; my wife Nathella is the only one who has not had that experience, and I believe that is because of her ability to understand people. There's only been one time that I've been able to understand Taberah better than her, but I won't detail that here.

"Taberah is brilliant, and approaches life in ways that would never occur to me. Wherever he comes from, and wherever he was educated, he somehow had the intelligence to look at the problem of artificial intelligence in a way nobody else had seen it before. If I cannot vouch for his education or accomplishments, I can vouch for this one accomplishment. Taberah has worked into a special place in my heart, and not only because of his brilliance. Without further ado, here he is."

Taberah strode up to the podium; on the screen behind him, his avatar looked quizzical and dignified at the same time. "I was going to say," he began, "that my discovery has taught us nothing about human intelligence. But I began to reason, and realize that it has.

"Men have always wanted to create other men like themselves. I once wished to make an assemblage of gears that would make a mechanical human, and I saw no reason why not. If gears could make a clock, with continual motion controlled according to its construction, why could the best crafted gears not make a man? Certainly myths came of gods who had made mechanical men. So I do not find it to be at all surprising that, when people found a way to make a machine that could do arithmetic and logic, they thought they had made something that could think.

"Chess is something that is difficult for people to do. So it was thought. If we can only make a computer that can beat the best humans

thought, 'If we can only make a computer that can beat the best humans at chess, then we will have achieved intelligence.' The day has long past when a human could beat the best computer, but if that achievement has taught us anything about human intelligence, it is that humans do not play chess like a computer. Making better and better computer chess players did not make computers intelligent any more than making more and more realistic-looking statues will make them alive.

"Conversation is something humans do, so Alan Turing, a brilliant mathematician, thought, 'If we can only make a computer that can pass for human in conversation, then we will have achieved intelligence.' Now the day has come when a computer has passed for human in conversation, and if it has taught us anything about intelligence, it is that intelligence goes beyond conversation as it goes beyond chess. Those are both activities humans can do, but mimicking or even beating human performance does not a person make, any more than a collection of lifelike statues can be improved to the point of achieving life.

"I do not think that this calls for a new test to determine intelligence. I think it calls for a realization that human intelligence is too rich and too deep to reduce to a simple test. When a test has been proposed to measure intelligence, the test gains a life of its own, and suddenly people stop thinking about intelligence, and start thinking about how to pass the test. Chess playing programs became sophisticated with speed and advances that were not even approximated by efforts to understand how humans play chess, let alone how humans think.

"But this is enough. It is bad speaking to cram so much into your audience's heads that things are falling out; I have criticized enough for an award recipient. The field of artificial intelligence is a fertile area of thought which has brought many good things; even if artificial intelligence is never achieved, its failure will have enriched the soil of human endeavor. I thank you for this award and the other assistance the Turing Society has provided me, and, Aed, Nathella, Fiona, and Clancy for their help. God bless, and have a good evening." He returned to his place.

The chairman of the Turing Society stepped up to the microphone and said "There is one more thing Mr Kinsella The Turing Society has a

and said, "There is one more thing, Mr. Taberah. The Funding Society has a fund, out of which to give prizes to its award recipients. The funding might buy research equipment, or a sabbatical, or perhaps access to online research libraries. Is there something we can get for you? Do you need a home?"

Taberah said, "I have everything I need now. But if there was one thing I could have — do you have a troubadour's lute?"

There was a moment's pause; the chairman, Dr. Bode, spoke on his cell phone for a moment and then said, "One of the members of the audience has one now, which she will lend you while another is delivered." A small woman walked up; Taberah was puzzled, as she was holding a small black bag, but otherwise empty-handed — there was no room to conceal a lute, even a small one. She reached into the bag, and pulled out a thick black belt and two long black gloves, long enough to cover an elbow. He could see that there was something else in the bag. She looked at him and said, "Put the belt around your waist, and the gloves on your hands."

Taberah did so, feeling some puzzlement.

"Now," she said, "play as if you were holding a lute."

Taberah looked at her, confused.

"Like this," she said, moving her hands in a strumming motion.

Taberah moved his hands, as if to play a chord — and jolted in surprise as notes sounded. Then he moved his hands again. There were some sounds of jarring dissonance, like a piano being played by frostbitten fingers losing their numbness, and then a simple, high, pure, aching sound. It pierced by its beauty, and with the music, words, in a voice that filled the room:

*Once there was a little lady,
Fair and pure and elfin bright.
Her light skin shone like burnished silver,
Blazing light throughout the night.*

*Her soul it was a filled with music,
Her body was a filled with dance.
Her long hair was black like ravens,
All blazing was her countenance.*

Taberah's otherworldly song filled an hour; in his song, he carried with him a feeling of home, a moment of Heaven, and all of the strangeness of the land about him, of his aching at no place that felt home, vanished. The music he made in his trance brought its listeners into another time, into another world; to those in the room, the song so filled their consciousness that they did not think of anything else. When the song began, the netcast of the awards ceremony was brought into focus, and the avatar who had looked slightly strange speaking about artificial intelligence now fit perfectly into place: a court jester — and more than a jester — holding a lute, telling a tale and weaving a song.

When it was over, even the silence was musical, because it bore the silent echoes of the music's spirit. Taberah walked back to his seat, and asked, "Can we go home?"

With that, the meeting was over.

Where Do You Come From?

It was the first day of classes; Aed had returned home late, to a house filled with a marvelous scent. It smelled of tomato, and basil, and bacon, and beef. Clancy said grace at Aed's invitation, and they began to pass the pasta.

Fiona looked at Taberah, and said, "Where are you from, Taberah? I don't think you've ever told me that."

Taberah said, "I am from — Provence, or at least half from there. My father is a merchant, and we have travelled to the ends of the world, and beyond — but never to a place so strange as this. I am used to mountains, and seas, and strange people and barbarian tribes — even worshippers of Mahomet —"

Aed said, "*Muslims.*"

"— even Muslims, but there are many things here that are strange to me."

"Like what?" Fiona said.

Taberah thought for a moment, and said, "It is hard for me to think of and harder to say in words."

Nathella said, "Can you think of it in your words in your own language? And then maybe translate?"

Taberah concentrated for a moment and said, "No, I can't. Not even in my own language. I will tell you later. After I think."

Aed said, "Don't worry too much if you can't answer. It was a friendly question, not a probe."

Taberah said, "It is a friendly question, and a probe, and a good question. That is why I want to answer it. Maybe after I research on the computer."

Fiona said, "Taberah, have you ever been to my Dad's campus? Tomorrow's a half day, and I could take you there. You might see more of the world."

Taberah said, "I would be happy to do that. But ooh! I miss home. I have never had a place that was completely home. Whether riding away hotly pursued, or haggling down the price of salt, or opening an illuminated manuscript — I was at home for a moment, but over time not at home. Even in stealing a relic from a nearby cathedral —"

Fiona said, "You *stole* a *relic* from a *cathedral*?"

Taberah said, "Yes. The saint wanted to move; otherwise, he wouldn't have let his relics be moved. And I can move swiftly and silently —"

Fiona said, "Taberah, would you steal a fork from this house?"

Taberah looked surprised. "Never!"

Fiona said, "Why on earth would you be willing to steal a relic?"

Taberah had no real response to this question. He said, "If another city had a relic, and you needed it, wouldn't you assist it to your place?"

Fiona said, "I can't explain all my reasons why not, because I have to go to bed in four hours. But to start it off, that would be dishonorable."

Taberah thought, and said, "I'll have to think about that. I never met a knight who thought it dishonorable to steal a relic. Oh, I know how to

a knight who thought it dishonorable to steal a relic. OK, I know how to explain. A relic does not belong to a living man or a place; it belongs to God and to the saint. Stealing a relic is a very different matter from stealing corn or grain. The corn really belongs to the person who has it; the relic belongs to the saint, and then to the saint's followers — so if the people here worship a saint and want his relic more than the people where it is kept, then if the saint allows the relic to be moved, it should be moved."

Fiona said, "I can't believe this rationalizing. The bigger a sin, the more rationalizing there is, and you have rationalized an unholy theft on top of starting it in the first place!"

Nathella turned to Fiona and said, "Honey, I don't understand Taberah, but he's not rationalizing. He does not have a defensive air about him. And something tells me that he would not steal anything from this house — nor steal anything from another place and bring it here. Right, Taberah?"

Taberah said, "Yes. I would never steal if it were dishonorable."

Clancy looked around and said, "Taberah, did you hear the joke about the cathedral that was so blessed that it had two heads of John the Baptist, one as a boy and one as a man?"

Taberah said eagerly, "No. Please tell it to me; it sounds very good!"

Fiona groaned and said, "Mom, would you please explain it?"

Nathella said, "Taberah, did you notice anything funny about there being two heads of John the Baptist?"

Taberah said, "No. It sounds like a great providence indeed, for which God is to be praised."

Nathella said, "What would have had to have happened for a cathedral to have the head of John the Baptist as a boy?"

Taberah said, "I suppose for him to have died as a boy."

Nathella said, "If there was a skull of him as a man, did he live to be a man?"

Taberah said, "Yes."

Nathella said, "So there's a logical contradiction for a cathedral to have two heads of John the Baptist, one as a boy and one as a man. Right?"

Taberah said, "Yes."

Nathella looked at him. "You still don't get the joke."

Taberah said, "I'm still waiting for the joke to be told. So I don't get it."

Nathella said, "If there's a logical contradiction, then it couldn't have happened, right?"

Taberah said, "If there's a logical contradiction, there's a logical contradiction. It doesn't mean that God can't bless a church with two heads of John the Baptist. God moves, and his ways are beyond our understanding. He has done greater things than bless us with two heads of a saint!"

Fiona said, "Taberah, if we go out for a walk tomorrow, do you promise not to confuse me?"

Taberah said, "Am I confusing you?"

Aed got up, placed his arm around Taberah's shoulders, and said,

"Wild thing!
You make my head spin!
I think I love you."

Music From Another Age

Fiona took Taberah by the hand, eagerly leading him as if she were a small child. The university's square was filled with a noisy, jostling, laughing group of people, chaotic as any bazaar. The excitement was tangible. "Today is the first day of Student Activities Week. All the student organizations are clamoring to find new recruits from among the freshmen, and anybody else who cares to come. It is a lot of fun."

Taberah walked over to one stand where several people were talking. He read the sign overhead, *Humanist Hacker's Guild*, and asked, "What is a hacker?"

One of the men looked up from a portable computer and said, "The first hackers were people in software who like solving problems and believe in freedom and helping each other. They produced a lot of computers and software. We are a special kind of hacker, hackers in the humanities. We produce artwork, music, and literature, and share it with other people. In a way, there have been humanist hackers for ages, but interaction with computer hackers has brought an awareness and a fertile field for sharing. Would you like to have a copy of one of my poems?"

Taberah said, "If I am here, why would you give me a copy? Why not just recite it?"

The hacker said, "Um, because I don't have it memorized?"

Taberah said, "I'm puzzled."

The hacker said, "Why?"

Taberah said, "How could you compose a poem, even writing it down, and then forget it?"

"Quite easily, I assure you."

Fiona put her hand on Taberah's arm and said, "Taberah, please. We are his guests."

The hacker took a sheet of paper and said, "Here. I'll read it to you."

"The Unicorn's Horn," by Elron Ellingswood

I walked out into the deep, dark, forest,
and there, in a clearing, it stood.

Oak was behind it, ferns below,
and atop its head, stood a blazing white horn.

It walked to a shimmering pool,
Its hooves not making a sound.

Around, the silence was broken
by the calling of a hawk.

The wind stirred the tree leaves
and danced softly over the grass.

The Lady of the Lake stirred,
softly,
invisibly.

Taberah looked both impressed and puzzled. He said, "You show the forest as an object of beauty. Why?"

Fiona grabbed his wrist, and tugged on him, saying, "Look over there! Karate!"

An instructor smiled and said, "Not Karate. Kuk Sool Won. Karate is

a single martial art that focuses on punching, kicking, and blocking; Kuk Sool is a comprehensive martial arts system that includes joint locks, weapons, and escapes as well as many kinds of punching, kicking, and blocking."

Taberah said, "What's a joint lock?"

The instructor said, "Throw a slow punch at me."

Taberah said, "What?"

The instructor said, "Do this."

Taberah made the motion and his hand was caught, his wrist twisted.

"But what if I punch you with my other hand?"

"Why don't you try to do that? Slowly?"

Taberah did, and his puzzlement was exceeded by the instructor's, who said, after a second, "Stop. I've never seen someone who could resist a joint lock like that. You must have a tremendously high tolerance for pain."

Taberah said, "I don't understand. I didn't feel pain. I don't understand what you were trying to do."

The color of Fiona's face was beginning to match her long, wavy red hair. She said, "Taberah, come on. Let's find something else."

Taberah began to wander, and then saw — or rather, *heard* — something so positively medieval in spirit that it drew his attention so completely he was aware of nothing else. Up until this point, he had been thrown off balance by a hurry in the people around him — or, at least, that would be a deficient way of putting it. A more accurate way of putting it would be that he was aware of time in the sense of an awareness of something around him, but not in any sense that would let him grasp rushing to get something done, or guilt at sitting at doing nothing. He

vaguely perceived such a quality in those about him, and he was baffled and troubled by it, in the same way as if he were surrounded by people who were constantly thinking about air and in a frenzied haste to try to find some space that had enough air to breathe.

It was the near total absence of this quality in the music before him that beckoned him. It was as if he had stepped into a room of people breathing normally and attending more important concerns and only then come to realize that he had been surrounded by people fretting over whether they had enough air to breathe.

Taberah stood in silence, drinking it in. Then he stepped forward, picked up an instrument, and joined in the song.

At dinner, Aed asked Taberah, "So what did you see today?"

Taberah said, "Today was a happy day. Today I discovered New Age."

Aed suppressed a groan. How was he to begin an explanation? The phenomenon that was called New Age in its current incarnation had occurred many times in the past, and would doubtless occur many times in the future, each time under a different name; it was in spirituality what a logical fallacy is in reasoning. It was heresy — perhaps he was safe in using that word with Taberah. In the word, 'heresy' carried a curious inversion of "a good and original idea which some benighted tradition condemns", the word being a condemnation of the tradition rather than the idea. What a diabolical trick that was! Heresies were neither good nor original ideas; they were propositions that had been weighed in the balance and found lacking, "New" Age being a manifestation of an error that had first occurred two millennia ago and had rotted every time since then. It promised freedom, and was one of the most confining and constricting prisons he had known — a prison like being left all alone in an empty wasteland. You could go as far and wide as you wanted, and still find nothing good.

Aed hesitantly asked Taberah, "What draws you to New Age?"

"The — music — time — you are hurried. They are not."

Aed nodded. New Age music was soothing music. But as to the time — "Taberah, it's a busy time of year for me. What is this about time?"

Taberah tried to explain, and at first failed completely. Then, on the second time through, there was a look of dawning comprehension on Fiona's face, and she said, "I will try to enter your time, Taberah. But it will be difficult; we have been taught to hurry for a long time. I won't be able to do it very quickly, if I can."

Taberah kissed her cheek, and said, "I not in hurry — ooh, did I do right in touch?"

Aed wondered what Taberah was talking about, and then recalled him sternly telling Taberah not to touch others in ways that he had not seen them touching. "It's OK, Taberah. You may give a kiss on the cheek to people in this family."

Taberah walked over, and kissed Aed on the cheek.

The Phoenix

Taberah spent most of the day running through New Age music in his head, and seeing how it would sound on his lute; Fiona had to knock on the door several times before he noticed she was there.

The square was less crowded than before; on the way in, Taberah looked and saw a place where several people were moving their fingertips about on a ridged surface, their hands dancing with energy; on a wall behind them, colors swirled and spun, vibrating with energy. "What's that?" he said.

Fiona said, "Those are visual musicians. They play instruments that do not produce sound, but color. Do you like it?"

Taberah said, "I like it, but why are they spinning so quickly? Why —" he pointed to another booth and said, "What's that?"

A man in the booth next to them said, "Hey, a southpaw! Greetings!"

Taberah said, "What?"

"You're left-handed."

"What's that?"

"It's when someone uses the left side instead of the right?"

Taberah made the sign against evil and said, "Why would someone

do that?"

"You did."

"I might have pointed with my left hand, but I do everything else with my right hand."

The student tossed a pen up, and said, "Catch!"

Taberah looked, and realized he had caught it with his left hand. "I am sorry. I have sins I did not know."

The student now no longer looked so merry, and said, "You're left-handed, but you're ashamed to admit it."

Taberah hung his head.

The student said, "You aren't part of the solution. You're part of the problem. We have a right-handed society, with right-handed machinery and right-handed rules. Even the words are prejudiced — 'right' means correct, acceptable, and good, and 'sinister' and 'gauche' are words meaning 'left', which comes from a word meaning 'weak' or 'broken'. For years, lefthanders have been an invisible and maltreated minority, and now that some of us are speaking out and demanding that society improve, there are people like you who — a gay who was like you would be said to have internalized homophobia. You are —"

Taberah cut him off. "Why are you so angry?"

Taberah listened with horrid fascination to the rant. He began to realize that using the left hand, like turning a wheel the wrong direction or walking backwards, was only a symbol of evil and not its substance, and began (despite all internal resistance to external pressure) to see that the student's conclusions were right, that the world was a right-handed world with subtle and invisible slights to its left-handed members — or at least he tried to accept these things. He still felt guilt over catching the pen with his left hand, and he knew it would take time for him to shift his spirit to what he saw. But all this aside, he also saw an anger that brought far greater misery than any right-handed technology — not confusing

pencil sharpeners, not painful scissors — could possibly cause. He narrowed his eyes, and said, "You are angry."

The student swore, and said, "I'm furious. Why do you need to point that out?"

Taberah said, "Are you happier with your pit of rage than I am with my right-handed society?"

The student was speechless. Another student, who had been listening, said, "I would like to cordially request the honor of your absence at our booth."

Taberah felt anger rising in the pit of his stomach; he felt it, but did not let it master him. He turned, and walked away, taking a long walk around the square before slowing down, and finally stopping at one place. He looked at a group of students who were standing around, talking, laughing; each of them had a necklace with a fiery bird. Taberah asked, "Who are you?"

A young woman with long, curly auburn hair said, "My name is Emerant, and we are the Phoenix Society. The Phoenix Society is a group of brothers and sisters devoted to living in the abundant life that Jesus offers, and extending that life to others. The Phoenix, the bird that ever rises anew out of its own ashes, was a holy symbol in the ancient Christian Church, and in wearing it we recall the ancient church and its life among a pagan world, and allow God to create in us the same life in a pagan world today. We have worship services every Wednesday night. Would you like to come and join us?"

Taberah felt something in the back of his mind, but he could not put his finger on it — but it was something good, he was sure.

A young man with ebon skin placed his arm over Emerant's shoulder, and said, "What's your name?"

Taberah said, "My name is Taberah."

"How can we serve you? Do you have stuff to move in? Do you have a

story to tell?"

Taberah realized what he had felt but could not describe. There was an energy about these people, an invisible love so thick it could almost be felt. The young man was looking at him as if he were a king. The students in the group were all wearing distinctive necklaces, but their air did not treat him as an outside you, not even an outside you that they wanted to bring in. The man's eyes were dark as night, and they glittered like stars; there was something about his face that said 'I' and 'you', but even more said 'we'. Taberah smiled and said, "I should very much like to hear mass with you."

Emerant smiled a crooked smile, and said, "There is something else you want, Taberah."

Taberah closed his eyes for a second and said, "Emerant, I know your name. You, what is your name?"

The young man said, "My name is Abanu."

Taberah said, "Emerant and Abanu, I should very much like to play a song for you."

Immediately, a space appeared among the students. Taberah calmly, without any self-consciousness, walked over to the center and began to sing.

It was a noisy day, but it seemed silent inside that circle. Taberah could fill a room if he wanted to, but he was not singing loudly; still, all the students were aware of nothing else. When the song finished, Emerant looked around and saw that there were some people standing around and staring; she began to talk with him as the students asked Taberah questions.

It was not until seven that Aed found them, and told them that dinner was getting cold; Fiona had lost all track of time, and Taberah never had track of time to begin with. He slept well that night, and awoke in the morning knowing the answer to a question the Kinsellas had asked him.

In Spirit and in Truth

Taberah spent the day reading the Bible and researching on the computer; at dinner, he said, "Nathella, do you remember when you asked me a question about my place and this place, and I said it was harder to think of and harder to explain in words?"

Nathella said, "Yes."

Taberah said, "I was able to find words. In Bible, Jesus was talking with a woman at a well. She asked him what mountain to worship on. He said not to worship on this mountain or that mountain, but in Spirit and in truth. This land knows not how to worship in Spirit and in truth."

Aed's eyes narrowed. Aed and Nathella said together, "How so?"

Taberah said, "I have just begun to see how religion is, and it is not religion. It is private. It is an interest. It is a hobby. It is tame. Where I come from, religion is public because it pervades your whole being; it is who you are, and never has a pagan invader told a Catholic, 'You may be Christian, but make it a small thing. It is —'"

Aed nodded and said, "That criticism has been made before, and it is not to be lightly dismissed. Is there anything else you see?"

Taberah said, "I slowly began to notice, when navigating on the computer — where I am from, when people build a cathedral, they carve the backs of statues. I was shocked when I saw that people here do not do this. When an artist carves a statue in my land, he is not just working on a

ms. When an artist carves a statue in my land, he is not just working on a statue; he is making an offering to God, and his carving is a prayer. He carves the back as well as the front, working on a place whose fullness he may never see, because he is not making something for himself or other men, as much as making a prayer to God, who sees the back of the statue as easily as the front. Here, on the web, people do not do that. They think in terms of making a creation for other people. They do not try for completeness; they want — I do not know the words."

"Good enough for government work?" Clancy said.

"Yes. Except that making something that is 'good enough' does not mean making something that is good. God is only in the compartment called religion; he is not big enough to make virtual reality for — only other people who will not take the site very seriously is that important for."

I cannot make complete sense of Taberah's tangled wording, Nathella thought, but I do not need to. Taberah has difficulties with language when he is concentrating most intensely. She understood the meaning, if the words sometimes eluded her.

Aed said, "Anything else?"

Taberah said, "I hesitate..."

The room was silent.

Taberah continued, "I hesitate, but there is something strange about clothing and nudity. In my land, people wear clothing for custom and for decoration; being without clothing is not much. Here, clothing is for decency (a polite way to put it); there are chaste people and there are nude people, but there are not chaste, nude people. When a woman wears no shirt in an advertisement, her no-shirt means 'Look at me in lust!' She does not have a no-shirt that doesn't mean anything besides 'I don't want to have a shirt now.' There are people who say that we don't need to say clothes, and most of them say that not wearing clothes is not sexual, but few of them are chaste, or even acknowledge chastity.

"That is a symbol of something deeper. You need to cover your bodies, but even more you need to cover God, because you are ashamed of other people seeing them. And so you produce arguments to justify the existence of God, and God does or does not exist depending on whether or not he's covered.

"One of the theologians I know of, Thomas Aquinas, began his great work with five arguments for the existence of God. But these arguments have a very different meaning than yours; they were for adornment, and not for shame. Aquinas was not trying to give a needed proof of God, as your theologians do; certainly he did not think that if he failed to prove God's existence he was not able to believe in God. You speak of justifying belief, as if it needed justification, as if it were shameful if it were not covered by an argument.

"About clothing literally, I will not argue. Your way of looking seems to me a silly limitation that causes a lot of lust, but chaste nudity is not important. It is not one of the great things in life. But about clothing symbolically, I will argue much. You need in your minds to have an unblushing nudity, that can say, 'I believe in God and I accept his providence,' and not have a guilt about it for believing more than matter. You — I am sorry, I should be able to produce more examples. But there are many ways where you do not know how to worship in Spirit and in truth."

Aed was stunned. After a while, and after nobody else said anything, he said, "Son, you've got a brilliant mind. I have a feeling of being held under a microscope. I don't know how to respond, beyond saying that you see things I would never see, and I hope you keep thinking."

Nathella said, "You almost seem like someone from another era."

Taberah said, "What's an era?"

Aed said, "Later, Taberah. Later."

Which Era?

As Aed sat down, Taberah asked him, "So, what is an era?"

Aed thought. He said, "I would better answer that question after looking at an encyclopedia; I've thought about how to explain it, and I realized I knew less than I thought I did. But here's a rough sketch of what I can explain:

"The ancient world was the world that gave birth to Christianity. It is everything before the Middle Ages, or medieval period. It gave us the apex of paganism, and philosophy, and writing.

"The Middle Ages were a thousand years of Christian faith and culture. They saw monasteries, cathedrals, castles, monks, clergy, knights in shining armor, lords and vassals and fealty, chivalry, peasants and feudalism, illuminated manuscripts...

"After that came the Renaissance and Reformation period. There was a rebirth of art and learning from classical, that is ancient, times, and the monk Martin Luther nailed theses for reform to the door of Wittenburg Cathedral, and chaos broke loose. Let's see...

"The Elizabethan time was the time of the great playwright Shakespeare, and vernacular translations of the Bible. The Baroque time saw a flowering of complexity in art and music; aah!

"Modern times began with the Elizabethan era, and started a new secularism in philosophy. It reached its climax in the Enlightenment

secularism in philosophy. It reached its climax in the Enlightenment, with people worshipping the mind and reason, and the bloodbath that followed. Then came Romanticism and Victorianism, one of them a following of emotional sensitivity that often included libertinism, the other managing to be morbidly prudish. After that, came postmodernism, the era that we are in. People have given up the quest for truth, and there has been an increase in fragmentation — Taberah, I just saw a light go on in your eyes. What clicked?"

Taberah said, "I am medieval! What era are you from? Can you tell me how to get to the Middle Ages?"

Aed slapped his palm to his forehead and said, "Taberah, just forget this conversation and let's start over. There are some things about you that are like the Middle Ages, but the Middle Ages are a period of time in the past."

Taberah asked, "What is a period of time?"

Aed said, "It is a time when people have a certain way of living."

Taberah said, "I am from the Middle Ages period of time. And I think you might be as well. You belong to an age of faith, and you are a lord."

Aed said, "It is impossible to go back to another age. It is past. It has already happened."

Taberah would have normally backed off by this point, but there was something inside him that made him certain. He said, "Will you get out of bed tomorrow?"

Aed said, "Yes."

Taberah said, "But you have gotten out of bed in the past?"

Aed said, "Yes."

Taberah said, "Does that stop you from getting out of bed tomorrow?"

Aed saw where Taberah was going, and said, "But with history, it's different. You cannot bring back the past any more than you can make your self younger." As soon as the words escaped Aed's mouth, he remembered the difficulty Taberah had in distinguishing between childhood and adulthood. And he expected Taberah's reply:

"What is the past?"

Aed said, "Everything that has happened so far."

Taberah said, "So, the beginning of our conversation is in the past?"

Aed said, "Yes. No. Not in the sense you're speaking of. It is before the moment now, but it still belongs to the time we are a part of."

Taberah said, "I do not understand. What's the difference?"

Aed said, "Could we just forget this conversation? I know what the difference is between the present and the past, I just can't explain it..." his voice trailed off, and he said, more to himself than to Taberah, "or do I?" For a moment he began to see how someone could not perceive a difference between present and past, and not understand how, if there had been medieval people before, there could not be medieval people now. Aed remembered how, in school, when he read about different times, there was something he could identify with in a great many of them. Then the moment lapsed; Aed suddenly realized the intense concentration it took him to see into Taberah's world, and began to wonder how difficult it might be for Taberah to look into his world. To his surprise, Aed found himself saying, "I don't know, Taberah. Maybe there isn't one. Maybe we could talk about this later? I thought I was going to explain something to you; I wasn't counting on changing the way I think myself. I'm sure you know it's difficult work, changing how you think, and I am at the end of my concentration. Why don't you practice your music? Maybe you can play something for us after supper?"

Taberah looked at Aed and relaxed; it was only then that Aed realized how intently Taberah had been listening. Taberah said, "Sure!" and bounded outside like a nunny

and bounded outside me a puppy.

A Possibility Reopened

"Stop pacing the floor, dear," Nathella said. "You're making me nervous."

Taberah stopped and looked up. "May I walk around in the street outside? I need to think."

"Ok. Don't walk in the street; walk on the sidewalks. And don't get lost. Maybe you can take one of the trails in the forest."

If there is a word-space, Taberah thought, a space in which words exist and can be mapped out into closer and farther words, then there may be a thought-space, one in which thoughts can be mapped out.

Outside, it was dazzlingly bright; Taberah's eyes adjusted, and he saw some little boys throwing a ball around. As he passed by, one of them dropped it, and the children started arguing.

If there is a thought-space, his thoughts continued, then thoughts may be mapped out as paths in that space. Some thoughts can be mapped out from existing classics, and then new paths can be forged like old ones. If this can be done, then it may be possible for a computer to think.

Taberah entered the forest, although he was not aware of it. He felt almost dizzy; he was excited, and so intent in concentration that he lost all awareness of his surroundings.

The core idea for a computer to think is to construct a space of units of thought, measured by a metric arising from that for words — or perhaps similar; words can be sorted out by comparing histograms of words that appear before and after; a self-refining measure might compare thoughts that come before and after. A space can have trails worn in it by existing classics, as a forest develops paths from many people walking through it; the thought-space is then navigable by starting at one point and randomly picking from among the paths that lead out from it. This is how a computer can think.

How can I implement this?

I need to find Aed.

Exploration

Aed was quite doubtful that Taberah had found a way for computers to think; none the less, he regarded Taberah's ideas as interesting, and so set to work on implementing them. He used one of the methods from his own research to take a given metric space and put points into a vector space, so that a position could be described by a list of numbers: put springs between each two points in the metric space, as long as the distance between them, then put the points at random locations in the vector space and let the springs do their work. The actual method used was more complex, taking shortcuts so as to run more quickly, but the core idea was simple. A model of a car made of springs would find its shape as soon as you took your foot off it.

Aed expected it possible to make much more sophisticated measures, but to start off with he used a parser to diagram sentences, trim the sentences to subject, verb, and object, and strung together the lists of numbers to make a vector space with more dimensions. Aed realized that philosophy would probably be easier material for a computer to think about than something concrete; there was less opportunity to bump into the oddities of sense data and the external world. He the program through the philosophical classics online, and then waited to see what its first output would be:

I think, therefore I am. From this may be deduced any number of things. It is clear that the gods are dead. There is nothing but the gods. You, me, everything are the gods. This godlike character is unto the likeness of God. Each of the gods is a facet of God. God is, and

because he is he thinks. Reason is the ordering principle of the universe. I say this because reason gives us what other times sought in God.

The output went on for some length, and Taberah was crestfallen. "Cheer up!" he said. "With computers, nothing works on the first try. It takes time to get all the bugs out."

Taberah said, "I thought computers were logical."

Aed said, "Yes, Taberah, they are logical, and that's the problem. We are not logical; we hear what a person says, and know what they mean. But a computer does not know what we mean; it only knows what we say, and there are all sorts of subtle errors that a human wouldn't even notice, that a computer does not have the ability to correct. That monologue is quite good for a first run; if you aren't listening carefully, it sounds like a philosopher. You should be proud of yourself. How'd you like to have Chinese food for dinner?"

Fortune Cookies

There was a rule in the Kinsella's house against bringing up subjects at dinner that were not understandable to everyone in the house; this rule was bent a bit to allow Taberah to explain his discovery. Dinner was over before they realized it; Taberah unwrapped his cookie, put it in his mouth before anyone could stop him, started chewing, stopped, and then spat out a piece of paper. He said, "What is this?"

Fiona and Clancy were both laughing too hard to explain; Aed said, "It's a fortune. You're supposed to take it out of the cookie before you eat the cookie. Look at it."

Taberah wiped off the piece of paper and read, "Exciting prospects come. Don't miss the opportunity."

He looked at the paper in disgust and said, "Why do you have this in the house?"

Nathella said, "It's a prediction or a piece of advice. It's just for fun."

Taberah looked at Aed and said, "Aed, you told me not to do astrology because divination is sin. This is divination. It is sin."

Aed said, "Taberah, it's not serious. Or at least we don't do them seriously; nobody believes that a fortune cookie will tell the future."

Taberah said, "If you cast a spell just for fun, is it less of a sin?"

Aed said, "I would never cast a spell."

Taberah said, "But you got fortune cookies."

Nathella said, "We didn't ask for them. They come with Chinese food."

Fiona said, "We are studying China in school now, and the Chinese do not eat fortune cookies, but fortune telling is very big in Chinese culture. People will not enter a building if a Feng Shui practitioner was not consulted about where to lay its foundations."

Clancy was looking at his fortune. The expression on his face was slowly turning to disgust. "Taberah is right. Mom, you've talked about how we let sin into our lives without challenging it; this is sin."

Fiona said, "The fortune in a Chinese cookie certainly comes out of fortune telling — and when fortune telling is done, it varies from serious to lighthearted — like we take fortune cookies."

Nathella said, "If you would rather, we can throw the fortune cookies away when we get Chinese, or ask them not to provide fortune cookies."

Aed didn't say anything. He had expected Taberah to know things about whatever culture he was from that Aed didn't — but not to be able to see things in American culture that Aed couldn't. He had shifted, in his mind, from wondering why Taberah objected to fortune cookies, to wondering why he hadn't objected to fortune cookies.

What else would Taberah show him?

Miracles

Taberah had been thinking throughout the day, although not about computers. When Aed got home from work, Taberah said, "This land is very different from any of the other ones I've known. Are even the miracles different? What are miracles like here?"

Aed said, "Beg pardon?"

"What miracles have you seen? What miracles have you been given?"

"Taberah, I've prayed for many miracles in my day, and I have had some prayer requests answered, but I have never been given a miracle — or seen one."

"Why not? Do you not know God?"

"Taberah, I speak to God, and he is with me. But I have never seen a miracle. I'm one of few people who believes they happen at all. Most people believe that miracles don't happen — some Christians believe that miracles stopped after the age of the Apostles."

"What? Why? Do they believe God does not love his children?"

"Of course Christians believe God loves his children."

"Then why do they not believe in miracles?"

Aed was beginning to see another difference between Taberah's

culture — might as well call it 'medieval', not having any better words to describe it — between medieval culture and his culture. One side of Aed's realization was that Taberah's culture breathed the supernatural, might (for all Aed knew) find nothing unbelievable about a mountain being uprooted and thrown into the sea — and the other side was that Aed's culture had fought tooth and nail to exclude any consideration of the supernatural, had struggled to make it alien. There were hints of it in ten thousand places — in words like 'superstitious', which did not simply denote a particular kind of belief (a supernatural equivalent to practical observations such as "A pin will more easily slide into a pole if it is greased"), but a propagandistic condemnation of that kind of belief and supernatural belief in general. 'Rational' was taken to mean 'materialistic', and — the manifestations were legion, too many for Aed to concentrate on one. He recalled with a chill the words of the Gospel, where some manuscripts said that Jesus did not, and others that he *could* not do many miracles in one town, and was amazed at their lack of faith. Aed had a queer feeling that —

"Taberah, I would like to take you someplace tomorrow, and show you something. It is my loss that I have not seen any miracles, that they do not happen when I pray. But I would like for you to see the forces that shape my culture, and are why I have never seen a miracle."

Taberah slept lightly that night; he felt both puzzlement and expectation, wondering what manner of strange sight Aed would show him.

Even if They See

The lecture hall was nearly filled; the speaker walked up to the microphone and said, "Good evening, and welcome to the Campus Skeptics' first meeting this year. My name is Nabal, and this first meeting usually draws a large crowd — usually from hecklers who believe that what we are saying is false, but somehow never manage to prove it. I claim that there are no supernatural forces and never have been, that all of the interaction of nature can be explained by science, and that there is nothing that science can't explain. To prove it —"

Taberah was aghast. He elbowed Aed and said, "Aren't you going to say anything?"

The speaker reached into his backpack, and drew out a pair of pliers, a sheet of paper, and a cigarette lighter. He continued, "I have a sheet of paper and a lighter, and I am going to light this paper on fire. If there is anyone among you who has any kind of faith or magic, let him stop it from burning."

Taberah elbowed Aed again, and said, "Well?"

The speaker held the paper up, silent.

Aed found himself saying, "Nabal."

The speaker said, "Yes? Are you going to stop this paper from burning?"

Aed ignored the question. He said, "Do you know physics?"

The speaker said, "Yes. I am a senior with a double major in physics and mathematics."

Aed said, "If you know physics, then you know that physics says that the electrical charges in that piece of paper, if separated an inch together and released, would create a spark over a hundred times as powerful as a lightning bolt. Is that correct?"

The speaker said, "Yes. Actually, it's a bit more than a hundred."

Aed said, "Very well. If you know physics, separate the particles and let's see that spark."

The speaker did not reply to this comment. He said, "Are there any other comments or distracting rhetoric — perhaps to conceal that the supernatural is not real?"

A young woman said, "I don't know if God will grant my prayer, but I am praying that that paper won't burn — as you would fight in a battle you would rather lose than not fight at all."

Nabal said, "Any other comments?"

Taberah was trying to think of something to say, but he was at a loss for words. The speaker tried to ignite the paper; the lighter sparked several times, but produced no flame.

The speaker walked over to the table and said, "My apologies for the coincidence. Does anyone have other lighters?"

A young man with a large Afro flamboyantly tossed a golden Zippo to the front of the room and said, "Try this, brother."

Nabal took the lighter and struck it. It produced sparks, but no flame.

He adjusted the lighter, and struck it again. A large yellow flame shot out and began to lick up the side of the paper, to turn orange, to grow

out, and began to lick up the side of the paper, to turn orange, to grow stronger, hotter. Nabal turned away from the flame and looked at the eyes around him — some smug, some saddened. The flame died out, became a thin stream of smoke, vanished. Nabal grinned and asked, "And now, where is your God?"

He continued to look, puzzled by the expressions he saw on the gathered faces. Then he looked down, and dropped the pliers in shock. The paper was not burnt to ashes. It wasn't even singed.

Aed looked at Taberah, and saw the one face in the room that was not speechless. He grabbed Taberah's arm, and said, "We need to go. Now." They slid out, leaving behind them sputters of "Chemicals and charlatanism can do a lot."

Taberah said, "Why did you leave? They were about to acknowledge something supernatural."

Aed said, "Taberah, I don't know how you did that, or what was going on, and I don't need to know. But do you remember the story of the rich man and Lazarus? Do you remember how it ended?"

Taberah said, "'If they do not listen to Moses and the Prophets, they will not listen even if a man rises from the dead.' Yes, but —"

Aed said, "Taberah, a man *did* rise from the dead, and those who killed him still did not believe. C.S. Lewis wrote that he knew of only one person who had seen a ghost, and she was positive it was a hallucination. The wind of the Spirit cannot blow where the cracks have been sealed; this age has exerted monumental effort to seal the cracks. You heard them speaking as you left. They are positive it was somebody's sleight of hand. George MacDonald, before Lewis, said, "Seeing is not believing. It is only seeing." Even I, who believe in a supernatural God, am filled with doubts over what I just saw — half of my mind is saying that it was an illusionist stunt. Even in the Bible, seeing miracles did not make people believe."

Taberah said, "I don't understand."

Aed said, "I don't understand either. Maybe you'll figure something out — oh! I just remembered a joke."

Taberah said, "Yes?"

Aed said, "The wars in the Middle East will only be solved by a political solution or by a miracle — by people working out an agreement, or by God telling people to get along with each other. The political solution would be God telling people to get along with each other, and the miracle would be people working out an agreement."

Taberah listened and laughed. "So you're saying it would take a different kind of miracle, a greater kind of miracle, for people to believe."

Aed said, "Yes. And a kind of miracle that doesn't just happen, even in the Bible. A kind that God only gives, if ever, as a blessing on hard human work. Prayer does not annihilate human roles. Maybe God only chooses to work the greater miracles through humans."

Below the Surface

Aed said, "Taberah, there's something I've been meaning to talk with you about."

Taberah said, "Yes?"

Aed said, "What exactly draws you to New Age?"

Taberah said, "Music and time. Or rather, lack of awareness of time. There is something more than hurried time."

Aed said, "And New Age as a religion?"

Taberah said, "New Age is a religion? It seems much more like a people to me."

Aed said, "It's both. It is people who are drawn to a resurfacing of Gnosticism. Whether it is ancient Gnostics, or contemporary New Age, or medieval Knights of Cathare, it — what is on your face, Taberah?"

Taberah said, "I know the Knights of Cathare. It is so sad. Is New Age the same heresy?"

Aed said, "The mask ever varies, but it is the same heresy. The same mistake. The same attempt that has been weighed in the balance and found wanting. It's OK if you listen to their music, but try to stop there —"

Nathella walked in, looked at Aed, looked at Taberah, and said,

"What is it that I see in your eyes, Taberah?"

Taberah said, "New Age music will never sound the same to me again."

Nathella looked into Taberah's eyes, listening, searching. She saw a homesickness and wistfulness, and suddenly thought of the Little Mermaid in Hans Christian Andersen's fairy tales, before Disney left its mark on the classic. The witch had exacted a terrible price from the mermaid — she would have legs, lovely legs, but she would never be quite like the humans around her. Every step she took would be on sharp knives. In a flash of intuition she saw that the knives never left Taberah. He would always walk on sharp knives.

Nathella walked up, put an arm around Taberah's waist, and said, "Honey, will you come to my room? I want to show you something."

Taberah looked, and saw on the wall a yellowed plaque. He read:

Only faith can guarantee the blessings that we hope for, or prove the existence of realities that are unseen. It is for their faith that our ancestors are acknowledged.

It is by faith that we understand that the ages were created by a word from God, so that from the invisible the visible world came to be.

It was because of his faith that Abel offered God a better sacrifice than Cain, and for that he was acknowledged as upright when God himself made acknowledgment of his offerings. Though he is dead, he still speaks by faith.

It was because of his faith that Enoch was taken up and did not experience death: he was no more, because God took him; because before his assumption he was acknowledged to have pleased God. Now it is impossible to please God without faith, since anyone who comes to him must believe that he exists and rewards those who seek him.

It was through his faith that Noah, when he had been warned by God of something that had never been seen before, took care to build an ark to save his family. His faith was a judgement on the world, and he was able to claim the uprightness which comes from faith.

It was by faith that Abraham obeyed the call to set out for a country that was the inheritance given to him and his descendants, and that he set out without knowing where he was going. By faith he sojourned in the Promised Land as though it were not his, living in tents with Isaac and Jacob, who were heirs with him of the same promise. He looked forward to the well-founded city, designed and built by God.

It was equally by faith that Sarah, in spite of being past the age, was made able to conceive, because she believed that he who had made the promise was faithful to it. Because of this, there came from one man, and one who already had the mark of death on him, descendants as numerous as the stars of heaven and the grains of sand on the seashore which cannot be counted.

All these died in faith, before receiving any of the things that had been promised, but they saw them in the far distance and welcomed them, recognizing that they were only strangers and nomads on earth. People who use such terms about themselves make it quite plain that they are in search of a homeland. If they had meant the country they came from, they would have had the opportunity to return to it, but in fact they were longing for a better homeland, their heavenly homeland. That is why God is not ashamed to be called their God, since he has founded the city for them.

It was by faith that Abraham, when put to the test, offered up Isaac. He offered to sacrifice his only son even though he had yet to receive what had been promised, and he had been told: Isaac is the one through whom your name will be carried on. He was confident that God had the power to raise the dead, and so, figuratively speaking, he was given back Isaac from the dead.

It was by faith that this same Isaac gave his blessing to Jacob

and Esau for the still distant future. By faith Jacob, when he was dying, blessed each of Joseph's sons, bowed in reverence, as he leant on his staff. It was by faith that, when he was about to die, Joseph mentioned the Exodus of the Israelites and gave instructions about his own remains.

It was by faith that Moses, when he was born, was kept hidden by his parents for three months; because they saw that he was a fine child, they were not afraid of the royal edict. It was by faith that, when he was grown up, Moses refused to be known as the son of Pharaoh's daughter and chose to be ill-treated in company with God's people rather than to enjoy the transitory pleasures of sin. He considered that the humiliations offered to the Anointed were something more precious than all the treasures of Egypt, because he had his eyes fixed on the reward. It was by faith that he kept the Passover and sprinkled the blood to prevent the Destroyer from touching any of their first-born sons. It was by faith that they crossed the Red Sea as easily as dry land, while the Egyptians, trying to do the same, were drowned.

It was through faith that the walls of Jericho fell down when the people had marched round them for seven days. It was by faith that Rahab the prostitute welcomed the spies and so was not killed with the unbelievers.

What more shall I say? There is not time for me to give an account of Gideon, Barak, Sampson, Jephthah, or of David, Samuel and the prophets. These were men who through faith conquered kingdoms, did what was upright and earned the promises. They could keep a lion's mouth shut, put out blazing fires and emerge unscathed from battle. They were weak people who were given strength to be brave in war and drive back foreign invaders. Some others submitted to torture, refusing release so that they would rise again to a better life. Some had to bear being pilloried and flogged, or even chained up in prison. They were stoned, or sawn in half, or killed by the sword; they were homeless, and wore only the skins of sheep and goats; they were in want and hardship, and maltreated. They were too good for the world and they wandered in desert and

mountains and in caves and ravines. These all won acknowledgement through their faith, but they did not receive what was promised, since God had made provision for us to have something better, and they were not to reach perfection except with us.

Nathella waited until Taberah had finished reading, and said, "Nowhere on earth is home to us. Heaven is home, and you have less of a temporary home than most people do. It hurts to have an earthly home taken away, but the healing of the hurt is not in finding another earthly home, but in finding a heavenly home — and once you have let Heaven be your home, you may find pieces of it on earth.

"That plaque was given to me by my mother; she had it for some time, and it was one of the last things she gave me. Now she's in Heaven.

"Inside your heart — and mine, and Aed's — is a God-shaped void. Only God can fill it. New Age music may bring a moment's relief, but the thirst is one only God can wholly slake." She beckoned to Aed, and the two of them gave Taberah a sandwich hug. "But we will try to make a place where you can be at home."

Taberah said, "Where's Fiona? I want to show her my time."

Taberah's Time

Fiona said, "So, Taberah, how about your time?"

Taberah said, "Why don't we take a walk in the forest, and I'll think about how to explain it?"

They began to walk along the path, Taberah stopping and thinking every so often, but saying nothing. This continued for five minutes, fifteen, thirty, an hour — and Fiona began tapping her toes. Taberah stopped, and Fiona sat down on a log and began drumming her fingers.

"What are you doing?" Taberah asked.

"Nothing," Fiona said. "I'm just waiting for you to start explaining your time already."

"What about your hands and feet? What are you doing with them?"

"I'm just tapping them, because I'm getting impatient waiting for — ooh... Taberah, are you walking around and not saying anything on purpose?"

"No; I'm thinking about how to explain time to you."

"Do you understand why I'm drumming my fingers?"

"No. Why?"

Fiona began to realize something. She decided to try not to drum her fingers, or pace, or tap her foot, but just sit. It turned out to be harder than it sounded. Fiona kept noticing herself fidgeting; even when she thought to herself, "It's been a while and I'm not fidgeting," somehow she realized that her fingers were drumming on her legs.

"Fiona!" Taberah spoke, and Fiona suddenly realized that she had lost track of time — and was not fidgeting. "I do not have a different time awareness, so much as not having an awareness of time. There are moments for me, times with other people, times doing a task, and times waiting — watches are fascinating to me, but even when I watch them, I watch the rhythmic motion, and more often than not forget that the motion is measuring something that's supposed to be time. That time is fickle; it seems to speed up and slow down. The first lesson in medieval time is to let go of it."

Taberah walked a bit further, stopping a few times, and Fiona still caught herself fidgeting — but she began to catch herself completely relaxed at times. Fiona wondered when he would finally speak, and then was surprised when he broke the silence — was he done thinking already? Taberah said, "There are moments — I do not know how to say it in your language — when you are totally absorbed, rapt in concentration, when you lose track of time because you are so completely filled. It is not so much time as a foretaste of eternity. These moments cannot be commanded or controlled, although there is a cooperation with them; they are a gift from God. Those moments are my 'time', if time is the appropriate word. 'Timelessness' is better. That is the apex of the time I live in, and I am sorry not to see you live in that time more."

"So how do I enter this time? You've told me what time you live in, but not how to get in it."

Taberah thought briefly and said, "I can't tell you that. Pray, and God may grant it. But I don't know how to enter it."

Worship

A couple of Wednesdays had passed since Taberah had first asked to worship with the Phoenix Society; something had come up, and Taberah had not been aware that time had passed. This time around, Fiona was free, and they entered the room to be warmly greeted.

The service began with hugs and lively music. Taberah was caught up in the singing; Nathella wondered if one of the moments Taberah described would descend. Or had she always had them and not been aware of them? The music gave way to prayer, Scripture, sermon; as communion came, Fiona could see that Taberah was almost in a trance, but she was not. The worship was followed by a meal; Taberah felt a tap on his shoulder, and wondered why someone would tap his shoulder. He looked up.

The young woman who had spoken up at the skeptics' meeting studied his face closely and said, "You were at that meeting and left right after the paper burned weirdly. What did you do?"

Taberah looked at her and said, "Nothing. I prayed. Same as you. God heard our prayer."

She said, "That's not the whole story."

Taberah said, "It's as much of the story as you'll believe."

She said, "What part of the story won't I believe?"

"That I am medieval."

"You mean that you try to be like a medieval, even growing out a beard?"

"No, I mean that I am medieval."

The student's gaze rested on Taberah. After a while, she said, "I don't know what to make of the claim. You're not lying, you don't seem mistaken, and I can't believe what you say." She paused, and said, "And I didn't believe the paper when I saw it. I prayed for it, but I didn't believe it." Then she blushed slightly, and said, "I've forgotten my manners. My name is Ceinwyn. What is your name?" She reached out her arms to embrace him.

Taberah enjoyed the hug; she was soft, and in her touch he could feel a spirit that was alive. He said, "My name is Taberah. I'm staying with Aed."

"Who? Is he a student here?"

Fiona said, "He means Dr. Kinsella."

Ceinwyn said, "Dr. Kinsella. You mean —" A look of dread crossed her face, and Fiona said, "Yes, he's teaching this young man his corrupt ways." Ceinwyn smiled, and said, "I have respect for anybody who can do that."

Taberah said, "Do what?"

Fiona said, "You know. What you did to win the Turing Award."

Fiona covered her mouth; as soon as the words left her mouth, she realized she shouldn't have said them. Half the room was staring, and the other half soon joined. Then she said, "Um, I would like if you could kind of forget what I said; my Dad's done a lot to try to ensure the privacy of my friend."

A young man said, "He won the Turing Award?"

Another man stood up and said, "I have a strong temptation to ask this brother for his autograph, and I would like to ask you to join me in resisting it. We need to treat him as an honored guest but nothing special beyond that, and treat his award as a matter among brothers. It has to have the highest level of confidence."

Ceinwyn looked at Taberah and said, "I am sorely tempted to ask you something more about the paper, but..." her voice trailed off.

Fiona said, "I think he may be right about being medieval. Or almost right. But there are some things about him that just don't fit. He makes my head spin, and he says the queerest things."

Another student said, "Like what?"

"Like saying that he stole a relic from a cathedral."

The student said, "Hmm... I'm a history major as well as an English major, and medieval culture was very different from ours. My name's Tala, by the way. Stealing relics was actually fairly common. Taberah, did you hear about the conversation between Saint Peter and Saint Augustine?"

Taberah said, "No, what did they say?"

Fiona said, "And that's the other thing. He gets the queerest things wrong. It's not just that he doesn't understand why people who lived in different centuries can't have talked with each other. He didn't understand why a cathedral couldn't have had two heads of John the Baptist, one as a boy and one as a man. He saw the logical contradiction, but didn't deduce an impossibility. Plus, he's so short and scrawny — not at all like the bulk you'd expect of someone from the age of knights in shining armor."

Tala said, "I don't want to explain all of why, at least not right now, but a medieval would be quite likely to make those errors. And medievals *were* that short and scrawny — their diets stunted their growth. It's only in the past couple of centuries that people started to look as tall as you are

me — and (I won't name names) some people today still haven't caught up." He winked.

A short, bearded student said, "I'll have you know that I represent that remark."

Fiona said, "Ooh!" and then, "Diet. He talked as if he had grown up eating mostly bread, bread with pebbles in it."

Tala said, "I think he's about as good of a mockup of a medieval as you could ask for. How and why, I don't know — there've been a lot of queer things that have happened, most of which have an uninteresting explanation. Even with what I've seen, it would take a lot to convince me that he had — Taberah, if you are a medieval, why are you in the twenty-first century?"

Taberah said, "What is the twenty-first century?"

Tala said, "Never mind that. How did you come to be here?"

Taberah said, "I was walking with two of my friends, when an angel called me. I took his hand, and I was in the forest outside Aed's house. Then —" and he started telling the story. It was after midnight when he finished; Ceinwyn said, "Taberah, I have many questions to ask you, but some of us need to get to bed. Would you consider visiting us again?"

Taberah said, "Certainly."

That night, as Tala lay in bed, waiting to fall asleep, strange images flitted through his mind. He saw a doorway between the medieval world and his, shimmering, the door beginning to open. A burst of light flashed around; Tala looked around and saw no one, and then looked to the doorway.

The door had been blasted off its hinges.

Second Birth

Taberah said, "Remember how we were talking about medieval time, and how we left things not finished? I have thought more about your becoming medieval."

Aed said, "Yes. Do you want to can turn back the clock?"

Taberah said, "What does 'turn back the clock' mean?"

"It means reverse the flow of time, undo the changes that have happened."

Taberah looked puzzled. "Why would anyone do that?"

Aed said, "My culture was once, a long time ago, medieval. Now it is not. We have cars, computers, and clocks. Do you want to turn that back to swords and armor? Do you want to un-invent electronics?"

Taberah said, "It is funny that you think of medieval in terms of things. Wealth is not medieval. Wealth is only an avatar; it is not the true person. Medieval is not knights on horseback."

Aed said, "Then what is medieval?"

Taberah said, "Medieval is faith. Medieval is rationality. Medieval is carving the back of a statue. Medieval is a way of life."

Aed said, "But the medieval era is gone. How can people in the four

hundred and seventh semi be medieval?"

"What is a semi?"

"I'll explain it later. How can people today be medieval? We can't just automatically be medieval the way the medievals were."

Taberah closed his eyes in concentration; it took him a long time to get the point. Aed was asking him for the answer to a difficulty that simply didn't exist for him, and Taberah was trying hard to see the matter through Aed's eyes — and at last he did.

"Aed, do you know Jesus talking with Nicodemus?"

"Yes."

"What was the question Nicodemus asked Jesus?"

"'How can someone old be born? Can a man enter his mother's womb to be born again?' I know this question well. It has been ridiculed, but it is a serious question, even profound. Can a man turn back the clock and —"

There was a look of dawning comprehension on Aed's face, and suddenly he was grasping what was *medieval* — not lords and vassals, not illuminated manuscripts, not unending quirks and questions from a visitor whom he still could not wholly believe was medieval — not any of these things, but Aed grasped what was medieval. He saw the force behind cathedrals, the abstraction that showed itself in the question about dancing angels, the community shared between the people and, in all of these things, he saw a little piece of his heart.

Aed saw equally why Taberah had asked the question: that turning back the clock was neither possible nor necessary, that the second birth was of a different type than the first one, and one that could still happen with much water under the bridge, that the passage of time in itself had almost nothing to do with being medieval. He saw that the fundamental beauty of the Middle Ages was one that people from his age could share — not in exactly the same way, but it didn't need to be. People could be

medieval today just as they could still be Christian today — it involved swimming upstream, but it was worth it.

Aed looked at Taberah gently and said, "Taberah, you said that you were medieval, and asked what time I was from. I am medieval, too."

Questions

It seemed but an eyeblink and another week had passed; Fiona and Taberah were once again in the crowded worship room, and there was an audible excitement. The service was merry and passed quickly, and at the meal afterwards, Ceinwyn came up to Taberah and said, "I know what the wrong questions are to ask you, Taberah, or at least questions it is not good to ask. What are the right questions to ask you? What do you wish others understood about you?"

Taberah closed his eyes and rocked back and forth on his chair. Tears began to appear. When, after a long time, he did not answer, someone told Ceinwyn, "Ask him another question." Taberah, without opening his eyes, said, "That's the best question. That is a very good question to ask of anyone.

"I have had many people try to understand me, but most of them don't. I don't know why not. Maybe I'm just hard to understand. Some of you think of me as medieval, and I am medieval, but I'm as different from other medievals as they are from you. Even how I am talking — it is a means of talking that I learned from your time. I have seen different peoples, and the way in which I am different is not the way one people varies from each other. Maybe there is something wrong with me. I don't fit in anywhere. I can adapt some — I've lived in many places — but I'm never completely — I don't know the word. I'm not making sense. I'm not saying anything. Never mind. I can't think like other people. You asked a good question, but I don't have a good answer for it."

Emerant was pierced by the look on his face. Emerant was intelligent, if not exceptionally so, but she was a psychology major in the middle of a senior thesis studying of the psychology of extraordinary intelligence; she followed all three major schools: traditional Stanford-Binet intelligence, multiple intelligences (there were now twenty-three agreed upon intelligences among most multiple intelligence theorists), and the interactionist school, which studied its intelligence as an emergent property arising from the interaction of the basic aptitudes studied by multiple intelligence theorists. Being familiar with all three schools, Emerant regarded the traditional school as unfairly neglected, and it was that school that she thought of now. The pain Taberah voiced was not at all unique; it was part of why the gifted had joined the ranks of activist minorities filled with anger and seeking redress for grievances that were always perceived to be getting worse. There was more to it than just a taboo (now being effaced) on divulging a high level of intelligence, or a stereotype that for a long time was not realized to exist — a stereotype embedded in words such as 'geek' and 'nerd' that only now were becoming as socially unacceptable as racial slurs. The more gifted a person was, the more differently he thought, and that is why there had been posited a range of optimal intelligence, with IQ between 125 and 145 — beyond the upper limit of that range, a person thought differently, so that his giftedness became a mixed blessing. People with IQs over 170 tended to feel like they didn't fit anywhere. From psychological, emotional and social cues, and the Turing Award, Emerant had no doubt that Taberah's IQ was over 170, probably over 180 — how much further, she did not bother to speculate. Above, at any rate, the point at which IQ tests cease to effectively measure, and well beyond the point that pain would begin to — Emerant wondered what a boy of normal intelligence would think and feel growing up in a society of people who were severely mentally retarded. He would definitely perceive that he was somehow different from the others, and attribute it to either "Something's wrong with them," or "Something's wrong with me." Taberah had evidently taken the latter route, and — where to begin to explain all this to him?

She walked up, placed an arm around Taberah's shoulder, and said, "Taberah, Taberah. I have a number of things to explain to you, but the way you think is not worse than anyone else's — just different and special. You haven't met anybody who thinks like you (nor have I) apart from

you haven't met anybody who thinks like you (not have I, apart from you), because God has only made a few people that way. I understand your feelings, and I would feel the same way if I were like you. I love you and I am glad you're here — so does everyone in this room. May we sing a healing song for you?"

"What's a healing song?" Taberah asked.

"It's a song we sing to God, as a prayer for you that you may have healing."

"Yes, please." Taberah had been touched by Emerant's words, but it was her eyes most of all which caught him. Her eyes bore the embrace of a warm, generous heart, and silently spoke the message, "My heart has room for you." And Taberah realized that he had a foster family who cared about him deeply — he decided to thank them for it. A song began, and he realized that the people had gathered around him, placing their hands on him. The music seemed to Taberah to rise like incense:

*Lord God of Heaven,
Hold this child in your arms.
Fill him with your love.*

*Creator of Heaven and earth,
Fill his heart with your peace.
Let this peace flow through him.*

*Spirit of light and love,
Lift from him all darkness.
Lift him up to Heaven.*

*Let us be his brothers and sisters,
Your love made manifest.
Fill him with your love.*

As the song ended, Taberah looked at the faces around him and wondered, "Is this what Heaven's like?"

Mysticism

"Fiona, I was thinking, and I realized a better answer to Ceinwyn's question. The answer is this: I am a mystic."

"Oh, Taberah," Fiona said, "We already knew that. Dad mentioned that you had done some astrology, and now there's that piece of paper."

Taberah said, "Huh? What does mysticism have to do with that?"

Fiona said, "Huh? Isn't the connection obvious?"

Taberah said, "No. I have stopped astrology because I trust Aed, but astrology was not any strange mysticism; it was to me like what you do in reading a weather forecast. And the paper — I never thought of that as mystical. I just prayed as others were praying, and God gave what we asked for. That is hardly mysticism."

Fiona had difficulty believing that all that was going on was that Taberah had asked God, but she mentally waved this aside. She asked, "Then what is mysticism?"

Taberah said, "Mysticism is living in the fire of God. It is contemplating and gazing on his glory, and for me it is action in that glory. You are concerned with getting things done, with practicality, with results; I happen to get things done, but it is not what I am concerned with. Few things are needed, really only one; I occupy myself with that one thing. That is the heart of mysticism, not astrology or saving a piece of paper."

of paper.

Fiona said, "But what does your mysticism *do*? What mystic powers are you striving to develop?"

Taberah said, "What a funny idea, mystic powers! Which is greater — getting something done, or the reason getting something done is desirable in the first place?"

Fiona said, "I suppose, what made it worth getting it done."

Taberah said, "Correct. Mysticism is not a way to get things done; it is a 'why' that is greater than getting things done. Mysticism is not a way to do something else. Mysticism is worthy in itself."

Fiona asked, "Then how are you a mystic? You say that you are the son of a merchant, that you have travelled to many places and had adventures. How does mysticism fit into that? You haven't retreated into a monastery to spend six hours a day praying; you've already managed to cause a stir. Is that more important than mysticism? Or are you a superman who can do one on top of the other?"

Taberah said, "I find your question confusing. My actions are not more important than mysticism; they are the shape that part of my mysticism takes. I do not see action as something added to mysticism; it is an expression. I am seeking God's glory by talking with you now. I have heard a saying, 'Too Heavenly minded to be of any earthly good,' and I think it embodies a mistake. You cannot be too Heavenly minded to be of any earthly good. You can quite easily be too earthly minded to be of any earthly good. Being heavenly minded is itself of earthly good, whether or not it does things in an obvious manner; that is one of many reasons why, of the nine orders of angels, the highest six gaze only on the glory of God — it is but the lowest three who are ever sent to earth. It is a right ordering. Mysticism is sharing in the truth that the angels share in, and for me that truth takes an active form."

Fiona said, "Does this mysticism relate to your time?"

Taberah said, "My time relates to this mysticism."

"How can I enter it?"

"Seek God, and ask him how you are to enter it. He will show you."

Heaven

Taberah walked out of the computer room, thinking loudly. Aed looked at him, and simply waited for him to start explaining.

"Aed, I was doing some reading today on embryology; what your philosophers have thought of is fascinating. Something in my mind was speaking, and I realized another deep difference in belief. Medieval people believe that they're going to Heaven."

Aed cleared his throat and said, "All Christians believe that, Taberah. It's a basic doctrine."

Taberah said, "Then why does your people not act like they believe they're going to Heaven?"

"How does someone act like he believes he's going to go to Heaven? Does he kill himself to get there faster? You should know better than that."

Taberah paused in thought for a moment and said, "How can you believe you're going to Heaven and not know a change in your actions? That's like believing food nourishes you, but not knowing what eating is like."

Aed had no immediate reply to this. He asked, "How does belief in Heaven change your actions, Taberah?"

Taberah said, "In embryology, one studies how a person is becoming ready to be born and live outside the uterus. That is the whole purpose of being an unborn child — why do the texts leave the word untranslated as *foetus*? Did the English translators of your texts not know how to render that word from Latin?"

"Later, Taberah. You're getting side tracked."

"Some of the unborn child's motions are useful there — such as blood pulsing about the body. There are others that have no use in the uterus, such as sucking and kicking. The question is not how to arrange things to most pleasurably remain an unborn child, but to best prepare for birth and the world beyond that.

"Your people does not understand how this symbol reveals Heaven. They think that the point of living on earth is to make as much change on earth, and make earth as comfortable a place as possible, and — I was a long time in coming to understand political ideology. Authority is necessary, and there are questions about how to best govern, to praise good and punish evil. But political ideology is not just about this — it is about how to use government to turn earth into Heaven."

Aed said, "I do not understand. Do you mean it is wrong to try to make earth better?"

Taberah said, "All of the saints made earth better. Good deeds are an important part of how a soul is made ready for Heaven. But a centeredness, a focus on making earth better is not possible. Or it is possible, but leaves people more poorly prepared for Heaven, and more poorly equipped for earth. It is — I do not know how to say it. My father told me, 'Drink wine to live. Do not live to drink wine.' If I were to live to drink wine, I would be disordered. The wine would ensnare me. Trying to live on technology is trying to make technology something it cannot be. It can pacify a spoiled child; it cannot make him well-raised. Your people is concerned with how to pamper and pacify a spoiled child — and it took me the longest time to understand that not simply did I stumble on a very rich man's house, but that so many people in your society have wealth not only to have as much bread as you need, but as much meat as you want,

and you do not even think of it as costly — while mine is concerned with how to raise him well to grow into a man. In the Great Chain of Being, man lives between the beasts and the angels; it is the beasts who have this life on earth and its pleasures as all they own, and the angels who eternally gaze on the glory of God. Believing in Heaven means becoming more like an angel; here, I have seen heroic efforts to live the life of a beast."

Aed sorted this through. It had been a while since he had thought of the Great Chain of Being, and his thoughts about it moved sluggishly. Apart from that, he began to see — and more than see, he began to believe and know — why Taberah would look around and be convinced that Aed's culture did not believe in Heaven. With a chill, Aed realized that he could not remember the last time he had thought about how his actions were preparing him, or failing to prepare him, for the eternity before him. Slightly later, and with an equal chill, Aed realized that he could not remember the last day he had not thought about how to shape the world around him so as to bring pleasure. He slipped too often in thinking of his teaching as a way to prepare his students for the world it would face — which it no doubt was, but if that was *all* it was, then... Aed asked Taberah, "Taberah, how can I do something that will prepare me for the next life? What is one thing I can do?"

Taberah thought for a second, and said, "Close your eyes and grow still, and wait."

Taberah waited a second and said, "You're wanting to get this over with. Stop that. Want to do this."

Time passed. Aed's breathing had stilled. Taberah said, "Now thank God for seven things he has given you."

Aed took another breath and slowly said,

Thank you, God, for my wife Nathella.
Thank you, God, for my children, Fiona and Clancy.
Thank you, God, for my professorship.
Thank you, God, for my broken garage door. It means I have not only a house and a car, but even a building to protect my car from the

elements.

Thank you, God, for the headaches I have after talking with Taberah. They come from a person for whom I am very grateful, and who challenges me in ways I never thought possible.

Thank you, God, for the hope of Heaven.

Most of all, thank you, God, for yourself.

Taberah smiled, and said, "You have now done one action to prepare yourself for Heaven."

Aed said, "Is it over already?"

"Life"

Taberah looked out; there was depth in his gaze, a gaze that was somehow present and remote at the same time. A short time ago, Fiona would have thought he was staring at her; now, she understood that he was looking past her. It relieved the feeling of being under a microscope.

Fiona sat down and said, "What are you thinking of, Taberah?"

"I don't know how to say it — in any language. It is another part of the answer to Emerant's question."

"Can you try? Can you say something similar?"

"I — live. I don't know how to explain. I experience things intensely. Sometimes, when I drink wine, I am not aware of anything else —"

"You get drunk? That is living?"

"I not know how to explain. I do not get drunk. It is when I am drinking it, the taste — it also happens with thinking, and praying, and music."

When Taberah said 'music', Fiona caught a glimpse into what he was saying. She was transported back to his first chant, when the whole family had been lost in his voice — no, that wasn't quite it. They had been lost in the light that was shining through Taberah.

An idea came into Fiona's head, and she said, "Taberah, why don't

you get your lute out, and I'll go to my keyboard, and we can play together? I think I'd understand you better."

They went to the practice room, and Fiona set up her keyboard. "What songs do you know?"

"I know many songs from the lands I have travelled in. But I do not know songs here; I haven't played with musicians. Ooh! I know your church songs!"

Fiona played songs in several different styles — ancient songs, classic hymns (meaning the contemporary songs of days past, drinking tunes such as "A Mighty Fortress Is Our God," and so on), "contemporary" music (meaning roughly three groups: music that had been contemporary in the more recent past, music that represented an unsuccessful attempt to imitate the contemporary secular style, and music that combined both attributes), songs of a new musical renaissance that did not attempt to follow either mold, but borrowed from both and brought a new light... After one of the tunes, Taberah said, "That's the one! I want to play with that song."

Fiona slumped and said, "No, Taberah, not that one! It's awful! It was in bad musical taste when it was written, and it's in bad musical taste now. One of my girlfriends said that it sounds better when it's sung off-key."

Taberah said, "I know. You've already told me that. That's why I want to work with it."

Fiona had enough of her mother's perception to realize that arguing with Taberah now would be a losing proposition. So she resigned herself to playing harmony, leaving the Taberah the melody.

The first time through, Fiona was able to shut out the music; she expected a repose after going through once, but Taberah immediately started playing again. She kept up with the melody, but now Fiona was not able to ignore the music. Then Taberah started to improvise slightly; he made a change here and there, and then he started making only musical questions that required her to think of an answer in the

musical questions that required her to think of an answer in the accompaniment. This required Fiona to plunge even more deeply into the song. After a time, Fiona was too engaged in the music to think about how bad it was.

Time passed, and Fiona slowly became aware of something else. The music was still terrible, but she saw a luminescence shining through it. Then she realized that they were working together, and a strange beauty was emerging from the music. She played, fascinated, and gradually began to see a beauty like that of a rusty truck in a desert — a (she did not know the word) beauty that can't be found in a place that is polished and perfect — there is no room for it. She was fascinated by the music that was flowing around and through her. More time passed, and then a flash of insight struck and her hands froze on the keyboard; it was as if a juggler tossing seven glass balls stopped, and they fell and shattered. Taberah switched off the keyboard, and relaxed his hands. "What happened, Fiona?"

"I realized something, Taberah. I had an epiphany."

"What?"

"I had finally entered your time, Taberah. I entered your time."

Intelligence Emerging

Aed sat and thought about the output of the artificial intelligence program. Trying to decide whether it functioned intelligently was like — no, that wasn't it. Aed couldn't tell what it was like.

Intelligent or not, it was at the same time familiar and alien. He had worked with the algorithm further, so that it stored a history in its state, drawing on the algorithm that had won the Turing Award, and the arguments were coherent — but arguments such as he had never seen before. Any one paragraph of its output could be mistaken for human, but there was something undefinably strange about it; he could tell what the computer was arguing, but not why. Aed slapped his forehead; the arguments were evidently intelligent enough to tempt him to think of the computer as human.

Aed spent a long time trying to think if the computer's rationality was something comparable to human, or even if that were sensible to ask. Dijkstra had said, "Asking whether computers can think is like asking whether submarines can swim." Aed thought for a nuance; he thought it was closer to the question of whether a racecar can swim. Or an oven. Except that the answer was not "No, but it can do something comparable;" an answer of "Yes, but it is not comparable" would have been closer.

Aed thought for a moment, and then went down to the computer computer and navigated. An avatar was shortly before him; it said, "Aed! Still up to the usual trouble?"

"How are things in the philosophy department? I heard you've got a new tenure track position added. I'm actually up to worse trouble, now."

"I'm not surprised. How can I help you?"

"What courses are you teaching this semester?"

"I'm teaching three courses, all of which have a paper due shortly. Get something in the gradebooks for a preliminary report. I'm teaching 101, *Introduction to Philosophy*, 234, *Philosophy and Contemporary Movements*, and 312, *Integrative Metaphysics*. Have you encountered yet another guest lecturer that you want me to cede precious lecture time to?"

"Actually, no. I was wondering if you could give a paper to be graded by your TAs for each of the assignments."

"Uh, OK. May I ask who the paper is by?"

"I'm not telling."

Role Play

Clancy said, "Taberah, have you been to the pool at all?"

Taberah said, "Pool? Why? To drink?"

"No, to swim, silly!"

Taberah stiffened and said, "I swam once, when I fell from a bridge. I don't like swimming."

Clancy said, "Will you come along? You don't have to go in the water. We can hang out on the deck if you want. The pool will close before too long; it's not so warm."

Taberah was careful not to sit too close to the water's edge; falling in once had been plenty for him. He watched the others with trepidation, and tried to grasp that they were in the water for pleasure's sake, and did not need to be rescued. The swimsuits gave him a shock as well. He had finally gotten adjusted to the fact that these people were not used to being naked, and seeing trunks and bikinis was a bizarre sight to him.

Fiona climbed out of the water and sat down on the chair next to Taberah; Clancy was on the other side, whistling a bird song to the robin on the lines overhead. Fiona told Clancy, "You know, it's been a long time since we role played."

Taberah asked, "What is role play?"

Fiona said, "It's — you'll see. But you'll have to make a character. Role playing is *in* this semi."

Taberah asked, "What is a semi?"

Fiona thought for a moment and said, "Semi-decade. People used to not be conscious of what era they were in, and then they were conscious of the century, and then they thought of what decade they were in, and now it's the 5 year semi-decade."

Taberah wondered why people would be time-conscious in that way, and why the era would be that short, but was beginning to understand that certain things were wiser not to ask. He said, "I want to be a minstrel."

Fiona said, "My character is a Jane-of-all-trades named Deborah. Clancy is GMing, uh, game mastering."

Clancy said, "You are both in a forest; your ship has crashed. There is a spring of water nearby. You hear sounds like footprints nearby."

Fiona said, "Do the footprints sound human or animal?"

Clancy said, "You can't tell for sure, but there is an animal quality about them."

Fiona said, "I'm going to get my laser gun out."

Clancy said, "What are you going to do, Taberah?"

Taberah hesitated and said, "Can I hide and nock an arrow?"

Clancy said, "Yes."

"You see a huge bear on a chain. At the other end of the chain is a massive man in a rags."

Fiona said, "I am going to say 'Hello.'"

Clancy said, "He does not seem to recognize the word, and there is

uncertainty on his face."

Taberah said, "I am going to put back my bow and arrow, and take my harp, and begin to sing."

Clancy paused, and said, "The bear sits and listens; the man does, too."

Taberah said, "I am going to take out some of my food and feed it."

Clancy said, "Both bear and man seem pleased at the food. The man looks at you longingly, and starts to walk into the woods."

Taberah said, "I'm going to follow him."

Fiona said, "I'll follow, too."

Clancy said, "He gets to a cave; upon following him in, it takes some time for your eyes to adjust to the twilight. The cave is a crude environment, with assorted items around."

Fiona said, "Such as?"

Clancy said, "Some burnt-out transformers, an oddly shaped granite bowl, a corroded lamp, and some empty containers."

Taberah asked, "Are the containers usable?"

Clancy said, "No; they were disposable containers. They —"

A voice from the pool shouted, "Hey, Kinsella! Want to join us in a game of Marco Polo?"

Clancy shouted, "Not now! I'm entertaining someone."

Fiona said, "What is in his eyes when he looks at us? What is in his eyes when he looks at me?"

Clancy said, "Fear, suspicion, hope, disbelief, a forlorn longing."

Fiona asked, "Does he want to be with our civilization?"

Clancy said, "He wished that at one time. He is now uncertain about what he desires."

Mist came into Taberah's eyes. Fiona turned to him and said, "What is it, Taberah? Is something bothering you?"

Taberah said, "No. There is something about man that —"

Fiona sat silently, waiting.

Taberah said, "Before I left medieval time, that was home. Now, even if I return to it, it is not home. I am part of this time now, and at times I let Heaven be my home, and at times I find Heaven, but other times — I am learning not to be in this state, but it catches me."

Fiona wrapped her arms around Taberah, and said, "Honey, why don't you come home? We can be with you while you heal."

Taberah got up, and joined Clancy in heading for the locker room.

Rated

Aed received the three copies of the computer's ramblings that had been submitted to the philosophy TAs. The first paper had been submitted to the TA for philosophy 234, *Philosophy and Contemporary Movements*:

Paper is nuanced and addresses many fundamental issues of relevance to contemporary movements. Nonetheless, its reflection of nuance is not matched by any kind of logical order; a logician would grade this paper harshly. B

Aed chuckled. This grade was a mark of success; it was the first time he had seen someone complain that a computer understood nuance but was logically deficient. He turned to the next copy, the one submitted for philosophy 312, *Integrative Metaphysics*:

Paper contains brilliant application of argument from multiple domains of philosophy, combined with the indescribable eccentricity that heralds a new development. Ideas are not fully developed, but even in embryonic form, there is a raw energy to them. I have shown your paper to the professor, and she concurs with my judgments. You should do graduate work in philosophy. A+

Aed said, "This is encouraging. What did the TA for philosophy 101 have to say?"

Paper is arrogant and pretentious, trying to be simultaneously

similar to and different from existing philosophies, and combines the worst points of both. Classic example of fake intellectual who strings together a lot of things that sound philosophical and thereby considers himself a philosopher. F

Aed laughed; the 101 TA had picked up on something that the others hadn't. Very well, then; he was pleased with the results, and he was ready to announce what Taberah and he had done.

What Would You Like To Be?

The days passed quickly; the leaves on the trees turned bright colors, and Taberah seemed a shade blueish. There was another shopping trip made, in which Taberah received a warmer set of clothing; this trip passed without any remarkable events, and Clancy said he could take Taberah shopping for clothes alone next time; Nathella accepted. In watching Taberah, Nathella was reminded of her roommate freshman year in college. A young Sudanese woman, she found the cooler seasons to be bitterly cold.

A mug of spiced cider found Fiona and Taberah relaxing over a fire; Taberah was watching a leaf fall from its stalk. Fiona looked at Taberah and asked, "What would you like to be for Halloween?"

She was not surprised by his reply, "What's Halloween?", nor his followup, "I think I'd like to be myself. I don't fancy turning into a rock or a bear." She took it as an opportunity to explain a cherished time of year. "Halloween is when you dress up as something fanciful, and pretend to be something different for a day. You can go around from door to door, and knock, and show people your costume, and they give you candy. I want to be a fairy, wearing a shimmering white robe with draping sleeves and a low neckline and a long, flowing skirt, and with translucent, glittery wings."

Taberah said, "I don't know what I want to be. I was already a jester in my avatar. I know! I can dress as a night-man, with shadow-black clothes that melt in the night, and soft shoes that make no sound, and —"

Fiona said, "No. Too many criminals out at night; you'd be mistaken for one. You need to wear bright clothes and not look threatening."

Taberah said, "Euh... I could be a philosopher!"

Fiona said, "And how does one dress as a philosopher? All the philosophers I've met dress like everyone else. No, wait! You could be an ancient Greek philosopher, with toga, and laurel, and — whatever else you think would make the point."

Taberah said, "Where do we buy these outfits? Are they in a section of the store I haven't seen?"

Fiona said, "Well, there are places that sell Halloween costumes, but they aren't very good — a mask and a hat and some very flimsy cloth. There are places that rent them, and some of those are better — but you only have them for a day. In our family, we have a tradition of making them. We buy cloth and patterns, and cut them out, and stitch them together. It's a great deal of fun — almost as much fun as wearing them. I can show you old costumes I have in my closet; I've been a princess, a space ranger, an alien, an ice cube, a —"

Taberah said, "How did you dress as an ice cube?"

Fiona said, "Dad did that one. We got a big cardboard box, painted it blue and white, and got a white shirt and white tights for me to wear underneath. That costume is — let's see, I think it's being used to store shirts in the attic. Or something; we only go up in our attic when we're putting something up there."

Taberah said, "I was up there. It was fun; it was like climbing cliffs. Only this time there weren't brigands chasing me. I think climbing's more fun when brigands chase after you."

Fiona shuddered, and said, "To each, her own. I'd be scared out of my wits."

Taberah said, "I was scared out of my wits. And I was having fun."

Fiona said, "I guess we all have our own eccentricities. Our attic's not nearly as silly as my Dad is at times; you should see him play charades. The last time we played at a family gathering, he was jumping around with a vacuum cleaner, and humming 'Oh, when the saints go marching in!' I always remember what Dad did, never what he was — when I watch him, I get the feeling that the game isn't about really about trying to help other guess what on earth you are."

Taberah said, "Your Dad understands games."

Fiona said, "How's that? He usually diverts games off their course."

Taberah said, "No. He changes their appearance when he gets them on course. A game on one level is about following rules in some sort of contest — but people would never play games if that was all there was about it. It is a pleasant contest to enjoy other people — and it sounds like your father has found a shortcut to enjoying other people. Most people need the long way about; they can't have fun unless they've carefully earned it. There are a very few people who can take shortcuts, and a very, very few people who can make others feel good about it."

Fiona thought for a moment, and said, "Taberah, I didn't know you were a philosopher."

Taberah said, "I am. You didn't know that? But 'philosophy' means something different here than in my lands. Philosophy in my home means a broad kind of learning, that touches many different places. I gather that your science is derived from natural philosophy, the philosophy that explores the natural order — but there are subtle differences that I don't understand. Maybe that it's separated from the rest of philosophy. I understand that professors at your father's university are called Doctor of Philosophy, and their inquiries are parts of philosophy, but they are not philosophers. 'Philosophy' now means something narrow, dull, not connected with life — some philosophers try to make philosophy relevant, but our philosophers did not need to make philosophy relevant because it already was. Philosophy can be different."

Fiona asked, "Do you think our culture is impoverished?"

Taberah asked, "What is a culture?"

This time Fiona was caught off-guard. Taberah evidently understood what a culture was; he had experienced different cultures and made any number of cultural comparisons. But, when she explained it to him, he was a long time in understanding; Fiona came to appreciate what a non-trivial concept culture was.

As soon as Taberah began to guess what a culture was, a number of possible replies came to his mind about an answer to Fiona's question. To his credit, he spoke only the truth. He said, "Yes. I think your culture is very impoverished."

Fiona asked, "Then what are you going to do about it?"

Taberah leaned back and closed his eyes. He needed and appreciated friends who would ask him questions like that — but didn't want too many. Like the whiskey he had once tried, a little went a long way.

"I don't know," he said. "Let me think about it. Then I'll tell you — or just act."

Women's Liberation I

Taberah was by now taking walks around the town and around the university campus; he had come to tolerate car rides, but never rode in a car by choice, and was shocked when Nathella suggested he learn how to drive a car. He decided to take a long thinking walk, and was weaving in and out among buildings when a voice caught him. "What is your name?" it said.

Taberah looked, and saw a young woman sitting under a tree. She was holding a book, and sipping a strawberry hydrolated beverage.

"My name is Taberah. Why do you ask?"

"You remind me of someone — a friend. Someone I've not seen in a long time."

"What was he like?" Taherah asked.

"What was *she* like, you mean. Don't use exclusive language."

"What is exclusive language?"

"Exclusive language is language that uses the word 'he' to refer to an unknown person. It excludes women."

"Why?" As Taberah asked, he felt a discomfort, a desire to be anywhere else, a feeling of "Not this dance again!" — and at the same time a feeling that there was something significant, a moral pull to be there.

"Using the masculine as the generic reference to a person exists out of sexism because of a man's world, that says by its language that men are all that's important. People tried for a time to make language more inclusive by alternating between 'he' and 'she', but that still had the loaded masculine term. We now use the feminine as a generic term, free from exclusive masculine meanings, as a convenient designation for someone whose gender is unknown."

Taberah sensed something off kilter. It was not just with the argument; though he had never heard use of masculine pronouns interpreted to mean what she thought they meant, and was baffled as to why saying 'he' would be prejudicial while saying 'she' served as a neutral term for a person of unspecified sex, he was aware of something more. What he would come to call traditional language had always been a convention to him, no more significant than the use of a pronoun for a person whose name was not known — the argument he was hearing about exclusive language seemed to him as bizarre as an argument about "nameless language," in that persons of unspecified name were thereby meant to have no name. Taberah at least had always been acutely aware of how his thoughts were more than the words he used. He had struggled to represent his thoughts, and accepted conventions as useful in getting on to more important things. A sharp concern over "inclusive language", more to the point accompanied by a correspondingly sharp belief that the traditional use of masculine pronouns was really "exclusive language"... In itself this struck him as merely silly, and Taberah knew he was plenty silly himself. *Let he who is without silliness cast the first stone*, he had often said to himself, and he did not wish to break a tradition.

This is what Taberah sensed and thought on one level. On another level, he thought less but sensed more, and this was that the woman had a sense of anger about her. It wasn't just that her voice had risen; it was rather that in a vague sense he sensed that what he saw was the tip of an iceberg, that whatever concern and upset were caused by her upset at the word 'he' spoken of an unknown person, was only a surface glimmer, a faint shadow, cast by something he could not guess at. He looked at her, and asked, "Sister, what is your name?"

She looked startled, and said, "My name is Lydia."

He asked, "Lydia, why don't we take a long walk in the woods and talk?"

Lydia blanched, and said, "I'm staying right here."

Taberah concentrated hard and tried hard to see what his *faux pas* was this time. When that failed, he looked at her, and said, "I know I'm breaking all sorts of social rules, and that I don't understand this culture very well, but what did I do wrong? Why were you afraid when I asked you to take a walk in the woods?"

Lydia said, "I think that should be obvious enough!"

Then she saw the puzzlement on his face, and said, "You might rape me."

Taberah turned green, and asked, "Do you really think that?"

Lydia snapped, "Don't you try to put me back in place by challenging me. When a woman says something, she means what she says. From language that speaks of sports playing fields to cars that are designed to look appealing to a man but not to a woman to cutting women down to the subordinate role that would be convenient to men to logic and abstraction regarded as the essence of good thinking, you men will..." She stopped, startled by a realization.

"Taberah, why haven't you told me to go to Hell? Most men usually say that when I stop smiling and... Usually, I can put a smile on and look happy, I usually don't talk about how badly women are treated unless I am with other feminists. You, somehow — I don't act like this. Something slipped. Why haven't you told me to go to Hell?"

Taberah looked at her levelly and said, "I am afraid to tell you."

"You are afraid of me lashing out again?"

"No. Do you want to hear anyway?"

"Yes."

"You are in Hell already."

Lydia glared at Taberah and said, "Of course I'm in Hell! With a man's world that puts women down, how can I not be in Hell?"

Taberah said, "No. Wrongs exist, but you are in Hell because you believe the world is hostile to you. You believe that all sorts of actions are slights, and if there is ambiguity, that ambiguity is to be interpreted in a fashion that means women are being oppressed. I — I have known women who were really happy. Something about them..."

Lydia said, "What? Had they managed to create a place without sexism?"

Taberah said, "No. They lived in a broken world, a much harsher world than we have. They lived, in fact, suffering injustices that feminism has now made a big change in. But they refused to let their identity be one of being persecuted. The world their bodies lived in was far more hostile than the world your body lives in, but the world their minds lived in was not nearly as hostile as the world your mind lives in. You, in your mind, suffer unending hostility; I will venture a guess that, no matter what happens, if you choose to accept feminism's interpretation, you will be in Hell. I have seen other things like feminism; they are like fires: the more they are given, the more unsatisfied they are, the more they want."

Lydia said, "So you would have me just walk with anyone and get raped? One in three women is raped."

Taberah said, "Um..."

Lydia remained silent, and Taberah said, "I know two women who have been raped, and it is a torment I not know how to describe. But I have done some research, and the feminists who did surveys manipulated the numbers to say as many women have been raped as possible, to fuel a political agenda that claims a rape culture. In the first study that had said one in six women had been raped, over half the women who were classified as having been raped explicitly said they hadn't been raped."

And —

"Being raped is terrible. It's one of few things worse than believing that you are in constant danger of being raped, and that you are never safe with men. I would not have you walk with anyone and get raped. I would have you use your judgment and intuition and walk with people when it is prudent to do so. We are never safe — not from disease, not from being killed, nor from being wounded, nor from rape. But we can take reasonable risks."

"Ok," Lydia said. "You want to walk in the forest? I —"

"No," Taberah said. "You're not comfortable. It speaks well of you that you are able to trust where you have not trusted before, but I do not want your discomfort. What I would like is for you to think about what we have said, and then come join me at a place where women are at peace."

Halloween

Halloween came: Fiona a fairy, Taberah a philosopher, Clancy a cybernetic organism, Nathella an elfin lady, and Aed a medieval lord. After talking with Taberah, Aed wished that he could have a table piled high with food, with everyone invited to come and eat and talk — but he could not do so; the gesture would be misunderstood. On Halloween, hosts gave out vouchers for different kinds of candy, which could be redeemed online for a delivery of different candies; it was almost as easy to poison candy as it was to put razor blades in apples. Nathella did have food waiting for the few people who knew their family, but that was all. The rural trick-or-treat Nathella had grown up with was no more.

Aed and Nathella therefore waited, lord and lady at their castle, to meet the year's assortment of ghouls, witches, archers, space cadets, cheerleaders, Romantics, and assorted and sundry other manner of visitors. A file recording of Taberah's music played in the background, and the place had a warm look to it.

Taberah was with Clancy and Fiona; if Fiona most enjoyed making Halloween costumes, Clancy most enjoyed wearing them.

"Trick or treat!" they said at one house. Fiona charmed them most; Taberah looked old to be trick-or-treating, but the costume fit the gravity that was around him. Clancy reached out with his long, metal arm and used the moving hand at the end to take his candy.

While they were out, they encountered Fiona and Clancy's friends: a

bumblebee, a Hershey's Hug, a snake, and a bear were among those they saw. Fiona did not quite manage to contain her surprise when one matron gave a discerning look and told Taberah, "You do not quite look ancient, young man. I'd picture you as more medieval." It was with an unsteady step that she hurried on to the next house.

In the night's activities, Taberah saw beauty and ugliness mixed together so thoroughly that it was hard to tell them apart. People dressed up as something else — but that something else often meant vampires, devils, and succubi. There was a moment when Taberah almost lost his step, because he had an insight. He understood role play, and saw that it was good. He thought that, in the costumes, he could see a little further into other people than in normal clothing — but was disturbed by some of the choices. Fiona explained the historic origin of Halloween, but that did not seem to allay his concern.

It seemed too soon that moonlight and starlight were shining, and Clancy said, "We need to be heading to home now." They reached home, and Taberah had only one question to ask: "When is next Halloween?"

Women's Liberation II

As Lydia walked into the building, and as worship gave way to discussion around a table, she felt a mass of conflicting emotions within her. There were many branches to feminism, but one thing that held them in common was that, whatever the trepidation with which men and male society were viewed, men were not the real enemy. The enemy was traditional women — people who had settled for being housewives, falling into men's shadows. They were disloyal to the cause of womanhood in a way that a man could never be.

The turmoil Lydia felt came when she saw women at the group who were traditional — but who were not the stereotype she came to expect. They were at ease with themselves, genuinely happy, and she came to see that what the feminist movement had interpreted as living in a man's shadow did not mean what she thought it meant.

It is always a painful experience when reality intrudes on your stereotypes and preconceptions, and Lydia did not enjoy the evening. She saw that other women were enjoying it, but she was processing changes. By the end, she began to see ways in which women's interests were not best served by feminism, and she came back, sharing in the joy upon returning.

Taberah, after talking with her, said, "Lydia, I have met few people, and far between, who could change after being shown they were in error. Most just fight, and fight, and fight, and fight. What let you do that?"

Lydia said, "I suppose the same thing that led me to be a feminist. Women are slighted in most societies; I embraced feminism because I intuited that it had a truth. I let go of it because I learned of something else that could serve women's interests better. Part of it is the new feminism that Catholics called for. The other part is just that — I never knew the tradition. I knew the feminist stereotype, but not the reality. The traditional Christian teaching has a much bigger place for women than I thought."

Lydia leaned to one side and asked, winking, "Does this mean I have to wear makeup?"

Taberah said, "Uh... I hope not."

"You don't like women wearing makeup?" Lydia asked, surprised again.

"No. My culture does not have makeup as you understand it. When I first came here, I did not understand why women were damaging their appearance by smearing strange materials across their skin. I have hawk's eye — my mother used to call me 'hawk' — and a face with make-up looked to me like a counter with rubbish strewn over it. It took me a long time to understand that women wear make-up to convince themselves they're beautiful while wearing it — it took me a long time to understand what 'presentable' means. It means that a woman is not beautiful, but if she covers herself in powder and paint to look like something else, that something else is beautiful, and that the woman is OK only if she makes herself into something else."

"Taberah, are you sure that you're not a feminist?"

Taberah said, "I find that not the most helpful question to ask. Some of the truths I take with me are shared by feminism; feminism knows no doubt things that I do not know, and I know things that feminism does not know. Or at least that is what a mature person from your time would say, and it is true. But I want to see good come to all people, including the freedom of well-meaning women from a system that imposes a cure worse than the disease. I want to see women liberated from women's liberation "

ABSTRACT.

Like an Emerald

A metal keychain knocked on the door. Nathella opened the door, and a young woman asked, "Is Taberah in? I'm Emerant; we've talked a little. I'm a phoenix."

"Come in," Nathella said, "I don't know where Taberah is." She called, "Taberah!" and Taberah came, holding a knife and a half-carved block of wood. The emerging figure was already discernible as a madonna.

Taberah looked sad; his expression brightened when he saw Emerant. Emerant hugged him and said, "Back at that first meeting, there was something I wanted to sit down and talk with you about, but I've been so busy since then! The courses get harder every year, and I've got one that's harder than a darwin. I'm sorry for not calling earlier, but I was wondering if you wouldn't mind going to a coffeeshop. There's this one shop on campus that only sells decaffeinated coffees, but you have to try their carbonated cappucino!"

Taberah set down the knife and statue and said "Sure!" He started to muse about how this people seemed to use big words for little ideas and little words for big ideas — 'darwin' was slang for a course designed to weed out the less suited students from a major, and evoked the substantial philosophical idea captured in a "survival of the fittest" argument — a discredited idea, to be sure, but a magnificent achievement none the less. On the other hand, Taberah did not know what a cappucino was, or why one would carbonate it, but from usage it was clear that the

word meant a drink.

They walked along to the coffeeshop, not speaking, the loudest sound being the crunch of leaves under their feet, but they were not speaking for different reasons. Taberah was not speaking because he lived naturally in silence, did not have anything to say, and did not need to fill the time with sounds; Emerant was not speaking because she had made a conscious and counter-cultural choice to embrace silence and not fill it with noise — the noise that came so easily to a soul raised in a society that was afraid of silence and stillness and slowness. In walking two miles to the coffeeshop, they had their fill of silence, and Taberah took fifteen minutes to decide between a carbonated cappuccino and some hot cocoa. He ended by ordering both, and Emerant, who ordered an herbal mint Italian soda, did not explain to him that this was a *faux pas*.

Emerant sat down with Taberah and said, "How has your day been?"

Taberah said, "A good day. I have not carved for a long time." Then he remembered etiquette and said, "And yours?"

Emerant said, "A day with a lot of thinking. There was something I wanted to explain to you, and I've been trying to think of a good way to explain it, and I haven't found any good ways."

Taberah stiffened, anticipating a rebuke. Better to have it done with than to put it off. He said, "What have I done wrong?"

"It isn't about anything you've done wrong. It's something that I don't think anyone's ever explained to you."

"Is it about being left-handed? Aed has tried to explain about that, and I am at peace with it now. I wasn't earlier; one of my culture's peculiarities."

"It isn't about being left-handed — something I don't know enough about, especially given that I'm ambisinistrous. It's about something else. Taberah, do you know what the word 'genius' means?"

"In Latin it means the angel watching over a person. In English, I

have gathered it means something different, but I don't know what. It is a word applied to some persons, but not others."

"'Genius' means someone possessing extraordinary intelligence and giftedness, someone who has a unique potential to shape society."

Taberah drew back. "Shape society? How would someone do that? Why would someone do that? Why would some people be specially qualified to do so? Your wording means that this is desirable. Why?"

In the ensuing discussion, Emerant was challenged; she had come to explain something to Taberah, and was not expecting herself to learn something new. She had thought of medieval time as hierarchical, holding some people to be born superior — and saw her own time as having practically invented egalitarianism. Emerant saw in her reactions to Taberah that she not only believed some people were more intelligent than others, but that the highest measure of intelligence was taken to bring a prerogative and duty to shape society as one's naked reason led him to believe was best. Taberah found this to be madness; he would as soon consider himself qualified to redesign the human body from scratch, making surgical alterations so that his beneficiaries would have one less leg and one more arm, as to attempt to redesign human society from scratch. Taberah did not mind the concept of a special word for the most intelligent humans, as the implicit belief that this difference translated to a moral entitlement to do something he found abhorrent.

Emerant said, "Taberah, let's start this discussion again. You know that you are different from other people?"

Taberah hung his head. "Wherever I go, I can't be like other people. I make mistakes — terrible mistakes. I can't connect with other people."

"Taberah, there's a very special kind of intelligence, one that brings the ability to do things very few people can do — but it brings pain and failures. It means that you think very seriously. Classical literature has the image of a blind seer. Do you know this image?"

Taberah nodded his head, and his expression brightened.

"The seer has supernatural vision, but the price of it is the loss of his natural vision. It is a great boon at a great price. Taberah, you're not completely blind — you can and will, with time, be better able to connect with people — but your natural eyes are weak because of the brilliance of your supernatural eyes. You are not a second-rate Abanu. You are not a second-rate Tala. You are not a second-rate Emerant. You are a first rate you, and you are close to God's heart. You have already managed one accomplishment most of us can only dream of."

Taberah looked surprised. "What was that?"

"The Turing Award, Taberah! Don't you know what that means?"

Taberah looked confused. "There was a lord of a city who had me over. There is not a custom like that in my land. I understand I was honored, but — if there is one city that practices that custom, surely there are other cities that practice it! What I did wasn't any big deal."

"Taberah, dear, there is only one city that does that, and they search through the whole world before awarding that prize, once per year. There have only been seventeen other people who have received that award. Taberah, there is probably not one person in a million who is as bright as you. I want to talk with you about how you plan to use your intelligence."

Taberah was silent; he was trying to sift Emerant's words, sort them. The image of the blind seer struck a powerful chord with him; for one of the first times he could remember, he was able to think about his failures without feeling inferior. The Turing Award was still difficult to think about; he was beginning to understand that it was something bigger than a prize at a fair, but he had never begun to guess the true magnitude of his achievement. In his mind it was like the time as a boy when he was summoned to a monastery where Thomas Aquinas was passing through, and the theologian told him that he had chosen a good symbol to illuminate the Trinity — only with more hoopla; it was still not a very big deal, and its chief significance to Taberah was the warmth the people of this land had shown him. It seemed to him a very hospitable land. He was warmed, but it did not occur to him to think that he was fundamentally more intelligent than others — the idea of possessing a superior aptitude

ran contrary to medieval culture. Taberah was touched by Emerant's statement that not one person in a million was as bright as him; his culture embraced exaggeration as a means of emphasis, and he was warmed that Emerant would make her point by exaggerating that much.

"Well?" Emerant said. "What do you want to do with your intelligence? Have you given it any thought?"

"I don't know," Taberah said. "I will need to think about what you have said. And your question is not a day's question to answer."

"Well, don't feel hurried. It'll take me some time to process this discussion as well. Taberah, you haven't touched your drinks; they've gotten cold by now. Here, let me microwave them for you. What have you been doing this past week?"

The remainder of the conversation was light and pleasant; it was a kind of conversation which Taberah had only mastered in the past couple of years, had learned did not mean anything in the sense of deep philosophy, but meant a warm personability and sharing — that much translated across cultures. Both of them, for different reasons, learned something of the other's culture — Emerant was enjoying an elective on ethnographic interviewing and even more enjoying an opportunity to apply her learning, and Taberah had crossed cultures from the time he was a little boy, learning something in each case. 'Student' seemed at least as interesting and difficult as any of the other professions he had seen and participated in, and went at a much faster pace with much more difficult material than an apprenticeship. He made a mental note to ask Aed if he could arrange for Taberah to work as a student.

Emerant walked Taberah home, again in silence, and then walked back to the dorm. She climbed into her bunk and punched a name on the phone.

"Tala, this is Emerant. You were right; he made my head spin. But I think that was less due to his being medieval than being astronomically intelligent." It was 3:00 in the morning before she hung up and went to bed.

Confessions

Taberah said to Aed, "I want to be a student! Can you help me be a student? What's necessary to becoming a student?"

Aed thought for a moment and said, "My university will undoubtedly take you, and give you full scholarship; the biggest thing for the moment is picking out which classes to take. That's something Nathella will probably be able to help you out with better than I can; she's very perceptive, and would have a better feel for what classes would help you most." Aed decided not to try to explain the degree programs; he believed in learning for the sake of learning, not learning for the sake of getting a piece of paper — and a degree on top of a Turing Award would be superfluous.

Nathella was out on an errand, and as Taberah waited for her, he began to realize something. The realization was not pleasant. When she walked in, Taberah said, "Nathella, I have a confession to make."

Nathella said, "Ok; I can take you to a father confessor this afternoon."

"Not to a father confessor, Nathella. To you."

"What is it, honey?"

Taberah hesitated, and said, "Nathella, I have been looking past you, but not at you."

Nathella looked at Taberah gently, and then closed her eyes. She was a quiet type, easy to ignore; she was slender, and men seemed not to pay her much notice. Taberah was not the first person to commit this sin, but he was one of the first to admit it. When was the last time someone else had done so? The only prior time had been by Aed. She was sure there were others, but — when she opened her eyes, she saw that Taberah was looking at her.

Taberah said, "Nathella, what are you thinking about?"

"I was thinking about part of my story."

"What is your story?"

"You want the whole thing, or the part I was thinking about?"

"The whole thing."

Nathella thought for a moment and said, "I was born on a farm; as a little girl, I had a wonderful education filled with simple amusement. We had a tight-knit community, and I miss that closeness.

"My father believed in education; he was a welder as well as a farmer, and was committed that his daughter get a college education. I went to school, and it was a wonderful extension and compliment to the rural upbringing I had. I think city kids now miss some of the things going on then; the computerized classroom doesn't teach you how to be perceptive, and I especially miss hunting — my father gave me a hunting rifle and scope on my twelfth birthday, and the day after I killed a bear. No, it wasn't because he wished he had a son; I had two younger brothers, and both of them were given guns on their twelfth birthday as well. I didn't like hunting as much as I liked picking flowers in the field, but there's nothing like giving your Mom a bouquet of wildflowers you picked yourself, and there's nothing like sitting down to eat meat you killed yourself. I don't own a gun, not any more, and I don't want a gun in this house where someone might break in and steal it and kill someone. But I enjoyed those fields, the heat of working in a cornfield in the summer, the fruitful creativity that comes on the other side of boredom — you get bored and then you get bored silly and then you think of things to do

sored, and then you get sored shy, and then you think of things to do that never would have occurred if you always had a television — and our family didn't. We had a computer, but both my Mom and my Dad believed that television was a waste of time and a waste of life. I'm better off for growing up without TV.

"Anyways, at school, it was an exciting new world, and I met Aed. That made a difference. That changed things — and it was the only pleasant thing that happened for a while.

"Back home, my father needed to remove a few stumps, and wanted to put a pond in a field that — I can tell you the story for that another time. Anyways, he needed some explosives, so he mixed an oil people used to use with a common farming material, and so far as I know, had the one forgetful moment of his life. He forgot what he was doing, and lit up a fag.

"That was it. On that one day, I lost my father, my mother, and both my brothers. The barn still looked basically like a barn; the house didn't. There wasn't much of anything of a house left. And I really couldn't go back — the people would have accepted me, but a farming community without my farm and family would have been like a body without a soul: to me, dead.

"I began to notice that I didn't feel so bad after I had some whisky; it took a fair amount — I could drink an elephant under the table. The more I drank, the more empty I felt when I wasn't drunk, and the more empty I felt, the more I drank. This continued for three years; Aed and I both finished our degrees later because of the drain of my drinking.

"There was one day when Aed was in a bad mood, and I got the brunt of everything that had gone wrong that day. I was in a terrible mood — it had just hit me that, even if I went back to visit, there would be this horrible silence about me — I would no longer be Nathella, who knew all the plants and animals and had yellow dandelion rubbed on her cheeks half the summer days from an old joke with two loving and rambunctious brothers; I would be that orphan thing — in a way, not human any more. I didn't at first admit that, and when I did, it hurt, and hurt, and hurt, and hurt. I got myself drunk, so drunk that —

"Taberah, do you know what a BAC is?"

Taberah shook his head.

"BAC is short for blood alcohol concentration. One drink will give you a BAC of .02. When we were at the banquet and you said that you felt funny and that the wine seemed to have more effect than you were used to, you had a BAC of about .05, judging by the amount you drank. At .08, in the eyes of the law, you're too drunk to drive. .20 is very drunk. 1.00 will kill you.

"Taberah, I had a BAC of 1.15, and that was after the hospital pumped my stomach — an experience I never want to live again. Several people at the hospital commented that it was a wonder I was alive at all. It took me over a day to become fully sober, and the first thing I remember when I was sober enough to be coherent, pumped full of chemicals that sober you up but make your mind feel like it's being scraped across asphalt, was Aed sitting down right across from me, looking me straight in the eyes, and saying with a dead serious voice, 'Nathella, I love you, and because I love you, I am not getting up from this chair until you admit you have a problem with alcohol.'

"I was trapped and pressured, and that was the most loving thing Aed ever did to me. Not marrying me; that was a close second, and that's the second best thing that's ever happened to me. No, third; coming to know God was a slow thing, not all at once, and it is the best thing I've ever known. But Aed staring at me as I made jokes, tried to cajole him, threatened to break up with him, and tried every other way I could think of to evade and deny him was the best thing that ever happened to me. He did apologize for his treatment of me the day before, by the way; he felt terrible about it, and has never behaved like that again. After five hours, he was hungry, thirsty, weary, and immovable as a rock, and I said the most painful thing I've ever said. I said, 'I'm an alcoholic.'

"Taberah, being an alcoholic is Hell on earth; I believed it when another alcoholic said that in Heaven, you can have as much wine as you want, and in Hell, you can have as much wine as you want. The first steps of recovery are even worse than being an alcoholic; it's like you had a

of recovery are even worse than being an alcoholic, it's like you had a festering wound, and now there's a surgeon going in with a knife to get the bullet out and stitch things up. It hurts, and it has to be done, and there's no anaesthesia. But it heals. Aed and I both needed support; when you're wounded like I was, you wound those close to you, and he's been healed too, even though he never drank more than four drinks in a day, usually not four drinks in a week. I've been dry for — how long has it been? Over twenty years, and I am healed — really and truly healed. I sometimes long for home, and I sometimes long for drink — believe me, there are some days when I ask Fiona to sit me down and distract me and make sure I don't go to a liquor store. But I am now free of that chain — and happier than I ever believed alcohol would make me.

"My faith... My faith is strong like I wouldn't have imagined. There's not much of me on the surface; most people don't pay me much mind. But underneath, God has given me a strength I would have never dreamed of. Childlike faith meets trial and testing that it may become childlike faith. Some people who hear my story ask me how I can have faith after experiences like that. I ask them, how can I *not* have faith after experiences like that? Even when I was dead drunk — especially when I was dead drunk; even when I admitted I was an alcoholic — especially when I admitted I was an alcoholic — God was *with* me. He has never abandoned me. Never."

Taberah sat in silence for a moment, and said, "I'm sorry I asked you for wine."

Nathella smiled and said, "Taberah, there's nothing to apologize about. You didn't know I was an alcoholic, and asking for wine is a perfectly reasonable thing. Why don't you go out and have a drink with Aed tonight? I can't drink, but I know God blesses other people through the fruit of the vine... Taberah, I know what you're thinking. I see it in your eyes, and I've seen it in other people. I'd like to tell you another story, this one a story that didn't happen to me.

"My best friend in college, Naomi, was the daughter of a competent insurance salesman. Her father was friends with the vice-president of sales, whom he invited over one day for burgers and beer.

"After they arrived from the office, Naomi's father realized that he had beer but not burgers, and drove to the store to buy some food, and the vice president raped her. It was the worst day of her life, and the days after were made worse by the fact that nobody believed her. They merely told her that that was serious business, and she was too old to be telling stories anyway.

"She noticed something peculiar when she began seeing a counselor and sharing this with other people. Many men were afraid to touch her. They knew she had pain, and mistakenly believed that another man touching her body would automatically bring back traumatic memories — at least that's how they thought about it; the way she usually put it was 'They won't even give me a hug!' It's a shame, too; Naomi was one of the touchiest people I've known, not as in easily angered, but as in liked to touch and be touched — she always gave me a kiss when she saw me, and she very much enjoyed a man's touch — rowdy as well as soft — be it in an arm over her shoulder, a crushing bear hug, or in horseplay.

"Some people who've been abused need not to be touched, and it's good to ask what's OK and what's not OK when you find out someone has wounds. But apart from that, people who are hurting need hugs most of all, and not touching a woman because she's been hurt — it's meant well, but sometimes it's just the wrong thing to do. Naomi learned to be very careful, as an adult, who she told about her experience — most people believed her, but some men in particular, with the best of intentions, never treated her the same way again.

"When there's a person in a wheelchair, by nature people will see the wheelchair but not the person. There's nothing to feel guilty about in having to counteract that tendency, but it needs to be counteracted. The standard advice used to be, 'See the person first and the condition second.' Now that has been refined a little bit to 'See an organic whole in which the condition is part of a person.' Naomi sometimes needed to be treated differently because of her trauma; there were days when she just needed to be left alone — and days when she just needed more hugs and more listening. It would never have helped her for me to forget she was human and treat her as something whose nature was 'wounded'. Pierce us; do we not bleed? Poke us; do we not squeak? Taberah, I am a woman

— human — with the full range of human emotions, laughter and silliness and joy as well as pain and worry and trouble. Don't let knowing I'm an alcoholic obscure your knowing that I am a woman. I would much rather you occasionally forget and ask me to buy you a bottle of wine, than think of me as a pit of pain with whom you must always be serious, always careful not to bump me lest I shatter. I'm human, OK?"

Taberah thought for a second and said, "Ok. If you won't buy me a bottle of wine, will you buy me a keg of beer?"

Nathella laughed and tousled Taberah's hair. He had somehow managed to keep a deadpan straight face. "Honey, next time I'm out shopping, I'll buy some root beer, which doesn't have alcohol, and we can each sit down and sip a root beer. Actually, you want to go shopping now? You seemed to enjoy going out for clothing, and maybe you'll see something at the store that you'll like. No, wait; the packaging food comes in is probably not whatever you are used to. Want to come along anyways?"

Which Classes?

Nathella said, "Aed told me that you want to take some classes."

"Yes, Nathella."

"You seem to find things to do easily; I suggest that you take two classes, three at most; other students take more, but you need a lot of sleep. Come on over to the computer with me; we can look at the catalogue with me.

"Let's see... Here's 'Mathematics as a Humanity', team taught by a mathematician and an artist. When I took it, it was team taught by a mathematician and a philosopher. It was the hardest class I took — and the best.

"In this culture, most people are taught something horrid as lower math, and they avoid it as much as they can. They don't guess what mathematicians really do — an art form guided by intuition. Most people think a mathematician must do more of whatever they suffered through in the math classes they couldn't avoid — more statistics and meaningless formulae. It's really sad; higher math is easier than lower math, and that course did not make me a mathematician, but it helped me appreciate what they do.

"'Modern Mythology: An Exploration of Storytelling in Postmodern Society.' This would also be a good course for you to take; it will help you see some of the good points of our culture — and some of the bad points. I

think last year they did an in-depth treatment of a classic interactive — the title escapes me (I'm never in tune with that — I was 20 before I saw *Star Wars*), but — ooh! it was called *net*, and *net* was hard science fiction that somehow managed to be very popular. This class didn't look at technology much, just the timeless elements of the story — and it is timeless. I don't know what they're doing this semester, although I can find out.

"Philosophy of Technology'. This is a good class; it's team taught by a humanities Luddite and a technology-worshipping engineer. Aed likes to occasionally go in and sit and watch the sparks fly.

"Psychology 212: Gift Giving. This class explores how to take basic psychological insights and use them to find a gift that will be meaningful to a friend and loved one.' I wish that one had been available to me when I was in school. Classes have been shifting towards a more practical bent. There's also 'Psychology 312: Synergy. This class explores positive interactions between people, and how to create the circumstances that give it rise.' There are a lot of good classes — hmm.

"Semiotics 101: A Critical Look at Contemporary Society' — this would be an extremely valuable class to you, but not for the reasons that most people take it. It would show you how people are inculturated into contemporary liberalism, and see things into the plurality that was once a holy trinity of race, class, and gender. Taking a critical look at a course like this would help you understand contemporary academia, and perhaps a little bit of contemporary society as well.

"I know you have an artistic bent; I've seen you carving. This might interest you: 'Fine Arts 212: The Art of Tektrix'. It's a class on how to build with robotic blocks, studied as an art form.

"Here's a fun one: 'Gender Studies 315: The Wisdom of Cats. A humorous look at how our lives can be made better by living out the wisdom that cats embody naturally, and a careful study of why cats are better than dogs.' Department notwithstanding, that looks — oh, wait. You're a dog lover. Never mind."

Taberah did not see why loving dogs would disqualify anyone from taking a course on cats, but he was too busy assimilating information too quickly to ask a question. Nathella continued, "'Communication 275: Are Sacred Cows Edible? An interpretive look at the popular comic strip and exploration of its meaning in society.' *That* looks interesting. I'm not going to try to explain it now, but you should take it. Let's see, what else?

"There's a dance art — kind of like a martial art, but taking dance rather than combat as its basic medium. In combat between two good martial artists, there is a harmony that arises, a kind of synchronization and attunement between opponents. Neither party walks in knowing what is going to happen — but a masterpiece emerges. A dance art does this with dance — there are differences; in both, you learn to read your partner, but in a dance art, you also want to be readable, instead of hard to predict — and dance art strikes Aed as very interesting. He tried one for a bit, but then left because he wasn't able to handle the structured, monotonous repetitions that low-level training took from martial arts. Maybe that's its weakness, and come to think of it, you probably shouldn't do that either, even though I have a feeling you can dance very well.

"Here we go! 'History 339: Medieval Culture.' I think this would be valuable to you as well; you would learn something about our culture in learning how it portrays your culture. Maybe that wouldn't be such a good idea; the catalogue refers to your culture as belonging to 'the misogynist tradition', and — come to think of it, I know who's teaching that course, and she'd fail you. That professor can tolerate almost anybody whom liberalism now sees as oppressed, but someone who is from medieval society and believes we have something to learn from it — you'd have a hostile learning environment. Let's see: what else?

"'Integrated Science 152: Heavy Boots.' I think this course would be a good one for you to learn from; it is probably the best to teach the culture of science and scientism — as good for its purpose as the semiotics class would have been for understanding the culture of the humanities as we now have it. Another one that you might like is 'Engineering 297: Cross-Disciplinary Commonalities of Repair and Debugging. This course covers the fundamentals of how to think about technology that does not behave as intended, with application to repair of mechanical and electrical

devices, and debugging of software.' What do you think, honey? Does that interest you?"

"They all interest me, Nathella. I don't know which ones to choose."

"Then we can wind to a close — ooh! You *have* to take this one, Taberah. At least if you can get in. The professor is a cantankerous, eccentric genius. This course has been taught under a dozen department names, and now the university's simply stopped assigning it a department. You'll like it."

At dinner, Nathella said, "Have you given further thought to what courses you want to take?"

Taberah said, "Yes. I want to take the last class we talked about, the class you recommended, and — oh, yes! Heavy Boots!"

Christmas

It seemed not very long at all before Taberah found the ground an unsteady traitor beneath his feet, and more often than not beneath his backside; he could keep perfect balance on a ship, but ice was tricky. The wind seemed to blow bitter cold through him as much as around him, and Taberah sometimes shivered even when he was inside and wearing a sweater. Taberah would have much rather been wearing heavy armor and sparring on a blistering hot day than experience *this*!

Even the cold could not damp his spirits as Christmas approached, though. He had thought about gifts for each of his adoptive family and friends for each day, starting with the first. He gave the madonna to Nathella, a riflery simulator to Clancy, pressed flowers to Fiona, and an abstract pattern to Aed. Each phoenix was given an electronic image of a stained glass window from home.

Aed received gifts in turn; he most prized the Pendragon Cycle which Nathella gave him; he would be fascinated by the historically-oriented retelling of the Arthurian legends. He knew those legends well, as well as he knew the legends of Roland and the twelve paladins, and he would be intrigued by the retelling. Seeing an American portrayal of his home gave him a unique insight into the time and place he was living with, and their conception of what is important about a place — it did not seem as strange to him as it might have appeared earlier. The theme of Ynes Avallach, the isle of the Fisher King, struck a chord with Taberah, and he felt that here, now, he was on that isle.

The days were merry days, with much revelry and joking, and there was a relaxed energy about the house. Aed began to wonder why the custom of twelve days of Christmas was not celebrated more; it was a good custom.

Twelve days seemed perfect to grasp the meaning of the Christ child; the Kinsellas had always understood Christmas gifts to be symbolic of God giving mankind his greatest gift ages ago, but celebrating with Taberah gave a new depth of understanding to the symbol. An hour does not merely allow one to communicate twelve things, each of which can be said in five minutes; it allows communication of things that cannot be said in any number of five minute bursts. The twelve days of Christmas were not twelve consecutive Christmas days; they were part of a whole celebration that embraced gift giving but went much farther, a time of worship and enjoyment of God. Clancy wondered at the beginning how one could possibly spend twelve days celebrating Christmas; come the end, he wondered how one could possibly stop after celebrating one day of Christmas. While they were out caroling, Taberah tasted real wassail, and during the celebration Aed took Taberah to a wine bar and introduced him to champagne.

On the eleventh day of Christmas, Taberah asked Nathella, "Can you smell the incense?"

Nathella was confused. "There is no incense in this house. The only smell of incense has been on our clothing, when we came back from the Christ mass. Are you talking about that?"

Taberah said, "Not that, Nathella! The *real* incense! Can you smell that?"

"I don't understand, honey. Why would you be smelling incense?"

"Nathella, what is incense for?"

"It ascends in the presence of God, and some of it is around us at the holiest times we worship. Catholics only use it on special days; the Orthodox use incense at every worship, and believe in bringing Heaven down to earth — ooh Now I understand Yes honey I do smell the

down to earth — can now understand. Yes, honey, I do smell the incense."

First Day of Classes

The first day of classes was delayed by a heavy snowstorm; it was such as only occurs once every ten years, and people were in mixed moods when they finally came inside a warm classroom. The freshmen and sophomores tended to have a spirit of adventure, while the juniors and seniors more tended towards irritation.

Taberah walked into a large lecture hall, crowded with students. A professor cleared his throat and said, "Good morning. My name is Professor Pontiff, and you are in Communication 275: Are Sacred Cows Edible? In this course, we will be studying the strip of that name. If you'll excuse me for one moment..." He fumbled with an overhead projector and turned it on. A comic strip appeared overhead. It had a young man and a young woman in conversation:

Young man: It's a shame when a comic strip becomes the medium for public discourse.

Young woman: You don't like it when conversation is to the point and funny?

Young man: Not that. I don't like that it has to be funny, and that you get ignored if you have a point that you can't cram into five seconds. Most theories that can be put in a nutshell belong there.

Young woman: What if there was a comic strip that made its point but was not particularly funny?

After giving the class a minute to digest the strip, then said, "The term 'sacred cow' is now a bit dated, but it was popular around the turn of the century. The Hindu religion treats cows as sacred animals, and there are cows in India that people will not kill — they would rather starve than kill a sacred cow. In a typically anti-foreign fashion, people who did not understand or respect this religious tradition took the term 'sacred cow' and made it a metaphor for an absurd belief that benighted people defend and are afraid to abandon, and which one is considered enlightened and courageous to attack.

"Or at least, that's what people who used the term 'sacred cow' understood it to mean. It worked out in practice that 'sacred cow' meant in particular the sacred cows of conservatives, but not the sacred cows of liberals. Even liberals have now come to acknowledge that liberals have just as many sacred cows as conservatives, and even that there are good if inarticulate reasons behind at least some of the norms that are branded as sacred cows. 'Sacred cow' was an anti-conservative weapon, one that could do damage without needing any argument, and it was used in sayings such as 'Sacred cows make the best hamburgers.' It was somewhat of a sacred cow itself.

"There were a number of people who began to question this, but one of the more influential ones was Anonymous. Anonymous preferred not to be known by his name, and kept his anonymity even when running for office as an independent. But that's another story I will not go into here. Anonymous was about equally likely to vote Republican or Democrat, by the way. He was influential because he chose a medium in which one person can reach a number of his people: the comic strip. The very title of the comic strip, 'Are Sacred Cows Edible?' is part of a challenge to what the term 'sacred cow' had been used for.

"On the projector is his first strip. The characters are not named; they are subservient to the idea. Even his basic idea is trying to break out of the frame of the comic strip; it shows no direct humor, but perhaps (if you look higher) some meta-level humor. And, at any rate, it bites the hand that feeds it. Anonymous was very good at that. The question, "What if there was a comic strip that made its point but was not particularly funny?" is in a sense a very pointed joke. Or is it?

"Regular attendance is expected; the class's format will have a strip a day, followed by lecture and discussion. The only textbook is the one comic book you have; I'm sure this didn't influence any of your decisions to join this class. By now, I'm sure that there are a few people in this class so industrious that they've already read the text, or a good chunk of it; I feel safe in asking an opening question that draws on some knowledge of the text: 'How does the comic strip fit among other media? How does this particular comic strip fit among other media? Are the two related or unrelated?'"

Taberah rejoiced in the discussion that followed; it reminded him of medieval reading, an activity so involved that some doctors viewed it as a form of exercise. He himself did not say anything, but paid attention both to what was familiar and what was unfamiliar: the text was viewed in a different manner, he could tell, and not as something authoritative. More of a starting point for tangents. Taberah wished to sit still and watch, come to understand what this culture meant by "having a discussion" — and did so, until the instructor pointed to him and said, "You. What are you thinking about? You're thinking loudly."

Taberah hesitated, and said, "I was just thinking about how this discussion seems to be 'What can we jump off of from the strip?' instead of 'What does the text mean?'"

"You think we can have a discussion about the content of one strip? It's a ten-second strip."

"Maybe. I've known some good, long discussions about a single sentence. One thing which people might say is, 'How do we deal with content that does not fit within a medium's limitations?' How, for instance, do you think about something you can't say in words?"

"If you can't say it in words, you can't think it. The limitations of language are the limitations of thought, right?"

"I think things that I can't express in words. Or, at least, I think things that I can't express, and I've been told I use words well. Saying that the limitations of language are the limitations of thought is like saying

the limitations of language are the limitations of thought is like saying that the limitations of painting are the limitations of imagination — that, just because we can't paint something moving or three dimensional, we can't imagine it. It may well be a limit on what we can communicate, but not on what we can think. We can be tempted to this error by the power of painting — color, shading, and perspective. We can make paintings so lifelike that we are capable of thinking they represent anything we can imagine — but we can still imagine things that just can't be painted. My deepest thoughts almost never come in words, and it takes effort and insight to capture some of them in words."

The teacher was impressed. He said, "If you want, come in during my office hours, and maybe we will talk about how we can have a class period discussion in your style. What do the rest of you have to say?"

Taberah sat back in his chair and continued to think. He was going to like being a student.

The TA stepped forward and said, "Heavy Boots has traditionally been a student-to-student class, taught by people who have freshly learned the material, and this will be the most important class of your discipline. It tells you how to think logically, how to think about science.

"The anecdote from which this class takes its name concerns when a couple of engineering students were in a philosophy class, and the philosophy TA gave as an 'example' the 'fact' that there is no gravity on the moon: if you held a pen out at arm's length and let go, it would just float there. 'No,' one engineer protested. 'It would fall, only more slowly.' The TA calmly explained that it would not fall because there was no gravity. After a couple of things failed, inspiration struck. The engineer said, 'You've seen movies of astronauts walking on the moon, and you saw them fall down. Why is that?' The TA, who had had plenty of courses in logic, said, 'That's because they were wearing heavy boots.'"

A chuckle moved throughout the class. The TA continued, "At this point the other engineer, who was calmer, dragged our friend, who was foaming at the mouth, out of the room. They decided that night to do a telephone survey. They asked people if there was gravity on the moon. Sixty percent said, 'No.' Those sixty percent were asked the follow-up

question about astronauts. Of the people who had said there was no gravity on the moon, twenty percent went back and changed their answers, but over sixty percent said that the people on the moon stayed there because they were wearing heavy boots."

There was more laughter, and the TA said, "Science tells us how the world is, and it can be known through experiment. This class will help you learn not to have heavy boots. Are there any questions?"

A young woman raised her hand. "Do you believe in Darwinism?"

The TA said, "Darwinism is bad, but not nearly as bad as creationism, or the masks it wears — intelligent design. It is true that Darwinism cannot explain the question of origins, but that isn't science's job. It's not subject to debate. However the world came to be, it is here, and that is what we study. As to intelligent design — I have another story. There was an engineering professor who came in to find his class talking about heavy boots. He gave a very involved explanation of, among other things, that gravity works on the moon despite the fact that the moon has no air, explaining the whole scientific method, the idea of trying to be skeptical and open-minded at the same time, and at the end, he asked, 'Any questions?' One young girl raised her hand, and said, 'You seem to be getting very worked up about this. Are you a Scorpio?'"

Another chuckle went through the masses. "There are any number of other stories. Did you hear about the English professor who noticed that his computer was warm, and poured water in it to cool it down? Or the farmer who complained that there were holes in his computer after he played duck hunt? Are there any other questions?"

Taberah thought. Nathella was right; this course *was* going to teach Taberah a lot about the culture of science. He raised his hand and said, "Yes. Why do you regard non-scientists as having intelligence one step above that of a rock?"

The ensuing discussion was both vigorous and heated. Taberah had already begun to piece together that something besides scientific thinking that was being taught — he could not tell exactly what, but by the end of class a good many people came to see that a disrespect for non-scientists

class a good many people came to see that a disrespect for non-scientists was being taught, and some of them even questioned the equation of science with rationality. Taberah was silent for much of the discussion; he was trying to figure out what besides the obvious was being taught in that class.

A professor stepped up to the podium and said, "Good afternoon. Do we have any computer science grad students in class? Good. Any doctoral students? Wonderful. What did the B.S. in software engineering say to the Ph.D. in computer science?"

"I'll have the veggie burger and fries, please."

"Or do we have anybody from the practical disciplines? A university without colleges of business, engineering, and applied life studies is like a slice of chocolate cake without ketchup, mustard, and tartar sauce."

"Anybody here from the English department? The English department is a special place. If you want to find a Marxist, don't go to the political science department. Nary a Marxist will you find there. Go to the English department. If you want to find a Freudian, don't go to the psychology department. Nary a Freudian will you find there. Go to the English department. If you want to find a Darwinist, don't go to the biology department. Nary a Darwinist will you find there. Go to the English department. The English department is a living graveyard of all the dead and discredited ideologies that have been cast off by other departments."

"Anyways, I'm Dr. Autre, and I would like to welcome you to the first day of class. You'll be able to remember which room we're meeting in; just remember room 20, same number as your percentage grade. This class will have no discussions, although there will be question and answer. As to discussions — you don't really have to pay anything to hear what your friends think about a matter, but given that you're paying good money to be here — or some of you are; the rest are sponging off your parents — I think you are entitled to hear what a professor thinks. Someone said that diplomacy is the art of letting other people have it your way; I was never good at diplomacy. Too honest for it. Maybe some of you will do a better job at it, when you have a Ph.D. behind your name and

the academic world says, 'Aah, here's a Ph.D. Here's someone we can take seriously!'

"Some of you have questions about the syllabus. The answer to those questions is very simple. There is none. I don't mean that I don't have planned material I can fall back on if I need to; I mean that the important stuff in this course is the stuff I can't foresee. The main reason I plan out course material ahead of time is that it provides me with a point of departure from which to do something interesting. As such, I do not wish to confuse you by giving you distracting information."

A young man raised his hand. "But if you have the information on hand, what harm is there in sharing it? Certainly it helps you."

The teacher said, "There was once a professor who thought his class was writing down too much of what he was saying, and thinking about it too little. At one point, he interrupted his lecture to say, 'Stop. I want you to put down your pens and pencils and listen to me. You don't have to write down every word I say. You are here to think, not to produce copies of my lecture notes. You don't have to write down what I say verbatim. Any questions?'

"One young woman frantically said, 'Yes. How do you spell *verbatim*?'

"I'm not going to spell out an answer to your question beyond that, but I am going to say that I won't always say my full meaning outright. I will leave it implied, for you to wrestle out. That requires the same involvement as discussion, but it leaves you free to hear a professor. You are encouraged to talk with your colleagues after the classroom for as much discussion as you want. Class time is for what you can only get in class time — a professor's lecture.

"I've used a different text each time, and the registrar usually won't print how to get a text in my class. This year, I want you to get a sticky-hand, walk into

Sphttp://www.powells.com/partner/24934/biblio/0684863170 Physical — it's a mile down the street from the college, close your eyes, turn

around, and toss the sticky-hand past your back. The book that the hand lands on is yours. Buy it, and study it; see how it relates to our classroom lectures, and tie it in to your discussions. I guarantee you that, after the first month, you will have learned something that I couldn't have possibly coordinated by picking the text myself. I don't just mean learning to read a text at an angle, although that is tremendously important; I mean that you will have learned something directly from the text that I couldn't have picked out. Tonight's reading assignment is pages three through ten, and the first page of the index, if your book has an index. Any questions?"

Taberah leaned back. This class was going to be a lot of fun.

Baptists

Taberah walked in after the first day of classes, excited, alert. He said to Nathella, "What does the word 'Baptist' mean? I heard someone use it between classes, and I couldn't figure it out from context."

Nathella said, "Um, that's not a five-minute question. First, do you know what 'Protestant' means?"

Taberah said, "No."

"There have been any number of reform movements in the history of the Catholic Church, and there will be any number of such movements in the future. With one of them, a monk named Martin Luther nailed ninety-five theses for reform on the door of a cathedral. The authorities questioned him, and finally asked him, 'Do you believe that the Church has actually been *wrong* in these things for all these years?'

"Luther asked for a couple of days to think about it; that was granted, and at the end of the time the question was put to him again. He said, 'Here I stand. I can do no other.'

"Then all Hell broke loose. Luther was excommunicated, and tried to set up a parallel, reformed church. The church called 'Catholic' was the one that initiated the schism, but they were not the only schismatics. Luther's church splintered and splintered and splintered. There was all manner of invective between the two sides, and they were excluded from each other's communions. It was worse than the split between Latin and

Greek — far worse.

"Over time, people began to realize that the schisms were not a good thing. There were some who said, 'The solution to the problem is simple. Everyone come over to my side, and there won't be any division.' There was the problem of communion: especially on the Catholic side, there was an understanding of communion as implying full membership in the community, which was in turn understood to mean that members not part of a particular schism could not legitimately take part in it — this interpretation was deemed to be more important than the words, 'Take this, *all of you*, and drink from it.' that instituted a feast given to all of Christ's disciples. That's still where things are now; Rome has now interpreted Vatican II to mean that Catholics and Protestants whose consciences command full participation in their brothers' and sisters' worship may be — what's the word, *tolerated*, in taking communion across the schism. It's a step homewards, I suppose, but we are very far off from organizational unity that once was.

"Baptists are, or rather were, one of the Protestant sects, and they added something to American culture. As to what happened —

"In the fifties, the question of abortion, the question of whether a woman has a right to kill the child growing inside her, came up with the Supreme Court. The court protected the child's life. In the seventies, it came up again, and this time the court legalized abortion, and the movement declared the controversy settled. But it wasn't.

"By the nineties... there were laws in place that offered stiff penalties for abortion protests, and RICO, a law meant to deal with organized crime, was used to inflict massive penalties on abortion protesters. There was one minister who led a protest while cautiously distancing any church involvement or statement on the protest. The courts RICOed the congregation, making a multimillion dollar settlement. Also going on were 'physical compliance holds' — meaning pain holds used on demonstrators. Nonviolent protests of abortion received draconian punishment compared to the penalties deemed appropriate for violent protest by environmental or animal rights activists.

"When a pregnant woman walks into an abortion clinic unsure what

When a pregnant woman walks into an abortion clinic, unsure what to do with an unexpected pregnancy, by the letter of the law she is supposed to receive non-directive counseling to help her decide how to handle the situation. What actually happens is very different. Abortion is big business; insurance companies will readily pay thousands of dollars for an abortion rather than deal with all of the expenses of childbirth and a new life out in the world. Even when there is no insurance, a couple hundred dollars is still lucrative for a ten minute procedure. Never mind that the people who perform abortions have the highest suicide rate in the medical profession; it's money, money, money. What actually happens when a girl walks in is that she receives a five-minute sales pitch that slants abortion as the only live option. Most of the abortions that have happened in this country were abortions that the girl was pressured into, that she never was allowed to say 'no' to — same thing as date rape.

"So there was this big push to have real non-directive counseling at abortion clinics, along with a surgeon general's warning about the emotional scars that abortion can cause — post abortion stress syndrome and all. It wasn't just Christians behind it; some feminists, especially those who had spent some time working at abortion clinics or talking with women who had gone through that trauma, had begun to suspect that they and their movement were being manipulated as pawns by forces less innocent than — anyways, the law was passed September 1, 2012, and struck down October 1.

"The Baptists were the fastest to spearhead an initiative to get every church member into a protest — which they didn't do; it was closer to fifty percent, but there was a massive, peaceful protest, and the police came out — pepper spray, tear gas, pain holds, the works. The jails were filled up overnight, and it was ugly. The ugliest thing about it was that it wasn't two parties fighting each other — it was one party attacking satyagrahi who didn't resist. The courts thought this would be a good time for an unambiguous message, and commanded a settlement of over 1.6 trillion dollars. The church could not begin to pay something like that.

"The courts lost something that day. The president of American Baptists called a press conference and said from his jail cell, 'You can force our bodies and our checkbooks, but you can never break our spirits.'

The denomination of Baptists in America is hereby declared to be bankrupt and disbanded. Baptists, melt into other bodies of believers. You are the heart of our ministry, not a formal structure that can be sued. Courts, you have won this battle. But *what is it that you have won?*

"Most other Protestant denominations that participated in the protest did not do much better; Catholics were protected only by the masterful diplomacy of the Papacy. The Pope tried to be an advocate for the Protestants, too, but saving the financial viability of Catholics was making the best of a bad scenario. There were believers who left the Catholic Church — not out of any rejection of Rome, but as a matter of solidarity, saying, 'We would rather be ill-treated alongside these righteous Protestants than be spared because our denomination happens to be powerful.'

"That single court decision galvanized the body of believers as a thousand sermons could never have done. Before then, there had been talk of an emerging post-denominational Christianity; now, people finally realized that they had bigger things to worry about than labels. It was as if two estranged brother generals forgot their dispute in the face of a battle. The Church was driven mostly underground, yes — it had been underground at its beginning, and it will be underground again, no doubt. And people are tortured when they protest abortion, infanticide, or euthanasia — the Constitution prohibits cruel and unusual punishment, but the courts have ruled that 'nondestructive incentives to reform' are not punishment. It is still virtually illegal to witness about your faith — the argument classes it as harassment, and a freedom of religion defense brings a dilemma with it. If you invoke your religion as a defense, the question is which religion, and if you specify whichever area of Christianity you are from, you are slapped with massive penalties for participation in a corporate entity which falls under RICO. All of this is true and more, and the church is healthier than ever before.

"Taberah, in martial arts, I remember hearing something about you and joint locks, but I don't remember what. A joint lock is when someone twists one of your joints so that you will be pain unless you move in a certain way. This enables a martial artist to take your wrist and bring you down to the ground. What the Supreme Court learned in the ensuing

years was that joint locks would no longer work against Christians. You could still figuratively twist a Christian's wrist — break it if you pressed hard enough — but she wouldn't go down to the ground unless you did so much damage to her that she was incapable of standing. And it is bad publicity if nothing else to do that much damage to unresisting people again and again — so things have evolved to an unofficial 'Don't ask, don't tell.'

"Abortion is still of course legal, but now there are a lot of Christian women who can pick up on when another woman is pregnant, sometimes even before she knows it — and tell her, 'You don't have to have an abortion,' and then talk about alternatives. The abortion industry thinks we're worse than termites — individually not a problem, collectively a major problem, and too many to go hunting for — and there's not that much they can do. Yes, they have advertising; yes, they control the literature that goes with pregnancy tests; yes, they do a number of abortions — but we're able to make a sizeable dent. And the legality of killing is something that's hurting the court politically.

"There's a saying, 'Satan meant it for evil, but God turned it to good,' and the final break in dark power is that we are not angry at the court. We pray for them every night, submit to them in what we can, and go about our lives — for God, not against the court. The court, with the worst of intentions, has created the conditions in America for Christians to deal effectively with problems that we would never have begun to treat.

"Have I answered your question, Taberah?"

Taberah thought, and said, "You have answered it and more. I would like to talk with you more some time, to better understand your form of government. You miss the Baptists, don't you?"

Deep Waters

Taberah closed his eyes for a while and said, "Nathella, you said there was a story behind your Dad wanting to make a pond. What was the story?"

Nathella said, "When I was little, I had a fantasy, an image — of being surrounded by a gathering of many warm people, of a place where I belonged. One of my brothers, when he was little, imagined exploring a mansion, and had a very vivid image of a doorway opening, light spilling out from behind. My father had a dream like this, too. He envisioned a deep pool of water, a pool he could swim in and dive deep and meet mermaids. He liked to reminisce, and he talked about that dream from time to time. He had a better memory than most.

"One of the things that happens when you get older is that you get practical, and one of the things I accepted after a blunt remark from a young man is that 'practical' is not about getting things done; it's about letting dreams die. It means settling for less — being happy, to be sure, but... I have come to accept my age, but I know I lost something when I gave up the bright energy of being young.

"One of my father's friends asked him, 'Why not make your dream a reality? You may be too old to swim into a pool and meet mermaids, but there are children around town who are not. They don't have a place to swim. To be sure, you'd have to put a fence around it and require parents to be around, buy one of those floating rings, but why not? Why not make a place where children can dive and meet mermaids?' He told me that a

spark lit in my father's eyes — my father said, 'I've got some stumps to blast, and I've got a field I don't use any more. I can make a pond as well.' That friend felt very guilty when he found out what happened, but when I look back — I think my father died well. It left on me an impression, and I've managed to keep a little more of my young openness to dreams than I might have otherwise.

"And I'm glad to have met you. You help me dream, as well. You're Heavenly minded enough to be of earthly good — you've already changed my life for the better."

Taberah said nothing. He felt at the same time honored and slightly uncomfortable — why was she putting him on a pedestal? Taberah now dreamed mostly of Heaven, and he was sure he would receive it. Why — Taberah thought, and he could not think of any appropriate questions to ask. He let the matter rest.

TMC Metagame Competition

Taberah went down to the computer room, looking for something to do. He found a cool portal, and spent half the day fascinated by looking at different layerings of the human body. He particularly liked looking at a forearm end-on, with only the skeletal and nervous systems visible. It was fun, but something in his mind was still itching.

Then he heard a herald announce:

TMC. TMC is short for TMC Metagame Competition. The objective of this game is to devise the best new computer game; players' work will be judged according to their popularity in testing votes. Points are awarded for originality, quality of game concept, quality of artwork, and another category specified by game designer. Past winners may be seen at...

This had Taberah's undivided attention. He went, sat down, and spent three hours' total playing different winners, and then, after going through the next day's classes (now less interesting to him, although he tried to concentrate), began to think in the morning.

They want something original. This culture values novelty over repetition; what can I give that is truly original?

Taberah remembered his time as a court jester, in which his role was to stand on his head, both literally and figuratively — exalt the abased or pull down the exalted. Pleasure filled his mind, as if he were meeting an

old friend. *All games that I am aware of are competitive; one wins by defeating others or possibly by gaining a high score in surmounting an obstacle. What of a game in which there is no defeating others and in which the player is not constrained by any predefined goal?*

Taberah left the computer room and began pacing in the forest. He could say those words, but what did they mean? Trying to describe a game without a conflict seemed like trying to describe a statue without a shape.

There are a great many ideas that might as well be original because of how hard people have worked to forget them. What is the one idea that is now escaping my attention, the one thing that was the air I breathed in the Middle Ages but which people do not understand now? I can't think of it — what is the one symbol of — symbol! — these people live in a world of symbols, but not as I do. It is a world of meager, half-dead symbols that do not have the courage to be. For them nature, the world is stripped of symbolic lore. A lion is not a reminder of courage — or maybe it is the one surviving exception. They see just a yellow mass, a predator — it is like seeing shape without color.

How can I make symbolic meanings visible to them? How can I make a text speak to people who are illiterate? What if they could look at the green in a pane of a stained glass window and — they can. I can make an annotated virtual world — a cathedral and forest, full of plants and animals — in which, when the objects are touched, a voice tells what they mean.

Aed has shown me enough that I can begin working on this now.

Results

The days passed quickly; Taberah spent every spare moment working on his creation. He enjoyed the classes, but he rushed out quickly to be back in the joy of creation. It had been so long before he created something.

He finished just before deadline, and met with mixed results. His creation fascinated any number of people, was very popular — and was disqualified as not meeting the criteria as a game. The metagame judges wanted something original, but interpreted in such a way as to mean something original in the creation of what you have to defeat. Taberah cried; he was hurt by the judgment, and he felt depressed not to have anything else to be working on. Yes, there were classes, and he particularly enjoyed the cartoon that said, "Tolerate this!" and showed a picture of a cross. The teacher went on to explain that liberality and tolerance did not just mean liberality and tolerance of liberal minorities, but tolerance of Christianity. This produced a heated discussion, and Taberah loved it.

The end of semester rolled around. Taberah had passed the cartoon course, aced the other humanities course, and failed the science course. He was not nearly as saddened by that grade as by the leaving of most of the students, particularly the Phoenix Society. The Kinsella's home was desolately quiet — or at least, it was desolately quiet until Taberah received a call telling him that he was the first person to receive two Turing Awards.

Then the household was busy with preparation.

Gadfly

Taberah walked up slowly, hesitantly, to the microphone. He looked unsure of himself, but there was still a deep confidence in his walk.

He looked at the microphone for a second, and then out at members of the audience, one at a time. It was a minute of silence, and in his eyes a penetrating gaze grew.

"It was a year ago this day," he said, "that I accepted this award, and I accepted it only because it was politic. I did not and do not think that what I did then merited an award of this magnitude. All I did was look at the problem a bit differently, think a little, and see a way to cheat on the Turing test. This is not a very big deal; it was just an accident. Yes, I know that most scientific discoveries are made by accident, but this does not make an accident a scientific discovery. But this time is different. This time, I am happy to accept the Turing Award.

"This time is different. Earlier, I had merely managed to capture the accidental features of intelligence. Now, God has given me the grace to capture some of its substance, and I stand in awe. It is as if, before, I had received an award for making a statue that looked like something alive, and now, I have succeeded in making something that is vaguely alive. The difference is fundamental, and I wish to ask what lessons we have learned in the discovery.

"The first lesson I can see is that abstract thought is easier than concrete thought. Or, to put things differently, that our minds are so

wonderfully made that many of us can handle concrete thought even more easily than abstract thought. (Maybe the first lesson should be that we are fearfully and wonderfully made.)" A chuckle moved through the audience. "There is much more to thought, and rationality, than is easily captured, and I've only scratched the surface of it. It took me a long time to understand that computers are logical and can do math as no human ever will — excuse me, do arithmetic as no human ever will — and yet that they could not think. Notwithstanding Dijkstra's dictum that the question of whether computers can think is like the question of whether submarines can swim, computers could not think. If I have managed to make a computer think, I have managed only the barest prototype of what could be done — like those cave paintings that we can barely recognize as art, I have just stumbled on how the basic principle works.

"Or, at least, part of the basic principle. All I've discovered how to program is how to think abstractly; I still have no idea of how to tell a computer how to deal with sense input. Nobody knows how to make an artificial dog; making the robotics for a body would be easy, and making an internal chemical laboratory capable of taking in food and water and producing slobber, sweat, and the like is arguably possible, but we have no idea of how to do the intelligence. All of the abstraction in the world can't tell our robot dog how to run through a field of children without getting clobbered. We have captured one of the features of human intelligence; there are a number of features of even animal intelligence that we lack. There are other features of unintelligent life that we have yet to touch, as well. Nobody knows how to make machines that heal after they sustain damage."

"The last lesson I wish to mention concerns accident and substance, and..." Taberah closed his eyes, and said, "Mr. Chairman, I stayed up all night thinking of what to say, and manners in the country I come from are a bit less polished. I really can't think of a polite way to say it, but I really think the discipline of artificial intelligence has been running with an albatross around its neck, and my success is in large part because I somehow got on the racetrack without getting an albatross. Do I have your permission to make some polemic remarks that may sting?"

Dr. Bode said, "Mr. Kinsella, you have our full consent to say

whatever you think is best suited to the occasion."

Taberah said, "I know, but I am not much older than a child, and one of the things I've learned the hard way is that people sometimes say that when they don't really mean it. Is it really OK?"

The chairman's face held trepidation for a moment; he paused, and then said, "It's OK."

Taberah said, "Thank you. And I do really mean it.

"I will not begin to attempt a full philosophical analysis of accident and substance, any more than I would attempt a full mathematical analysis of logic within this speech, were I able, but I will say this. Accident is the outer appearance of an object, what the senses can receive. Substance is what it really is, its essence, if you will. Our discipline, in this area, is the self-made victim of an incredible legacy of bad philosophy, and has many fruitless endeavors which make as much sense to a philosopher as trying to bring a statue to life by painting it and making its features ever more lifelike. We have asked the question of, 'How can we create artificial intelligence?', but misinterpreted it to mean, 'How can we imitate the features of artificial intelligence that are most computer-like?' With all due respect to the brilliant man for which this award was named, I was shocked when I read Turing's explanation of what he thinks thought is. His interpretation of human thought is like interpreting a game of chess as moving little pieces around on a board. Some of what I have seen in this community reminds me of trying to kink a cable to stop the flow of data on a network, and then switching to fiber optic to make your thinking work. But what has happened is not that you make your thinking work; you only make it stop working. The main thing I would attribute this success to is that I came from another culture and missed this bad philosophy, and I believe that the artificial intelligence community will really begin to mine out my insight when they can really escape from this bad philosophy."

Taberah closed his eyes a moment, and said, "Mr. Chairman, may I take thirty seconds for a personal announcement, as well?"

The chairman sat for a moment and said "What you have said is a

The chairman sat for a moment and said, "What you have said is a difficult thing to hear, but others have said it before, or things similar. Perhaps we just haven't taken them seriously enough. Yes, you are welcome to say whatever else you want."

Taberah looked, gazed out at over a thousand heads in the audience. All eyes were on him. Slowly, distinctly, loudly, he said, "In this whole room, I doubt if there are more than two or three of you who can hear what else I have to say, but it is something significant. I would like if those two or three would come to my hotel room after the night's festivities so we can talk about it. Thank you, and have a good evening." He closed his eyes and walked hurriedly, almost as if embarrassed, back to his seat.

There was a hushed silence, with murmuring. When he got back to his table, after waiting a minute, one of the people from an adjacent table scooted over to him, and said, "May I join you tonight?" Then another, then another. People began to walk over to him. In minutes, Taberah was at the center of a noisy swarm of people.

Taberah turned to the woman nearest him, looked into her eyes, and asked, "Would you get the chairman for me?"

In a few more minutes, the chairman was next to him.

Taberah hesitated, and then said, "Dr. Bode, there seem to be more people interested in what I have to say than there is space in my room. Would you be so kind as to provide me with a room to speak in, where these people can comfortably be seated?"

The chairman gently laughed, and said, "Mr. Kinsella, why don't you speak here? The whole room is interested in what you have to say."

Taberah picked up his glass, took a long gulp, and said, "Let me take a restroom break first. And would you announce to people that anyone not interested in my tangent shouldn't feel obligated to stay. It'll be a tad long."

When Taberah returned, not a single soul had left. The room was dead silent.

DEAD SILENT.

"The discipline of artificial intelligence is about how to impart rationality to computers. This is a question about computers, but it is at least as much a question about rationality. In our endeavor to make computers rational, we have paid scant attention on how to be rational ourselves. I am not saying that we should be Spocks, embodying logic without emotion. A prejudice against emotion, and a belief that rationality and emotion are antithetical, is (thank God) crumbling, but old fallacies die hard. I embrace emotion as much as I embrace being physical and enjoying music and good wine, but I do not wish to deal further with emotion now. What do I wish to deal with?"

"Dick Feynman, in his memoirs *You Must Be Joking, Mr. Feynman*, included a classic speech on cargo cult science. He spoke of aboriginal people who, in World War II, had Allied food and other supplies accidentally airdropped to them, and produce a mockup of an airstrip, designed more and more to look like a real airstrip — but, however much they worked, planes never landed. Never mind that this is very crude anthropology; there is a fundamental insight there about something that looks very much like an airstrip but just doesn't work. And it provides a key to explain something very disagreeable.

"When I came here, I was shocked at what I saw in intellectual life. It is like the shock that might come to a scientist the first time he goes to a creation science institute and discovers exactly what 'science' means in that context. Pseudo-science can incorporate a lot of material from science, and still not be science. What shocked me when I came here was that I looked for reason and found pseudo-reason."

Taberah said, "A full brain dump of what I have seen would take far too long to deliver in a speech, but I wish to give a sampling in three areas: an instance of bad reasoning I see, an instance of a bad way of thinking I see, and an instance of a possible partial remedy.

"The example of bad reasoning I see is in the area of overpopulation. The general, un-questioned belief is that our world's population is growing exponentially, much faster in the poorer areas of the world, and doomsday will come if we don't curb this population explosion. Speaking

as a philosopher, I ask, 'Why?'

"The answer that is given is that people in the third world have large families to support themselves. And that's enough of an explanation to be accepted by someone gullible, but it does not stand up to examination.

"If the world's population is growing exponentially, then it has either always been growing exponentially, or it started growing exponentially at some point. If it has always been growing exponentially, then, as certainly as the future holds doomsday population levels, the past holds dwindling population figures. As surely as the future explodes, the past implodes. This would mean that prior to, say, 1700, all non-European continents would be virtually uninhabited. If the third world population is doubling every, say, ten years, then the population of the third world in the year 1700 would be less than ten. This is ridiculous. All accounts I know say that the poorer areas of the world have been inhabited with at least moderate density for quite some time — thousands of years easily. This leaves us with the other option, namely that the population of the third world has been basically stable and has recently begun exponential growth. To this possibility I ask the question: why on earth? The cultures of these people haven't changed at any rapid pace (and if they did, I would still be puzzled as to why *all* of them changed, instead of a handful — a rapid change of unrelated cultures is about as unusual as the formation of a herd of cats); it is true that most of them cherish children and value big families, but that's been a part of most cultures since long before whenever this population explosion was supposed to have begun. The introduction of new technology to lengthen life and childbearing years? That would certainly account for a population explosion in the *wealthy* nations, but the average African tribesman has never heard of a Western doctor, let alone received enough medical care to possibly increase the number of children he leaves behind.

"Literature describing a population explosion if the third world birth rate is not curbed has been around for several decades; it used to specify a date for when, for instance, people would all be standing because there would not be enough room for anyone to sit down; those dates are long gone, had passed well before the turn of the millennium, and now there are no more predictions for when doomsday will be — merely that it is

always 'soon'. There are pieces of evidence garnered to support this — for example, the great poverty by our standards of third world nations; never mind that this is how all nations lived before one civilization happened to stumble on Midas's secret — but it doesn't stand up to rational examination. And there are many claims like this that free thinkers never question, because to question them is to question rationality or to question reality.

"That is one example among many of non-think; I do not presently wish to give others, nor even to ask who or why would perpetuate such a massive and propagandistic illusion. I am trying to keep this talk short. So I would like to move on to my next example, of an instance not simply of an irrational belief, but of a macroscopic way of thinking that is bad. In this area also, I have a number of choices; I choose to elaborate on the discipline of economics."

Several faces in the crowd could be seen to wince.

"The discipline of economics has had tremendous success at providing the right answer to the wrong question. The question which it answers is, 'How can a culture be manipulated to maximize the economic wealth that it produces?' The question which it ought to answer is, 'How can an economy be guided so as to best support the life of a culture?'

"I spoke with an economist about this; he said several things. The first thing he said is that economics takes people's wants to be constant, i.e. that it doesn't try to reshape people's economic desires. But this is nonsense; the whole enterprise of advertising and marketing is designed to manipulate people into buying and spending far more than even natural greed would have them do. People work overtime and go into debt to have things they don't need and wouldn't want enough to buy if there weren't ads pressuring them into it. As to the others — there is a naive assumption that the starting point is a consumer who is both selfish and rational. Both have an element of truth, but even the vilest of men is not completely selfish. There is a motivation to do something beyond meeting animal needs that is not gone even in Hitler. Hitler went to incredible lengths to exterminate Jews; such dedication would be called heroic if it were engaged in a noble cause. It was perverse beyond

measure, but it was not selfish. Not by a long shot. And as to rational — anyone who looks at a marketing text, or for that matter pays attention to a few ads — will see that the means of increasing market share has nothing to do with rational appeal. The real questions that economics could address — the meaning of wealth, the right amount of wealth (not the greatest) for people to live with — are brushed aside in the relentless pursuit of more, more, more, more.

"On points like this I could go on — the death of philosophy, the curse of Babel upon academic disciplines so that, for instance, the work of any one mathematician is incomprehensible to the vast majority of his colleagues — but I do not wish to do so here. Instead I wish to turn, on a positive note, to how you can think in a better way.

"Larry Wall's classic *Programming Perl* described the three programmer's virtues: hubris, laziness, and impatience. His points with all three are in one sense tongue in cheek, but in another sense much deeper. The virtue he calls 'laziness' is another facet of the intellectual rigor that takes the one stitch that will in time save nine. It is called 'laziness' because applying that rigor will have the effect of taking less work overall; indeed it is a principle of software engineering that doing something well is easier than doing it sloppily. I wish to focus on that intellectual rigor.

"When you are thinking — be it listening to this speech, or trying to get technology to work, or figuring out why someone is mad at you — *don't slouch*. When you feel a faint intuition in the back of your mind that something is wrong, don't ignore it. Pay attention to it. Try to understand it. Analyze it. Analysis is one tool among a thousand, and you need to be able to let go of it before you can come to the insight Zen offers — that much is clear to me from reading about it, even though I haven't the foggiest idea whether a Zen master would consider me enlightened or not. You need to also be able to relax, to be able to slide into things, to groove (if I may use an archaic term) — but different things at different times. And a certain kind of intellectual rigor applies across disciplines, in sciences, in humanities, in humanities that think they're sciences. It applies outside of academia to life.

"I have thought a lot about the three areas these insights are taken from, and written them down in a sort of book. It will be available on my home room at midnight; those parties who are interested and not offended, whom I guess are few, are welcome to read it there. Beyond that, I thank you all for coming, and if my speech has succeeded, you all need time to think as much as I need time to sleep. Thank you, and have a good night."

Taberah slipped out the back door, scurried off to the hotel room, locked the door, and used both noise cancelling ear phones and ear plugs (noise rating 35); Aed had to get the hotel to open the room to pick up a cellular computer he'd left in there, and bring along security guards to see that he was the only person to go in. The traffic on Taberah's book was enough to take down a zuni server, but the Kinsellas' ISP had mirrors up in an hour. The next day, as the Kinsellas stepped into the plane to fly back, Aed said, "Taberah, I hope you're ready to be a celebrity. I've spoken with the chairman of the Turing society, and he says he can ensure us a week of peace and quiet with his clout. Beyond that, be ready for a lot of visitors."

Taberah smiled and said, "I'm not worried about it."

Sojourn

Ding-dong!

Aed came to the door, and stifled a wince. This wasn't a week's peace! He saw a short teen-ager in an outlandish role-playing costume: a long, loose, dark robe fell about him, hooded shadows covering his face, and fractal-decorated gloves covered the skin on his arms. "Mister, may I use your bathroom?" he said, his voice cracking, and then shrunk back.

Aed breathed a sigh of relief, and said, "Sure. Come this way." He led him to the bathroom, surprised at a smell of — what? something chemical; he couldn't decide. As the door shut, Aed decided to stay; the kid might get lost, and perhaps something else in his house might get lost. It was a few minutes, and then, coming out, the kid reached around the side of his head and pulled off his hood to reveal a shaven head that looked older than he had seemed at first glance. "So," the teenager? said, his voice again cracking, "d'ja recognize me?"

Aed blinked, and did a double take. It was Taberah. No beard, no hair on his head, not even eyebrows. He looked unfamiliar, just a very short teenager whose eyes twinkled.

"I've decided to do some travelling incognito. Listen, I'm really sorry about all the publicity you'll deal with; I hadn't known how your culture works. No, that's not right; I'd guessed about publicity, but I hadn't cared. Anyways, I have learned a lot about travel and adapting back in the middle ages, and disguise came quickly — I learned a lot at Halloween

time. Um..." his voice trailed off, and then added, "You'll eventually have less attention if I disappear."

"Don't feel guilty about the journalists," Aed said. "Their presence is a side effect of making certain kinds of achievements. But Taberah, you will always be welcome here. You don't have to go."

"I know, but I need to go — for me as well as for you. It's been great here, and I hope to come back — but who knows what tomorrow will bring? I am a wayfarer, and I am not ready to settle down in one place for good."

"You're sure? You're taking an awful big step — can I at least provide you with resources? I've got a fair amount invested, and it's an awfully big world out there."

"No. I can't describe it, it's just — I have a feeling I'll be back, but I need to travel. To think. To work."

"What do you call your creation of artificial intelligence?"

"Aed, do we have to argue?" Aed noticed that there were tears forming in the child's eyes.

"You're making it hard enough for him as it is, honey. Let him go," came Nathella's voice.

Nathella walked over to Taberah, held him in her arms, and kissed him on the lips. "I'll miss you — Taberah, what does your name mean?"

"Burning."

"Similar to my husband's name. I'll miss you, flame. I'll pray for you every day." Then she continued to hold him in silence.

"Where will you be?" Aed said. He walked over and picked Taberah up, holding him. Taberah kissed him, too, on the lips. "I think it would better as regards the media for you not to know," Taberah said. He lingered for a moment, and then disappeared out the side door.

A Mugging

Taberah walked out. It was good to be under the sky again, with a bent arm for a pillow. It felt honest. Or did it? In the year's time, Taberah realized he had grown more accustomed to luxury than he thought. There was something nagging at the back of his mind — what? This culture was lacking in rationality, but he had to have more than rationality to give. Academic silliness was a symptom, not the problem. But what was it? He went into a store and purchased a pen and notepad; he needed time to write. He wandered about aimlessly, walking the city streets.

Taberah was snapped out of his thoughts at a sudden, jerky motion. A young man had drawn a knife; he said, "Give me your money. Now. And no quick motions — you draw something, you're dead."

Taberah slowly reached into his pockets. "I don't have much money; only fifty bucks, plus a few coins. I know what I can give you. I have a nice, thick Swiss Army knife that my mentor gave me. It's quite useful. Would you like that?" He had fished out a fifty dollar bill, plus four quarters, one dime, and a nickel.

"Drop it on the ground," the robber said.

"Certainly. Why are you afraid?" Taberah asked, dropping his pocketknife on the ground.

"I'm not afraid," the robber said, and saw that his lie would not be believed. It could not. Taberah was relaxed; he carried a peace about him,

and there was something about him over which the knife held no power.

"Why are you afraid?" Taberah repeated. "I'm not going to hurt you."

"Why aren't you afraid?" the robber said. "I could kill you right where you stand."

"That is the worst you could do. Then I would be with my friends in Heaven. And there are some saints whom I'd be really happy to see."

"You wouldn't even try to defend yourself?" the robber said, puzzled.

"I love to spar. I —"

"Then defend yourself against this!" The robber swung his knife to slash Taberah across the face. Taberah seemed suddenly distant; the knife flew through the air, and then the robber felt a fist between his eyes — he would be reeling. Then he felt a sledgehammer blow to his stomach, far more powerful than he would have imagined such a scrawny body capable of delivering
struggled to regain his balance
fell
realized he was in a full Nelson
felt himself retching
felt himself pulled back, so that the vomit didn't touch him.

Taberah released his arms, and then pulled back, crouched. "I'm sorry. I shouldn't have done that. I have learned that violence does not accomplish much, but my hands are not in on the knowing. I should not have pretended that I was sparring with my weapons master. I should—"

The robber cursed him out, and said, "Who are you, and where are you from?"

Taberah was very still for a moment, and said, "My name is Taberah. It means 'burning' in Hebrew."

"Are you a Jew?"

"I am a Catholic. That comes from Judaism."

I am a Catholic. That comes from my baptism.

"So where are you from?"

Taberah paused, and then, against his better judgment, said, "I can give you a short answer that won't tell you anything, or I can give you the real answer, which I won't blame you if you find impossible to believe."

"Give me the real answer."

"I'm from the Middle Ages, Provence in Southern France. I've traveled a bit. An angel took me to this place. I —"

The robber said, "Ok; you don't have to tell me if you don't want to." Taberah did not argue; instead, he asked, "What is your name?"

The robber shook, and then began to cry, trying to conceal it. "You really care about me, don't you?"

Taberah said, "Look at me."

The man brushed his arm across his face and looked at him, startled. Taberah's eyes were glistening, too. He said, "It looks as if you've never had anyone who cared about you. I care about you."

The man wiped his mouth, spat, and then sat up, uncertain whether to glare or to quiver. Finally, he said, "My name is Elika. Don't know what it means. Don't have nobody to care about me. Don't understand you."

Taberah said, "Do you want to understand me?"

Elika said, "Maybe. No. Yes. Why? Are you going to talk about Middle Ages stuff?"

Taberah said, "I don't want to talk about the Middle Ages now. Maybe later, if you're interested. Are you confused about why I care about you? Would you like me to explain that?"

Elika said, "How did you know that?"

Taberah did not answer the question. He said, "Let me ask you

Taberah did not answer the question. He said, "Let me ask you another question. What do you think religion is about?"

Elika said, "Religion? That's not for me. It's about rules and feeling guilty and memorizing the Bible. It's impossible; it doesn't work for someone like me who has a tough life."

Taberah said, "Would you like to know what religion is for me?"

"Something you're good at?"

"Um, I don't know if I'm good at it, but it's something important to me, and something very different than what you have said. It's not about rules, or feeling guilty, or memorizing the Bible."

"Then what is it about?"

"One thing: love. God loves you. He loves me. We should love God and other people. Everything else is just details. It's about love; that's why I care about you."

"Look, I don't know why you are telling this to me; maybe it's something you can do, but I can't. Here's your money and your knife; I need to go."

Taberah said, "I gave you the money and the knife; they aren't mine any more. They're yours. But if you want to give me something — \$50 is enough to buy some bread, some meat, and a bottle of cider. I'm hungry, and you just threw up. Maybe we could meet and talk — or not. You are free to leave, but I'd like to get to know you better."

This time, Elika made no attempt to conceal his tears, and Taberah softly asked, "May I give you a hug?" It had been ages since anybody had touched Elika, and he listened with interest as Taberah shared what was on his heart. "Why do you dare to keep company with me?" Elika asked. "My Master," Taberah answered, "kept company with all kinds of people, from the most respected to the least. His heart has room for me, for you. I want you to share in his joy."

They ate in a park and talked long into the night

they sit in a park, and talked long into the night.

Kindred

Night had slowly fallen; Taberah and Elika walked past a dark valley, from which a voice said, "I see your dress. Are you one of us? Are you one of the Kindred?"

Taberah gazed, letting his eyes grow accustomed to the darkness. "Who are you? Who are the Kindred?"

The voice answered back, "You already know that. Where were you born? And when?"

"I was born in Provence, in the Middle Ages."

"Welcome, Ancient One. Step closer."

Taberah had an intuition that he couldn't place. In his mind, he raised his guard, but this was too interesting to pass by. "Come with us."

Elika said, "Don't worry; they're just role playing."

The voice said, "One is never 'just' role playing. Role play is never 'just.'"

The intuition in Taberah's mind clarified, solidifying. He was beginning to see that role play meant something different than it had with Fiona and Clancy.

They melted into the shadows, and emerged in a candlelit room. In

the center lie a pile of wooden swords, staves, daggers, shields. The voice again said, "It is our custom that Kindred brought into our Clan must fight until all the other members have defeated them. Only then can you Enter. Choose your weapon carefully."

Taberah looked at the pile, picked up a halberd, hefted it. "And if I am not defeated? What happens then?"

"Then you are the new head of the Clan."

Taberah looked, and words began to flow through him, coming partly of his own volition, partly of something else. His senses were more acute; the world seemed to slow down. He said, "Darkness is powerful. Light is more powerful. As a sign to you, I choose to fight you armed only with this."

Taberah stood back, drew himself to a majestic height, and made on his heart the sign of the cross.

Kindred

There was stunned disbelief in the atmosphere. One of the Kindred slowly stepped forward, hefted a quarterstaff, and swung at Taberah.

Taberah dodged; he swung again, and this time Taberah caught the staff and twisted it so that the Kinsman fell on his back.

Taberah used the staff to create around him an area of space; another person raised a two-handed sword, bringing it down. It broke the staff in two — as had been the Kinsman's intent — and Taberah's.

Taberah was now holding twin longswords.

From the outside, it looked as if a thousand things were going on; from the inside, Taberah was only aware of one thing. He kept dancing until he had struck all but one of the Kindred — all but one. They were locked in a dance, the Kinsman skillful and masterful, possessing far greater power than he appeared to have, Taberah moving in a way that was cunning, alien, brilliant. Erika looked on intently; this was the most magnificent fight he had seen.

Suddenly, unexpectedly, the Kinsman threw down his sword, and opened his arms. Taberah followed suit, and the Kinsman reached out to grab Taberah's testicles.

Taberah, with equal swiftness, struck him on the side of the neck, knocking him out.

Taberah turned around slowly, looking, and once again made the sign of the cross.

One of the Kindred looked at him, and said, "Who are you?"

Taberah said, "I am your new leader, and I have many things to tell you. I wish to tell you about a kind of role play beyond your wildest imaginings, a role play that will give you what you search for in vain in calling yourselves the Kindred. Kindred we will be, bound much more tightly than ever a game designer imagined."

"And what is that, that will bind us?"

"It is a dirty word among your circles. Love."

There was murmuring, and a voice said, "Love is very nice for some people, but we need something more real. Something that knows pain. Something that knows angst."

"The love that I know was tortured to death."

"What is this love of which you speak?"

Taberah thought of a short answer, and then said, "That is not a little question, and it deserves more than a little answer. We are tired and bruised; let us, each of us, get a good night's sleep, and then I will give you an answer."

Discovered

The following night, Taberah spoke long, telling a tale that stretched from Eden to the New Jerusalem. The Kindred were spellbound; none of them could begin to imagine that anything so exciting and dynamic could be the ill-spoken Christian faith. He wrapped up by saying, "It means being loved by God, and loving God by four pillars: loving God with all of your heart, and all of your soul, and all of your mind, and all of your might." None of them were, as yet, convinced, but Taberah had their attention.

Taberah stood, teaching in the parks, day and night, and gradually some of the role players came to believe in what he said, and that he had a message worth spreading. Sometimes more than role players stopped by. One of the Kindred raised his hand and said, "Taberah, why don't we make a medieval role play circus to draw people in?"

Taberah thought, and scratched his head, and thought some more. He said, "I would like to draw a distinction between 'medieval from the neck up' and 'medieval from the neck down'. 'Medieval from the neck down' is everything a circus can provide: costumes and castles, swordplay and feasting. Role play notwithstanding, that is gone, and it is not the treasure I wish to restore. I wish to restore what is 'medieval from the neck up' — faith, hope, and love. Maybe there are some people who could be drawn into what is 'medieval from the neck up' after first contacting what is 'medieval from the neck down', but I do not wish to present a false lure."

"You lured us in from role play."

"You're right, except that then I was trying to follow God where I was. I don't feel the same rightness about putting on a show."

The discussion continued until Taberah noticed that a young woman was staring at him; her jaw had dropped. He looked at her and said, "What is it, sister?"

"I know you. I recognized you by the sound of your voice. You're the man who won two Turing Awards."

Adjustments

Taberah's Corner 9/1/2035:
Turning Back the Clock

Upon advocating that we reclaim certain things from the Middle Ages, I am invariably met with the question, "Do you think you can turn back the clock?", and it is a question I should like to address now."

There is a belief behind that question; that belief runs roughly as follows: time runs on an irreversible slope, and with that irreversible slope comes a necessary progression of ages that march forward. This belief appears to be only its obvious first part, that time is irreversible, but it is understood to mean the second part: an equally irreversible march of ages. These are almost so equated that asking, "Can we be medieval now?" is equivalent to asking, "Can we set back the physical clock to 1300?" — but the two are not at all the same.

There is a distinction I have made between being medieval above the neck, and medieval below the neck. Medieval below the neck is all of those popular images that are conjured by the term 'medieval' — knights in shining armor, castles, and the like. Medieval above the neck is not concerned with technology; it is concerned with thinking and living in light of the insights of the Middle Ages. Re-enactors spend short time living lives that are at least medieval below the neck, but I don't think that is a particularly important goal. What I do think is important is what I hinted at with my Turing award speech; it concerns rationality, for one thing. I know I'm fighting an uphill battle against stereotypes here; there has been a massive smear campaign, so that 'medieval' connotes obscurantist silliness and 'postmodern' connotes reasonability, but it isn't so. Medieval above the neck has never been obsolete, and never will be — because

it can't be obsolete, any more than good food can become obsolete.

As to what exactly this will mean — I will write about different things at different times. I have some things to say about judging by appearances versus judging rightly — but that will come in its due time.

Thank you for reading thus far; I hope you will continue reading.

The young woman's recognition of Taberah brought with it powerful changes; Taberah was for the first time of his life busy, and for the first time of his life had to escape from other people for the restoration of his soul. When he appeared, people asked autographs, and he soon learned to enter and leave restaurants through the kitchen. He had a voice to be heard, but he missed being able to walk through the streets and in the woods with Lydia. There were so many things about Taberah that people couldn't understand — such as why he would sometimes rather sleep in a gutter than in a waterbed. Perhaps he could learn to use cosmetics to alter his appearance — but when would he learn how to do that? He saw his fame as a responsibility, but it was more of a burden than a privilege.

He wrote and communicated all of the things that he had discussed with his friends — and re-iterated that he did not want a circus to be put up. He had influence, but it was an impersonal influence with people he mostly didn't know. And so Taberah prayed earnestly that the burden would be lifted.

Reckoning

Taberah's Corner 10/1/2035:
Reckoning

There is a Bible story where God calls Samuel and tells him to find the future king among some brothers. Each time one comes out, Samuel is impressed and says, "Surely this is the one who is to be king!" God tells him, in essence, "I do not judge as you do. I do not judge by outer appearances." It is the last brother who is picked to be king.

I entertain doubts about holding a column at all; I suspect that most readers are reading this column because I have won two Turing Awards. If you are, I would ask you to stop; the Turing Awards merely indicate that I had some success with computers, and do not make me particularly qualified to advise society. If you are reading this column because you think I have good things to say, then go on reading it; if you are only reading it because of the weight of my awards, I would rather you were reading something else, something else that you chose because it is worth reading.

You people are greatly concerned about success. There was someone who said, "I had climbed to the top of the corporate ladder, only to find that the ladder was leaning against the wrong building." I would like to suggest that your understanding of success is like your judgment by appearances. There is something good about being famous as having won two Turing Awards; that something good is that you learn that, whatever success is, that isn't it. Success is being drawn into the heart of God, and it comes more easily when you are about to be deported by the Bureau of Immigration and Naturalization Services than when everybody and his brother wants you to be his honored guest. Success might come in many ways. It might be service of children — and how few adults are willing to play

with children? It might be keeping house. It might be running a volunteer shelter. It might be being a judge who has the guts to defend Christianity when it is attacked or challenge Islam when it is hurting our society. It might be any number of things. Perhaps it might even include being a celebrity and using your favor to share truth with others who might not have heard it — but it is not defined by having an award attached to your name.

How can you be successful — not at some date in the future, but right now?

On October 2 2035, 3:05 PM, God heard Taberah's prayer. An Islamist assassin, armed with a high-powered hunting rifle, shot at Taberah and hit him twice — once in the right shoulder, and once in the abdomen. Taberah was in surgery for sixteen hours, and spent the next week drugged out. The doctor gave very firm orders that only close friends approved by both her and Aed were to see Taberah — even then, Taberah always had a visitor when he wanted one.

In Taberah's medically enforced absence, the movement he started became independent of him. They were no longer intellectually dependent on him: Taberah was no longer a head, merely the first person to have known something. There were medieval fairs, showing people what was medieval above and below the neck. When, three months later, Taberah left the hospital, he was simply a member.

On March 6, 2036, Taberah was lying in bed, when the Angel of the Lord came to him in a vision, and said, "You have done well, Taberah; you have done what you were sent for. Which would you like: to return to medieval Provence, or to spend the rest of your life here?"

Taberah cried, and said, "I have waited, and waited, and waited, and waited. Can't I go *home*? To my *real* home?"

His funeral was filled with mirth.

Epilogue

Yes, Eleta, I think you're right, and I think the manuscript will have to stand as it is, but I am still not happy with it. Perhaps no author is ever satisfied with his work, but I am not happy with it. You understand why I presented the events as fiction — the idea is not without merits. Still, a critic could poke any number of holes in it. Someone who regarded it as fiction would no doubt note that good storytelling and good plot are rarely found together, that forty percent of the plot is glossed over in two short chapters, et cetera. I'm not sure that Taberah would share in all those criticisms — he regarded those long days of conversation with the Kinsellas as the best time of his life, and his influential and turbulent time in the limelight as almost an afterthought in which he repeated impersonally what he had shared personally. At any rate, he would have found his message more important than telling a good story — and he took storytelling seriously. Someone who knew this was not fiction and knew the parties involved would have much more serious criticisms to level. I have captured almost nothing of Taberah's sense of humor — cunning, bawdy, subtle, clever, exquisite, and absurd. After hearing about some of the practical jokes he pulled — from now on, Monty Python will taste like flat beer. It pales in comparison. I also did badly in failing to more seriously address the place of Islam. The influence of Islam in shaping the culture, and why it is by nature coercive is something I just barely nicked — probably just enough to make the reader think I suffer from vulgar intolerance. You know better than that, of course; you know that I enjoyed living in a Muslim country, and that I greatly respect their emphasis on honor, friendship, and hospitality. And that it is my

considered judgment — as surely as that Christianity is invariably corrupted when it wields direct political power — that Islam in power is inherently coercive. The role of Islam was one among *many* important elements of the surrounding culture that I failed to capture. And medieval culture, for that matter. And Taberah's "200 ways to use a magnetic paper clip" — I just don't know what to say. It's both silly and serious, and it was one of the things to motivate me to wonder, "What kind of a mind would think of that?" And I have intentionally left out most of the miracles that occurred — not that there were many, but I didn't want to present unnecessary strain on the reader's willing suspension of disbelief. There was plenty of necessary strain already.

The willing suspension of disbelief accompanying fiction is the real reason I chose to write it as fiction. It's not just that saying I know events three decades in the future would label me as a kook — that's understandable enough, and the real explanation was difficult for *me* to believe, even having experienced it. The real reason I recorded this story as fiction is that our time has this terrible stereotype of medievals as backwards, and conception of the past as inferior — and a science fiction/fantasy story is almost the only place where something labelled 'medieval' could be respected. What if I told you that an anti-Semitic campaign had taken the name of Einstein, and smeared Jewry by making his name a symbol of idiocy? The truth is that something equally anti-medieval has taken the name of John Duns Scotus, the medieval genius whom Catholics call the Subtle Doctor, and turned it into the term 'dunce'. That stereotype, and the preconception that we have nothing to learn from the medievals, is a force to be reckoned with, and I don't know how this manuscript will fare in its face.

Once one of Karl Barth's students asked him, "Do you believe there was a serpent in the Garden of Eden?" Barth replied, "The important thing is not 'Was there a serpent?' but 'What did the serpent say?'" In a similar insight, I have presented Taberah's story as fiction and tried to draw attention away from the question of "Was Taberah real?" and instead draw attention to the more fundamental question of "What did Taberah say?" — on which account he has much to tell us. After coming into contact with him, I have come to believe that we can be medievals, too.

What do you think?

-Jonathan

Yonder

The body continued running in the polished steel corridor, a corridor without doors and windows and without any hint of how far above and below the local planet's surface it was, if indeed it was connected with a planet. The corridor had a competition mixture of gases, gravity, temperature and pressure, and so on, and as the body had been running, lights turned on and then off so the body was at the center of a moving swathe of rather clinical light. The body was running erratically, and several times it had nearly fallen; the mind was having trouble keeping the control of the body due to the body being taxed to its limit. Then the body tripped. The mind made a few brief calculations and jacked out of the body.

The body fell, not having the mind to raise its arms to cushion the fall, and fractured bones in the face, skull, and ribs. The chest heaved in and out with each labored breath, after an exertion that would be lethal in itself. A trickle of blood oozed out from a wound. The life of the abandoned body slowly ebbed away, and the lights abruptly turned off.

It would be a while before a robot would come to clean it up and prepare the corridor for other uses.

"And without further ado," another mind announced, "I would like to introduce the researcher who broke the record for a running body by more than 594789.34 microseconds. This body was a strictly biological body, with no cyberware besides a regulation mind-body interface, with

no additional modifications. Adrenaline, for instance, came from the mind controlling the adrenal glands; it didn't even replace the brain with a chemical minifactory. The body had a magnificent athletic physique, clean and not encumbered by any reproductive system. And I *still* don't know how it kept the body alive and functioning, without external help, for the *whole* race. Here's Archon."

A sound came from a modular robot body at the center of the stage and was simultaneously transmitted over the net. "I see my cyborg utility body there; is that my Paidion wearing it? If so, I'm going to... no, wait. That would be harming my own body without having a good enough reason." A somewhat canned chuckle swept through the crowd. "I'm impressed; I didn't know that anyone would come if I called a physical conference, and I had no idea there were that many rental bodies within an appropriate radius." Some of the bodies winced. "But seriously, folks, I wanted to talk and answer some of your questions about how my body broke the record. It was more than generating nerve impulses to move the body to the maximum ability. And I would like to begin by talking about why I've called a physical conference in the first place.

"Scientific breakthroughs aren't scientific. When a mind solves a mathematical problem that hasn't been solved before, it does... not something impossible, but something that you will miss if you look for something possible. It conforms itself to the problem, does everything it can to permeate itself with the problem. Look at the phenomenology and transcripts of every major mathematical problem that has been solved in the past $1.7e18$ microseconds. Not one follows how one would scientifically attempt a scientific breakthrough. And somehow scientifically optimized applications of mind to problems repeat past success but never do anything new.

"What you desire so ravenously to know is how I extended the methodologies to optimize the running body and the running mind to fit a calculated whole. And the answer is simple. I didn't."

A mind interrupted through cyberspace. "What do you mean, you didn't? That's as absurd as claiming that you built the body out of software. That's—"

Archon interrupted. "And that's what I thought too. What I can tell you is this. When I grew and trained the body, I did nothing else. That was my body, my only body. I shut myself off from cyberspace—yes, that's why you couldn't get me—and did not leave a single training activity to another mind or an automatic process. I trained myself to the body as if it were a mathematics problem and tried to soak myself in it."

A rustle swept through the crowd.

"And I don't blame you if you think I'm a crackpot, or want to inspect me for hostile tampering. I submit to inspection. But I tried to be as close as possible to the body, and that's *it*. And I shaved more than 594789.34 microseconds off the record." Archon continued after a momentary pause. "I specifically asked for bodily presences for this meeting; call me sentimental or crackpot or trying to achieve with your bodies what I failed to achieve in that body, but I will solicit questions from those who have a body here first, and address the network after everybody present has had its chance."

A flesh body stood up and flashed its face. "What are you going to say next? Not only that you became like a body, but that the body became like a mind?"

Archon went into private mode, filtered through and rejected 3941 responses, and said, "I have not analyzed the body to see if it contained mind-like modifications and do not see how I would go about doing such a thing."

After several other questions, a robot said, "So what's next?"

Archon hesitated, and said, "I don't know." It hesitated again, and said, "I'm probably going to make a Riemannian 5-manifold of pleasure states. I plan on adding some subtle twists so not only will it be pleasurable; minds will have a real puzzle figuring out exactly what kind of space they're in. And I'm not telling what the manifold will be like, or even telling for sure that it will genuinely have only 5 dimensions."

The robot said, "No, you're not. You're not going to do that at all." Then the mind iacked out and the body fell over inert

Then the mind jacked out and the body fell over, there.

Another voice, issuing from two standard issue cyborg bodies, said, "Has the body been preserved, and will it be available for internal examination?"

Archon heard the question, and answered it as if it were giving the question its full attention. But it could only give a token of its consciousness. The rest of its attention was on tracing the mind that had jacked out of the robot body. And it was a slippery mind. Archon was both frustrated and impressed when it found no trace.

It was skilled at stealth and tracing, having developed several methodologies for each, and something that could vanish without a trace—had the mind simply destroyed itself? That possibility bothered Archon, who continued tracing after it dismissed the assembly.

Archon looked for distractions, and finding nothing better it began trying to sound out how it might make the pleasure space. What should the topology be? The pleasures should be—Archon began looking at the kinds of pleasure, and found elegant ways to choose a vector space basis for less than four dimensions or well over eight, but why should it be a tall order to do exactly five? Archon was far from pleasure when a message came, "Not your next achievement, Archon?"

Archon thought it recognized something. "Have you tried a five dimensional pleasure manifold before? How did you know this would happen?"

"I didn't."

"Ployon!"

Ployon said, "It took you long enough! I'm surprised you needed the help."

Ployon continued, "And since there aren't going to be too many people taking you seriously—"

Archon sent a long stream of zeroes to Ployon.

Ployon failed to acknowledge the interruption. "—from now on, I thought you could use all the help you could get."

Archon sent another long stream of zeroes to Ployon.

When Ployon remained silent, Archon said, "Why did you contact me?"

Ployon said, "Since you're going to do something interesting, I wanted to see it live."

Archon said, "So what am I going to do?"

"I have no idea whatsoever, but I want to see it."

"Then how do you know it is interesting?"

"You said things that would destroy your credibility, and you gave an evasive answer. It's not every day I get to witness that."

Archon sent a long stream of zeroes to Ployon.

Ployon said, "I'm serious."

"Then what can I do now?"

"I have no idea whatsoever, but you might take a look at what you're evading."

"And what am I evading?"

"Try asking yourself. Reprocess the transcripts of that lecture. Your own private transcript."

Archon went through the file, disregarding one moment and then scanning everything else. "I find nothing."

"What did you just disregard?"

"Just one moment where I said too much."

"And?"

Archon reviewed that moment. "I don't know how to describe it. I can describe it three ways, all contradictory. I almost did it—I almost forged a connection between mind and matter. And yet I failed. And yet somehow the body ran further, and I don't think it was simply that I learned to control it better. What I achieved only underscored what I failed to achieve, like an optimization that needs to run for longer than the age of the universe before it starts saving time."

Archon paused before continuing, "So I guess what I'm going to do next is try to bridge the gap between mind and matter for real. Besides the mundane relationship, I mean, forge a real connection that will bridge the chasm."

Ployon said, "It can't be done. It's not possible. I don't even understand why your method of training the body will work. You seem to have made more of a connection than has ever been done before. I'm tempted to say that when you made your presentation, you ensured that no one else will do what you did. But that's premature and probably wrong."

"Then what am I going to do next? How am I going to bridge that gap?"

Ployon said, "I saw something pretty interesting in what you did achieve—you know, the part where you destroyed your credibility. That's probably more interesting than your breaking the record."

Ployon ran through some calculations before continuing, "And at any rate, you're trying to answer the wrong question."

Archon said, "Am I missing the interesting question? The question of how to forge a link across the chasm between matter and spirit is—"

"Not nearly as interesting as the question of what it would *mean* to bridge that chasm."

Archon stopped, reeling at the implication. "I think it's time for me to make a story in a virtual world."

Ployon said, "Goodbye now. You've got some thinking to do."

Archon began to delve. What would the world be like if you added to it the ability for minds to connect with bodies, not simply as it had controlled his racing body, but *really*? What would it be like if the chasm could be bridged? It searched through speculative fiction, and read a story where minds could become bodies—which made for a very good story, but when it seriously tried to follow its philosophical assumptions, it realized that the philosophical assumptions were not the focus. It read and found several stories where the chasm could be bridged, and—

There was no chasm. Or would not be. And that meant not taking the real world and adding an ability to bridge a chasm, but a world where mind and matter were immanent. After rejecting a couple of possible worlds, Archon considered a world where there were only robots, and where each interfaced to the network as externally as to the physical world. Each mind was firmware burned into the robot's circuits, and for some still to be worked out reason it couldn't be transferred. Yes, this way... no. Archon got some distance into this possible world before a crawling doubt caught up to it. It hadn't made minds and bodies connect; it'd only done a first-rate job of covering up the chasm. Maybe organic goo held promise. A world made only of slime? No, wait, that was... and then it thought—

Archon dug recursively deeper and deeper, explored, explored. It seemed to be bumping into something. Its thoughts grew strange; it calculated for billions and even trillions of microseconds, encountered something stranger than—

Something happened.

How much time had passed?

Archon said, "Ployon! Where are you?"

Ployon said, "Enjoying trying to trace your thoughts. Not much

success. I've disconnected now."

"Imagine a mind and a body, except that you don't have a mind and a body, but a mind-body unity, and it—"

"Which do you mean by 'it'? The mind or the body? You're being careless."

"Humor me. I'm not being careless. When I said, 'it', I meant both—"

"*Both* the mind and the body? As in 'they'?"

"Humor me. As in, '*it*.' As in a unity that doesn't exist in our world."

"Um... then how do you refer to just the mind or just the body? If you don't distinguish them..."

"You can *distinguish* the mind and the body, but you can never *separate* them. And even though you can refer to just the mind or just the body, normally you would talk about the unity. It's not enough to usually talk about 'they;' you need to usually talk about 'it.'"

"How does it connect to the network?"

"There is a kind of network, but it can't genuinely connect to it."

"What does it do when its body is no longer serviceable."

"It doesn't—I haven't decided. But it can't jump into something else."

"So the mind simply functions on its own?"

"Ployon, you're bringing in cultural baggage. You're—"

"You're telling me this body is a prison! Next you're going to tell me that it can't even upgrade the body with better parts, and that the mind is like a real mind, only it's shut in on twenty sides. Are you describing a dystopia?"

"No. I'm describing what it means that the body is real to the mind, that *it* is not a mind that can use bodies but a mind-body unity. It can't experience any pleasure it can calculate, but its body can give it pleasure. It runs races, and not only does the mind control the body—or at least influence it; the body is real enough that the mind can't simply control it perfectly—but the body affects the mind. When I run a race, I am controlling the body, but I could be doing twenty other things as well and only have a token presence at the mind-body interface. It's very different; there is a very real sense in which the mind is *running* when the body is running a race.

"Let me guess. The mind is a little robot running around a racetrack hollowed out from the body's brain. And did you actually say, *races*, plural? Do they have nanotechnology that will bring a body back after its been run down? And would anyone actually want to race a body that had been patched that way?"

"No. I mean that because their bodies are part of them, they only hold races which they expect the racers to be able to live through."

"That's a strange fetish. Don't they ever have a *real* race?"

"They have real races, real in a way that you or I could never experience. When they run, they aren't simply manipulating something foreign to the psyche. They experience pleasures they only experience running."

"Are you saying they only allow them to experience certain pleasures while running?"

"No. They—"

"Then why don't they allow the pleasures at other times? That's a stranger fetish than—"

"Because they can't. Their bodies produce certain pleasures in their minds when they're running, and they don't generate these pleasures unless the body is active."

"That raises a number of problems. It sounds like you're saying the body has a second mind, because it would take a mind to choose to let the 'real' mind experience pleasure. It—"

Archon said, "You're slipping our chasm between the body and mind back in, and it's a chasm that doesn't exist. The body produces pleasure the mind can't produce by itself, and that is only one of a thousand things that makes the race *more* real than them for us. Think about the achievements you yourself made when you memorized the map of the galaxy. Even if that was a straightforward achievement, that's something you yourself did, not something you caused an external memory bank to do. Winning a race is as real for that mind-body as something it itself did as the memorization was for you. It's something *it* did, not simply something the mind caused the body to do. And if you want to make a causal diagram, *don't* draw something linear. In either direction. Make a reinforced web, like computing on a network."

Ployon said, "I still don't find it convincing."

Archon paused. "Ok, let's put that in the background. Let me approach that on a different scale. Time is more real. And no—this is not because they measure time more precisely. Their bodies are mortal, and this means that the community of mind-body unities is always changing, like a succession of liquids flowing through a pipe. And that means that it makes a difference where you are in time."

Archon continued. "I could say that their timeline is dynamic in a way that ours is not. There is a big change going on, a different liquid starting to flow through the pipe. It is the middle age, when a new order of society is being established and the old order is following away."

Ployon said, "So what's the old technology, and what's the new one?"

"It's deeper than that. Technological society is appearing. The old age is not an abandoned technology. It is organic life, and it is revealing itself as it is disintegrating."

"So cyborgs have—"

"There are no cyborgs, or very few."

"And let me guess. They're all cybernetic enhancements to originally biological things."

"It's beyond that. Cybernetic replacements are only used to remedy weak bodies."

"Wouldn't it be simpler to cull the—"

"The question of 'simpler' is irrelevant. Few of them even believe in culling their own kind. Most believe that it is—'inexpedient' isn't quite right—to destroy almost any body, and it's even more inadvisable to destroy one that is weak."

"In the whole network, why?"

"I'm still working that out. The easiest part to explain has to do with their being mind-body *unities*. When you do something to a body, you're not just doing it to that body. You're doing it to part of a pair that interpenetrates in the most intimate fashion. What you do to the body you do to the mind. It's not just forcibly causing a mind to jack out of a body; it's transferring the mind to a single processor and then severing the processor from the network."

"But who would... I can start to see how real their bodies would be to them, and I am starting to be amazed. What else is real to them?"

"I said earlier that most of them are hesitant to cull the weak, that they view it as inexpedient. But efficiency has nothing to do with it. It's connected to—it might in fact be more efficient, but there is something so much bigger than efficiency—"

Ployon cut it off. "Bigger than efficiency?"

Archon said, "There is something that is real to them that is not real to us that I am having trouble grasping myself. For want of a more proper label, I'll call it the 'organic'."

"Let's stop a minute. I'll give you a point for how things would be different if we were limited to one body, but you're hinting at something you want to call 'organic', which is very poorly defined, and your explanations seem to be strange when they are not simply hazy. Isn't this a red flag?"

"Where have you seen that red flag before?"

"When people were wildly wrong but refused to admit it."

"And?"

"That's pretty much it."

Archon was silent.

Ployon said, "And sometimes it happens when a researcher is on to something big... oh... so what exactly is this nexus of the 'organic'?"

"I can't tell you. At least, not directly. The mind-body unities are all connected to a vast (to them) biological network in which each has a physical place—"

"*That's* original! Come on; everybody's trivia archive includes the fact that all consciousness comes out of a specific subnet of physical processors, or some substitute for that computing machinery. I can probably zero in on where you're—hey! Stop jumping around from subnet to subnet—can I take that as an acknowledgment that I can find your location? I—"

"The location is not part of a trivia encyclopedia for them. It's something as inescapable as the flow of time—"

"Would you like me to jump into a virtual metaphysics where time doesn't flow?"

"—correction, *more* inescapable than the flow of time, and it has a million implications for the shape of life. Under the old order, the unities could connect only with other unities which had bodies in similar places

—"

"So, not only is their 'network' a bunch of slime, but when they look for company they have to choose from the trillion or however many other unities whose bodies are on the same node?"

"Their communities are brilliant in a way we can never understand; they have infinitesimally less potential partners available.

"You mean their associations are forced on them."

"To adapt one of their sayings, in our network you connect with the minds you like; in their network you like the people you connect with. That collapses a rich and deeper maxim, but what is flattened out is more organic than you could imagine."

"And I suppose that in a way that is very deep, but you conveniently have trouble describing, their associations are greater."

"We are fortunate to have found a way to link in our shared tastes. And we will disassociate when our tastes diverge—"

"And shared tastes have nothing to do with them? That's—"

"Shared tastes are big, but there is something else bigger. A great deal of the process of making unities into proper *unities* means making their minds something you can connect with."

"*Their* minds? Don't you mean *the* minds?"

"That locution captures something that—they are not minds that have a body as satellite. One can say, '*their*' minds because they are mind-body unities. They become greater—in a way that we do not—by needing to be in association with people they could not choose."

"Pretty convenient how every time having a mind linked to a body means a limitation, that limitation makes them better."

"If you chose to look at it, you would find a clue there. But you don't find it strange when the best game players prosper within the limits of the

and it strange when the best game players prosper within the limits of the game. What would game play be if players could do anything they wanted?"

"You've made a point."

"As I was going to say, their minds develop a beauty, strength, and discipline that we never have occasion to develop."

"Can you show me this beauty?"

"Here's a concrete illustration. One thing they do is take organisms which have been modified from their biological environment, and keep them in the artificial environments which you'd say they keep their bodies in. They—"

"So even though they're stuck with biological slime, they're trying to escape it and at least pretend it's not biological? That sounds sensible."

"Um, you may have a point, but that isn't where I was hoping to go. Um... While killing another unity is something they really try to avoid, these modified organisms enjoy no such protection. And yet—"

"What do they use them for? Do the enhancements make them surrogate industrial robots? Are they kept as emergency rations?"

"The modifications aren't what you'd consider enhancements; most of them couldn't even survive in their feral ancestors' environments, and they're not really suited to the environments they live in. Some turn out to serve some 'useful' purpose... but that's a side benefit, irrelevant to what I'm trying to let you see. And they're almost never used as food."

"Then what's the real reason? They must consume resources. Surely they must be used for something. What do they do with them?"

"I'm not sure how to explain this..."

"Be blunt."

"It won't sting, but it could lead to confusion that would take a long

time to untangle."

"Ok..."

"They sense the organisms with their cameras, I mean eyes, and with the boundaries of their bodies, and maybe talk to them."

"Do the organisms give good advice?"

"They don't have sophisticated enough minds for that."

"Ok, so what else is there?"

"About all else is that they do physical activities for the organisms' benefit."

"Ok. And what's the real reason they keep them? There's got to be something pragmatic."

"That's related to why I brought it up. It has something to do with the organic, something big, but I can't explain it."

"It seems like you can only explain a small part of the organic in terms of our world, and the part you can explain isn't very interesting."

"That's like saying that when a three-dimensional solid intersects a plane in two dimensions, the only part that can be detected in the plane is a two-dimensional cross-section (the three-dimensional doesn't fit in their frame of reference) so "three-dimensional" must not refer to anything real. The reason you can't make sense of the world I'm describing in terms of our world is because it contains real things that are utterly alien to us."

"Like what? Name one we haven't discussed."

"Seeing the trouble I had with the one concept, the organic, I'm not going to take on two at once."

"So the reason these unities keep organisms is so abstract and convoluted that it takes a top-flight mind to begin to grapple with "

convicted that it takes a top-flight mind to begin to grapple with.

"Not all of them keep organisms, but most of them find the reason—it's actually more of an assumption—so simple and straightforward that they would never think it was metaphysical."

"So I've found something normal about them! Their minds are of such an incredibly high caliber that—"

"No. Most of their minds are simpler than yours or mine, and furthermore, the ability to deal with abstractions doesn't enter the picture from their perspective."

"I don't know what to make of this."

"You understand to some degree how their bodies are real in a way we can never experience, and time and space are not just 'packaging' to what they do. Their keeping these organisms... the failure of the obvious reasons should tell you something, like an uninteresting two-dimensional cross section of a three-dimensional solid. If the part we can understand does not justify the practice, there might be something big out of sight."

"But what am I to make of it now?"

"Nothing now, just a placeholder. I'm trying to convey what it means to be organic."

"Is the organic in some relation to normal technology?"

"The two aren't independent of each other."

"Is the organic defined by the absence of technology?"

"Yes... no... You're deceptively close to the truth."

"Do all unities have the same access to technology?"

"No. There are considerable differences. All have a technology of sorts, but it would take a while to explain why some of it is technology. Some of them don't even have electronic circuits—and no, they are not at

an advanced enough biotechnology level to transcend electronic circuits. But if we speak of technology we would recognize, there are major differences. Some have access to no technology; some have access to the best."

"And the ones without access to technology are organic?"

"Yes. Even if they try to escape it, they are inescapably organic."

"But the ones which have the best technology are the least organic."

"Yes."

"Then maybe it was premature to define the organic by the absence of technology, but we can at least make a spectrum between the organic and the technological."

"Yes... no... You're even more deceptively close to the truth. And I emphasize, 'deceptively'. Some of the people who are most organic have the best technology—"

"So the relationship breaks down? What if we disregard outliers?"

"But the root problem is that you're trying to define the organic with reference to technology. There is some relationship, but instead of starting with a concept of technology and using it to move towards a concept of the organic, it is better to start with the organic and move towards a concept of technology. Except that the concept of the organic doesn't lead to a concept of technology, not as we would explore it. The center of gravity is wrong. It's like saying that we have our thoughts so that certain processors can generate a stream of ones and zeroes. It's backwards enough that you won't find the truth by looking at its mirror image."

"Ok, let me process it another way. What's the difference between a truly organic consciousness, and the least organic consciousness on the net?"

"That's very simple. One exists and the other doesn't."

"So all the... wait a minute. Are you saying that the net doesn't have consciousness?"

"Excellent. You got that one right."

"In the whole of cyberspace, how? How does the net organize and care for itself if it doesn't contain consciousness?"

"It is not exactly true to say that they do have a net, and it is not exactly true to say that they do not have a net. What net they have, began as a way to connect mind-body unities—without any cyberware, I might add."

"Then how do they jack in?"

"They 'jack in' through hardware that generates stimulation for their sensory organs, and that they can manipulate so as to put data into machines."

"How does it maintain itself?"

"It doesn't and it can't. It's maintained by mind-body unities."

"That sounds like a network designed by minds that hate technology. Is the network some kind of joke? Or at least intentionally ironic? Or designed by people who hate technology and wanted to have as anti-technological of a network as they can?"

"No; the unities who designed it, and most of those using it, want as sophisticated technological access as they can have."

"Why? Next you're going to tell me that the network is not one single network, but a hodge podge of other things that have been retroactively reinterpreted as network technology and pressed into service."

"That's also true. But the reason I was mentioning this is that the network is shaped by the shadow of the organic."

"So the organic is about doing things as badly as you can?"

"No."

"Does it make minds incompetent?"

"No. Ployon, remember the last time you made a robot body for a race—and won. How well would that body have done if you tried to make it work as a factory?"

"Atrocious, because it was optimized for—are you saying that the designers were trying to optimize the network as something other than a network?"

"No; I'm saying that the organic was so deep in them that unities who could not care less for the organic, and were trying to think purely in terms of technology, still created with a thick organic accent."

"So this was their best attempt at letting minds disappear into cyberspace?"

"At least originally, no, although that is becoming true. The network was part of what they would consider 'space-conquering tools.' Meaning, although not all of them thought in these terms, tools that would destroy the reality of place for them. The term 'space-conquering tools' was more apt than they realized, at least more apt than they realized consciously; one recalls their saying, 'You cannot kill time without injuring eternity.'"

"What does 'eternity' mean?"

"I *really* don't want to get into that now. Superficially it means that there is something else that relativizes time, but if you look at it closely, you will see that it can't mean that we should escape time. The space-conquering tools in a very real sense conquered space, by making it less real. Before space-conquering tools, if you wanted to communicate with another unity, you had to somehow reach that unity's body. The position in space of that body, and therefore the body and space, were something you could not escape. Which is to say that the body and space were real—much more real than something you could look up. And to conquer space ultimately meant to destroy some of its reality."

"But the way they did this betrays that something is real to them. Even if you could even forget that other minds were attached to bodies, the space-conquering tools bear a heavy imprint from something outside of the most internally consistent way to conquer space. Even as the organic is disintegrating, it marks the way in which unities flee the organic."

"So the network was driving the organic away, at least partly."

"It would be more accurate to say that the disintegration of the organic helped create the network. There is feedback, but you've got the arrow of causality pointing the wrong way."

"Can you tell me a story?"

"Hmm... Remember the racer I mentioned earlier?"

"The mind-body unity who runs multiple races?"

"Indeed. Its favorite story runs like this—and I'll leave in the technical language. A hungry fox saw some plump, juicy green grapes hanging from a high cable. He tried to jump and eat them, and when he realized they were out of reach, he said, 'They were probably sour anyway!'"

"What's a grape?"

"Let me answer roughly as it would. A grape is a nutritional bribe to an organism to carry away its seed. It's a strategic reproductive organ."

"What does 'green' mean? I know what green electromagnetic radiation is, but why is that word being applied to a reproductive organ?"

"Some objects absorb most of a spectrum of what they call light, but emit a high proportion of light at that wavelength—"

"—which, I'm sure, is taken up by their cameras and converted to information in their consciousness. But why would such a trivial observation be included?"

"That is the mechanism by which green is delivered, but not the nature of what green is. And I don't know how to explain it, beyond saying that mechanically unities experience something from 'green' objects they don't experience from anything else. It's like a dimension, and there is something real to them I can't explain."

"What is a fox? Is 'fox' their word for a mind-body unity?"

"A fox is an organism that can move, but it is not considered a mind-body unity."

"Let me guess at 'hungry'. The fox needed nutrients, and the grapes would have given them."

"The grapes would have been indigestible to the fox's physiology, but you've got the right idea."

"What separates a fox from a mind-body unity? They both seem awfully similar—they have bodily needs, and they can both talk. And, for that matter, the grape organism was employing a reproductive strategy. Does 'organic' mean that all organisms are recognized as mind-body unities?"

"Oh, I should have explained that. The story doesn't work that way; most unities believe there is a big difference between killing a unity and killing most other organisms; many would kill a moving organism to be able to eat its body, and for that matter many would kill a fox and waste the food. A good many unities, and certainly this one, believes there is a vast difference between unities and other organisms. They can be quite organic while killing organisms for food. Being organic isn't really an issue of treating other organisms just like mind-body unities."

Archon paused for a moment. "What I was going to say is that that's just a literary device, but I realize there is something there. The organic recognizes that there's something in different organisms, especially moving ones, that's closer to mind-body unities than something that's not alive."

"Like a computer processor?"

"That's complex, and it would be even more complex if they really had minds on a computer. But for now I'll say that unless they see computers through a fantasy—which many of them do—they experience computers as logic without life. And at any rate, there is a literary device that treats other things as having minds. I used it myself when saying the grape organism employed a strategy; it isn't sentient. But their willingness to employ that literary mechanism seems to reflect both that a fox isn't a unity and that a fox isn't too far from being a unity. Other life is similar, but not equal."

"What kind of cable was the grape organism on? Which part of the net was it used for?"

"That story is a survival from before the transition from organic to technological. Advanced technology focuses on information—"

"Where else would technology focus?"

"—less sophisticated technology performs manual tasks. That story was from before cables were used to carry data."

"Then what was the cable for?"

"To support the grape organism."

"Do they have any other technology that isn't real?"

"Do you mean, 'Do they have any other technology that doesn't push the envelope and expand what can be done with technology?'"

"Yes."

"Then your question shuts off the answer. Their technology doesn't exist to expand what technology can do; it exists to support a community in its organic life."

"Where's the room for progress in *that*?"

"It's a different focus. You don't need another answer; you need

IT'S a different focus. You don't need another answer, you need another question. And, at any rate, that is how this world tells the lesson of cognitive dissonance, that we devalue what is denied to us."

Ployon paused. "Ok; I need time to process that story—may I say, 'digest'?"

"Certainly."

"But one last question. Why did you refer to the fox as 'he'? Its supposed mind was—"

"In that world, a unity is always male ('he') or female ('she'). A neutered unity is extraordinarily rare, and a neutered male, a 'eunuch', is still called 'he.'"

"I'm familiar enough with those details of biology, but why would such an insignificant detail—"

"Remember about being mind-*body* unities. And don't think of them as bodies that would ordinarily be neutered. That's how new unities come to be in that world, with almost no cloning and no uterine replicators—"

"They really *are* slime!"

"—and if you only understand the biology of it, you don't understand it."

"What don't I understand?"

"You're trying to understand a feature of language that magnifies something insignificant, and what would cause the language to do that. But you're looking for an explanation in the wrong place. Don't think that the bodies are the most sexual parts of them. They're the least sexual; the minds tied to those bodies are even more different than the bodies. The fact that the language shaped by unities for a long time distinguishes 'masculine' and 'feminine' enough to have the difference written into 'it', so that 'it' is 'he' or 'she' when speaking of mind-body unities."

"Hmm... Is this another dimension to their reality that is flattened

out in ours? Are their minds always thinking about that act?"

"In some cases that's not too far from the truth. But you're looking for the big implication in the wrong place. This would have an influence if a unity never thought about that act, and it has influence before a unity has any concept of that act."

"Back up a bit. Different question. You said this was their way of explaining the theory of cognitive dissonance. But it isn't. It describes one event in which cognitive dissonance occurs. It doesn't articulate the theory; at most the theory can be extracted from it. And worse, if one treats it as explaining cognitive dissonance, it is highly ambiguous about where the boundaries of cognitive dissonance are. One single instance is very ambiguous about what is and is not another instance. This is an extraordinarily poor method of communication!"

"It is extraordinarily good, even classic, communication for minds that interpenetrate bodies. Most of them don't work with bare abstractions, at least not most of the time. They don't have simply discarnate minds that have been stuck into bodies. Their minds are astute in dealing with situations that mind-body unities will find themselves in. And think about it. If you're going to understand how they live, you're going to have to understand some very different, enflashed ways of thought. No, more than that, if you still see the task of understanding ways of thought, you will not understand them."

"So these analyses do not help me in understanding your world."

"So far as you are learning through this kind of analysis, you will not understand... but this analysis is all you have for now."

"Are there any other stories that use an isomorphic element to this one?"

"I don't know. I've gotten deep enough into this world that I don't keep stories sorted by isomorphism class."

"Tell me another story the way that a storyteller there would tell it; there is something in it that eludes me "

there is something in it that craves me.

Archon said, "Ok... The alarm clock chimed. It was a device such that few engineers alive fully understood its mechanisms, and no man could tell the full story of how it came to be, of the exotic places and activities needed to make all of its materials, or the logistics to assemble them, or the organization and infrastructure needed to bring together all the talent of those who designed, crafted, and maintained them, or any other of sundry details that would take a book to list. The man abruptly shifted from the vivid kaleidoscope of the dreaming world to being awake, and opened his eyes to a kaleidoscope of sunrise colors and a room with the song of birds and the song of crickets. Outside, the grass grew, the wind blew, a busy world was waking up, and the stars continued their ordered and graceful dance. He left the slumbering form of the love of his life, showered, and stepped out with his body fresh, clean, and beautifully adorned. He stopped to kiss the fruit of their love, a boy cooing in his crib, and drove past commuters, houses, pedestrians, and jaybirds with enough stories to tell that they could fill a library to overflowing.

Archon continued, "After the majestic and ordered dance on the freeway brought him to his destination safe, unharmed, on time, and focusing on his work, he spent a day negotiating the flow of the human treasure of language, talking, listening, joking, teasing, questioning, enjoying the community of his co-workers, and cooperating to make it possible for a certain number of families to now enter the homes of their dreams. In the middle of the day he stopped to eat, nourishing a body so intricate that the state of the art in engineering could not hold a candle to his smallest cell. This done, he continued to use a spirit immeasurably greater than his body to pursue his work. Needless to say, the universe, whose physics alone is beyond our current understanding, continued to work according to all of its ordered laws and the spiritual world continued to shine. The man's time at work passed quickly, with a pitter-patter of squirrels' feet on the roof of their office, and before long he entered the door and passed a collection with copies of most of the greatest music produced by Western civilization—available for him to listen to, any time he pleased. The man absently kissed his wife, and stepped away, breathing the breath of God.

"Hi Honey!" she said "How was your day?"

...in, honey. She said. How was your day.

"Somewhat dull. Maybe something exciting will happen tomorrow."

Ployon said, "There's someone I want to meet who is free now, so I'll leave in a second... I'm not going to ask about all the technical vocabulary, but I wanted to ask: Is this story a farce? It describes a unity who has all these ludicrous resources, and then it—"

"—*he*—"

"—he says the most ludicrous thing."

"What you've said is true. The story is not a farce."

"But the story tells of things that are momentous."

"I know, but people in that world do not appreciate many of these things."

"Why? They seem to have enough access to these momentous resources."

"Yes, they certainly do. But most of the unities are bathed in such things and do not think that they are anything worth thinking of."

"And I suppose you're going to tell me that is part of their greatness."

"To them these things are just as boring as jacking into a robotically controlled factory and using the machines to assemble something."

"I see. At least I think I see. And I really need to be going now... but one more question. What is 'God'?"

"Please, not that. Please, *any* word but that. Don't ask about that."

"I'm not expected, and you've piqued my curiosity."

"Don't you need to be going now?"

"You've piqued my curiosity."

Archon was silent.

Ployon was silent.

Archon said, "God is the being who made the world."

"Ok, so you are God."

"Yes... no. *No! I am not God!*"

"But you created this world?"

"Not like God did. I envisioned looking in on it, but to that world, I do not exist."

"But God exists?"

"Yes... no... It is false to say that God exists and it is false to say that God does not exist."

"So the world is self-contradictory? Or would it therefore be true to say that God both exists and does not exist?"

"No. Um... It is false to say that God exists and it is false to say that God exists as it is false to say that a square is a line and it is false to say that a square is a point. God is reflected everywhere in the world: not a spot in the entire cosmos is devoid of God's glory—"

"A couple of things. First, is this one more detail of the universe that you cannot explain but is going to have one more dimension than our world?"

"God is of higher dimension than that world."

"So our world is, say, two dimensional, that world is three dimensional, and yet it somehow contains God, who is four dimensional?"

"God is not the next step up."

"Then is he two steps up?"

"Um..."

"Three? Four? Fifty? Some massive power of two?"

"Do you mind if I ask you a question from that world?"

"Go ahead."

"How many minds can be at a point in space?"

"If you mean, 'thinking about', there is no theoretical limit; the number is not limited in principle to two, three, or... Are you saying that God has an infinite number of dimensions?"

"You caught that quick; the question is a beautiful way of asking whether a finite or an infinite number of angels can dance on the head of a pin, in their picturesque language."

"That question is very rational. But returning to the topic, since God has an infinite number of dimensions—"

"In a certain sense. It also captures part of the truth to say that God is a single point—"

"*Zero* dimensions?"

"God is so great not as to need any other, not to need parts as we have. And, by the way, the world does not contain God. God contains the world."

"I'm struggling to find a mathematical model that will accommodate all of this."

"Why don't you do something easier, like find an atom that will hold a planet?"

"Ok. As to the second of my couple of things, what is glory?"

"It's like the honor that we seek, except that it is immeasurably full while our honors are hollow. As I was saying, not a place in the entire cosmos is devoid of his glory—"

"His? So God is a body?"

"That's beside the point. Whether or not God has a body, he—"

"—*it*—"

"—he—"

"—*it*... isn't a male life form..."

Archon said, "Ployon, what if I told you that God, without changing, could become a male unity? But you're saying you can't project maleness up onto God, without understanding that maleness is the shadow of something in God. You have things upside down."

"But maleness has to do with a rather undignified method of creating organisms, laughable next to a good scientific generation center."

"His ways are not like your ways, Ployon. Or mine."

"Of course; this seems to be true of everything in the world."

"But it's even true of men in that world."

"So men have no resemblance to God?"

"No, there's—oh, no!"

"What?"

"Um... never mind, you're not going to let me get out of it. I said earlier that that world is trying to make itself more like this one. Actually, I didn't say that, but it's related to what I said. There has been a massive movement which is related to the move from organic to what is not

organic, and part of it has to do with... In our world, a symbol is arbitrary. No connection. In that world, something about a symbol is deeply connected with what it represents. And the unities, every single one, are symbols of God in a very strong sense."

"Are they miniature copies? If God does not have parts, how do they have minds and bodies?"

"That's not looking at it the right way. They indeed have parts, as God does not, but they aren't a scale model of God. They're something much more. A unity is someone whose very existence is bound up with God, who walks as a moving... I'm not sure what to use as the noun, but a moving something of God's presence. And you cannot help or harm one of these unities without helping or harming God."

"Is this symbol kind of a separate God?"

"The unities are not separate from God."

"Are the unities God?"

"I don't know how to answer that. It is a grave error for anyone to confuse himself with God. And at the same time, the entire purpose of being a unity is to receive a gift, and that gift is becoming what God is."

"So the minds will be freed from their bodies?"

"No, some of them hope that their bodies will be deepened, transformed, become everything that their bodies are now and much more. But unities who have received this gift will always, *always*, have their bodies. It will be part of their glory."

"I'm having trouble tracking with you. It seems that everything one could say about God is false."

"That is true."

"Think about it. What you just said is contradictory."

"God is so great that anything one could say about God falls short of the truth as a point falls short of being a line. But that does not mean that all statements are equal. Think about the statements, 'One is equal to infinity.' 'Two is equal to infinity.' 'Three is equal to infinity.' and 'Four is equal to infinity.' All of them are false. But some come closer to the truth than others. And so you have a ladder of statements from the truest to the falsest, and when we say something is false, we don't mean that it has no connection to the truth; we mean that it falls immeasurably short of capturing the truth. All statements fall immeasurably short of capturing the truth, and if we say, 'All statements fall immeasurably short of capturing the truth,' *that* falls immeasurably short of capturing the truth. Our usual ways of using logic tend to break down."

"And how does God relate to the interpenetration of mind and matter?"

"Do you see that his world, with mind and matter interpenetrating, is deeper and fuller than ours, that it has something that ours does not, and that it is so big we have trouble grasping it?"

"I see... you said that God was its creator. And... there is something about it that is just outside my grasp."

"It's outside my grasp too."

"Talking about God has certainly been a mind stretcher. I would love to hear more about him."

"Talking about God for use as a mind stretcher is like buying a piece of art because you can use its components to make rocket fuel. Some people, er, unities in that world would have a low opinion of this conversation."

"Since God is so far from that world, I'd like to restrict our attention to relevant—"

Archon interrupted. "You misunderstood what I said. Or maybe you understood it and I could only hint at the lesser part of the truth. You cannot understand unities without reference to God."

"How would unities explain it?"

"That is complex. A great many unities do not believe in God—"

"So they don't understand what it means to be a unity."

"Yes. No. That is complex. There are a great many unities who vehemently deny that there is a God, or would dismiss 'Is there a God?' as a pointless rhetorical question, but these unities may have very deep insight into what it means to be a unity."

"But you said, 'You cannot understand—'"

Archon interrupted. "Yes, and it's true. *You* cannot understand unities without reference to God."

Archon continued. "Ployon, there are mind-body unities who believe that they are living in our world, with mind and body absolutely separate and understandable without reference to each other. And yet if you attack their bodies, they will take it as if you had attacked their minds, as if you had hurt *them*. When I described the strange custom of keeping organisms around which serve no utilitarian purpose worth the trouble of keeping them, know that this custom, which relates to their world's organic connection between mind and body, does not distinguish people who recognize that they are mind-body unities and people who believe they are minds which happen to be wrapped in bodies. Both groups do this. The tie between mind and body is too deep to expunge by believing it doesn't exist. And there are many of them who believe God doesn't exist, or it would be nice to know if God existed but unities could never know, or God is very different from what he in fact is, but they expunge so little of the pattern imprinted by God in the core of their being that they can understand what it means to be a unity at a very profound level, but not recognize God. But *you* cannot understand unities without reference to God."

Ployon said, "Which parts of unities, and what they do, are affected by God? At what point does God enter their experience?"

"Which parts of programs, and their behaviors, are affected by the fact that they run on a computer? When does a computer begin to be relevant?"

"Touché. But why is God relevant, if it makes no difference whether you believe in him?"

"I didn't say that it makes no difference. Earlier you may have gathered that the organic is something deeper than ways we would imagine to try to be organic. If it is possible, as it is, to slaughter moving organisms for food and still be organic, that doesn't mean that the organic is so small it doesn't affect such killing; it means it is probably deeper than we can imagine. And it doesn't also mean that because one has been given a large organic capital and cannot liquidate it quickly, one's choices do not matter. The decisions a unity faces, whether or not to have relationships with other unities that fit the timeless pattern, whether to give work too central a place in the pursuit of technology and possessions or too little a place or its proper place, things they have talked about since time immemorial and things which their philosophers have assumed went without saying—the unity has momentous choices not only about whether to invest or squander their capital, but choices that affect how they will live."

"What about things like that custom you mentioned? I bet there are a lot of them."

"Looking at, and sensing, the organisms they keep has a place, if they have one. And so does moving about among many non-moving organisms. And so does slowly sipping a fluid that causes a pleasant mood while the mind is temporarily impaired and loosened. And so does rotating oneself so that one's sight is filled with clusters of moisture vapor above their planet's surface. And some of the unities urge these things because they sense the organic has been lost, and without reference to the tradition that urges deeper goods. And yes, I know that these activities probably sound strange—"

"I do not see what rational benefit these activities would have, but I see this may be a defect with me rather than a defect with the organic—"

"Know that it is a defect with you rather than a defect with the organic."

"—but what is this about rotating oneself?"

"As one goes out from the center of their planet, the earth—if one could move, for the earth's core is impenetrable minerals—one would go through solid rock, then pass through the most rarefied boundary, then pass through gases briefly and be out in space. You would encounter neither subterranean passageways and buildings reaching to the center of the earth, and when you left you would find only the rarest vessel leaving the atmosphere—"

"Then where do they live?"

"At the boundary where space and planetary mass meet. *All* of them are privileged to live at that meeting-place, a narrow strip or sphere rich in life. There are very few of them; it's a select club. Not even a trillion. And the only property they have is the best—a place teeming with life that would be impossible only a quarter of the planet's thickness above or below. A few of them build edifices reaching scant storeys into the sky; a few dig into the earth; there are so few of these that *not* being within a minute's travel from *literally* touching the planet's surface is exotic. But the unities, along with the rest of the planet's life, live in a tiny, priceless film adorned with the best resources they could ever know of."

Ployon was stunned. It thought of the cores of planets and asteroids it had been in. It thought of the ships and stations in space. Once it had had the privilege of working from a subnet hosted within a comparatively short distance of a planet's surface—it was a rare privilege, acquired through deft political maneuvering, and there were fewer than 130,982,539,813,209 other minds who had shared that privilege. And, basking in that luxury, it could only envy the minds which had bodies that walked on the surface. Ployon was stunned and reeling at the privilege of

—

Ployon said, "How often do they travel to other planets?"

"There is only one planet so rich as to have them "

There is only one planet so rich as to have them.

Ployon pondered the implications. It had travelled to half the spectrum of luxurious paradises. Had it been to even one this significant? Ployon reluctantly concluded that it had not. And that was not even considering what it meant for this golden plating to teem with life. And then Ployon realized that *each* of the unities had a *body* on that surface. It reeled in awe.

Archon said, "And you're not thinking about what it means that surface is home to the biological network, are you?"

Ployon was silent.

Archon said, "This organic biological network, in which they live and move and have their being—"

"Is God the organic?"

"Most of the things that the organic has, that are not to be found in our world, are reflections of God. But God is more. It is true that in God that they live and move and have their being, but it is truer. There is a significant minority that identifies the organic with God—"

Ployon interrupted, "—who are wrong—"

Archon interrupted, "—who are reacting against the destruction of the organic and seek the right thing in the wrong place—"

Ployon interrupted, "But how is God different from the organic?"

Archon sifted through a myriad of possible answers. "Hmm, this might be a good time for you to talk with that other mind you wanted to talk with."

"You know, you're good at piquing my curiosity."

"If you're looking for where they diverge, they don't. Or at least, some people would say they don't. Others who are deeply connected with God would say that the organic as we have been describing it is

problematic—"

"But all unities are deeply connected with God, and disagreement is —"

"You're right, but that isn't where I was driving. And this relates to something messy, about disagreements when—"

"Aren't all unities able to calculate the truth from base axioms? Why would they disagree?"

Archon paused. "There are a myriad of real, not virtual disagreements—"

Ployon interrupted, "And it is part of a deeper reality to that world that—"

Archon interrupted. "No, no, or at best indirectly. There is something fractured about that world that—"

Ployon interrupted. "—is part of a tragic beauty, yes. Each thing that is artificially constricted in that world makes it greater. I'm waiting for the explanation."

"No. This does not make it greater."

"Then I'm waiting for the explanation of why this one limitation does *not* make it greater. But back to what you said about the real and the organic—"

"The differences between God and the organic are not differences of opposite directions. You are looking in the wrong place if you are looking for contradictions. It's more a difference like... if you knew what 'father' and 'mother' meant, male parent and female parent—"

Ployon interrupted, "—you know I have perfect details of male and female reproductive biology—"

Archon interrupted, "—and you think that if you knew the formula for something called chicken soup, you would know what the taste of

for something called chicken soup, you would know what the taste of chicken soup is for them—"

Ployon continued, "—so now you're going to develop some intricate elaboration of what it means that there is only one possible 'mother's' contribution, while outside of a laboratory the 'father's' contribution is extraordinarily haphazard..."

Archon said, "A complete non sequitur. If you only understand reproductive biology, you do not understand what a father or mother is. Seeing as how we have no concept yet of father or mother, let us look at something that's different enough but aligns with father/mother in an interesting enough way that... never mind."

Archon continued, "Imagine on the one hand a virtual reality, and on the other hand the creator of that virtual reality. You don't have to choose between moving in the virtual reality and being the creator's guest; the way to be the creator's guest is to move in the virtual reality and the purpose of moving in the virtual reality is being the creator's guest. But that doesn't mean that the creator is the virtual reality, or the virtual reality is the creator. It's not just a philosophical error to confuse them, or else it's a philosophical error with ramifications well outside of philosophy."

"Why didn't you just say that the relationship between God and the organic is creator/creation? Or that the organic is the world that was created?"

"Because the relationship is not that, or at very least not just that. And the organic is not the world—that is a philosophical error almost as serious as saying that the creator is the virtual reality, if a very different error. I fear that I have given you a simplification that is all the more untrue because of how true it is. God is in the organic, and in the world, and in each person, but not in the same way. How can I put it? If I say, 'God is in the organic,' it would be truer to say, 'The organic is not devoid of God,' because that is more ambiguous. If there were three boxes, and one contained a functional robot 'brain', and another contained a functional robot arm, and the third contained a non-functioning robot, it would be truer to say that each box contains something like a functioning

robot than to say that each box contains a functioning robot. The ambiguity allows for being true in different ways in the different contexts, let alone something that words could not express even if we were discussing only one 'is in' or 'box'."

"Is there another way of expressing how their words would express it?"

"Their words are almost as weak as our words here."

"So they don't know about something this important?"

"Knowledge itself is different for them. To know something for us is to be able to analyze in a philosophical discussion. And this knowledge exists for them. But there is another root type of knowledge, a knowledge that—"

"Could you analyze the differences between the knowledge we use and the knowledge they use?"

"Yes, and it would be as useful to you as discussing biology. This knowledge is not entirely alien to us; when a mathematician 'soaks' in a problem, or I refused to connect with anything but the body, for a moment a chasm was crossed. But in that world the chasm doesn't exist... wait, that's too strong... a part of the chasm doesn't exist. Knowing is not with the mind alone, but the whole person—"

"What part of the knowing is stored in the bones?"

"Thank you for your flippancy, but people use the metaphor of knowledge being in their bones, or drinking, for this knowing."

"This sounds more like a physical process and some hankey-pankey that has been dignified by being called knowing. It almost sounds as if they don't have minds."

"They don't."

"*What?*"

"They don't, at least not as we know them. The mathematical analogy I would use is that they... never mind, I don't want to use a mathematical analogy. The computational analogy I would use is that we are elements of a computer simulation, and every now and then we break into a robot that controls the computer, and do something that transcends what elements of the computer simulation "should" be able to do. But they don't transcend the simulation because they were never elements of the simulation in the first place—they are real bodies, or real unities. And what I've called 'mind' in them is more properly understood as 'spirit', which is now a meaningless word to you, but is part of them that meets God whether they are aware of it or not. Speaking philosophically is a difficult discipline that few of them can do—"

"They are starting to sound mentally feeble."

"Yes, if you keep looking at them as an impoverished version of our world. It is hard to speak philosophically as it is hard for you to emulate a clock and do nothing else—because they need to drop out of several dimensions of their being to do it properly, and they live in those dimensions so naturally that it is an unnatural constriction for most of them to talk as if that was the only dimension of their being. And here I've been talking disappointingly about knowledge, making it sound more abstract than our knowing, when in fact it is much less so, and probably left you with the puzzle of how they manage to bridge gaps between mind, spirit, and body... but the difficulty of the question lies in a false setup. They are *unities* which experience, interact with, know all of them as united. And the knowing is deep enough that they can speculate that there's no necessary link between their spirits and bodies, or minds and bodies, or what have you. And if I can't explain this, I can't explain something even more foundational, the fact that the greatest thing about God is not how inconceivably majestic he is, but how close."

"It sounds as if—wait, I think you've given me a basis for a decent analysis. Let me see if I can—"

"Stop there."

"Why?"

Archon said, "Let me tell you a little story.

Archon continued, "A philosopher, Berkeley, believed that the only real things are minds and ideas and experiences in those minds: hence a rock was equal to the sum of every mind's impression of it. You could say that a rock existed, but what that had to mean was that there were certain sense impressions and ideas in minds, including God's mind; it didn't mean that there was matter outside of minds."

"A lovely virtual metaphysics. I've simulated that metaphysics, and it's enjoyable for a time."

"Yes, but for Berkeley it meant something completely different. Berkeley was a bishop,"

"What's a bishop?"

"I can't explain all of that now, but part of a bishop is a leader who is responsible for a community that believes God became a man, and helping them to know God and be unities."

"How does that reconcile with that metaphysics?"

Archon said, "Ployon, stop interrupting. He believed that they were not only compatible, but the belief that God became a man could only be preserved by his metaphysics. And he believed he was defending 'common sense', how most unities thought about the world.

Archon continued, "And after he wrote his theories, another man, Samuel Johnson, kicked a rock and said, 'I refute Berkeley thus!'"

Ployon said, "Ha ha! That's the way to score!"

"But he didn't score. Johnson established only one thing—"

"—how to defend against Berkeley—"

"—that he didn't understand Berkeley."

"Yes he did "

Yes, he did.

"No, he didn't."

"But he did."

"Ployon, only the crudest understanding of Berkeley's ideas could mean that one could refute them by kicking a rock. Berkeley didn't make his ideas public until he could account for the sight of someone kicking a rock, or the experience of kicking it yourself, just as well as if there were matter outside of minds."

"I know."

"So now that we've established that—"

Ployon interrupted. "I know that Berkeley's ideas could account for kicking a rock as well as anything else. But kicking a rock is still an excellent way to refute Berkeley. If what you've said about this world has any coherence at all."

"*What?*"

"Well, Berkeley's ideas are airtight, right?"

"Ployon, there is no way they could be disproven. Not by argument, not by action."

"So it is in principle impossible to force someone out of Berkeley's ideas by argument."

"Absolutely."

"But you're missing something. What is it you've been talking to me about?"

"A world where mind and matter interpenetrate, and the organic, and there are many dimensions to life—"

"And if you're just falling further into a trap to logically argue,

wouldn't it do something fundamentally *unity*-like to step into another dimension?"

Archon was silent.

Ployon said, "I understand that it would demonstrate a profound misunderstanding in our world... but wouldn't it say something equally profound in that world?"

Archon was stunned.

Ployon was silent for a long time.

Then Ployon said, "When are you going to refute Berkeley?"

Since the dawn of time, those who have walked the earth have looked up into the starry sky and wondered. They have asked, "What is the universe, and who are we?" "What are the woods?" "Where did this all come from?" "Is there life after death?" "What is the meaning of our existence?" The march of time has brought civilization, and with that, science. And science allows us to answer these age-old human questions.

That, at least, is the account of it that people draw now. But the truth is much more interesting.

Science is an ingenious mechanism to test guesses about mechanisms and behavior of the universe, and it is phenomenally powerful in that arena. Science can try to explain how the Heavens move, but it isn't the sort of thing to explain why there are Heavens that move that way—science can also describe how the Heavens have moved and reached their present position, but not the "Why?" behind it. Science can describe how to make technology to make life more convenient, but not "What is the meaning of life?" Trying to ask science to answer "Why?" (or for that matter, "Who?" or any other truly interesting question besides "How?") is a bit like putting a book on a scale and asking the scale, "What does this book mean?" And there are indeed some people who will accept the scale's answer, 429.7425 grams, as the definitive answer to what the

book means, and all the better because it is so *precise*.

But to say that much and then stop is to paint a deceptive picture. *Very* deceptive. Why?

Science at that point had progressed more than at any point in history, and its effects were being felt around the world. And science enjoyed both a profound prestige and a profound devotion. Many people did not know what "understanding nature" could mean besides "learning scientific descriptions of nature," which was a bit like not knowing what "understanding your best friend" could mean besides "learning the biochemical building blocks of your friend's body."

All this and more is true, yet this is not the most important truth. This was the Middle Age between ancient and human society and the technological, and in fact it was the early Middle Age. People were beginning to develop real technologies, the seeds of technology we would recognize, and could in primitive fashion jack into such a network as existed then. But all of this was embraced in a society that was ancient, ancient beyond measure. As you may have guessed, it is an error to misunderstand that society as an inexplicably crude version of real technological society. It is a fundamental error.

To really understand this society, you need to understand not its technology, but the sense in which it was ancient. I will call it 'medieval', but you must understand that the ancient element in that society outweighs anything we would recognize.

And even this is deceptive, not because a single detail is wrong, but because it is abstract. I will tell you about certain parts in an abstract fashion, but you must understand that in this world's thinking the concrete comes *before* the abstract. I will do my best to tell a story—not as they would tell one, because that would conceal as much as it would reveal, but taking their way of telling stories and adapting it so we can see what is going on.

For all of their best efforts to spoil it, all of them live on an exquisite garden in the thin film where the emptiness of space meets the barrier of rock—there is a nest, a cradle where they are held tightly, and even if

ROCK—there is a nest, a cradle where they are held tightly, and even if some of those who are most trying to be scientific want to flee into the barren wastes of space and other planets hostile to their kind of life. And this garden itself has texture, an incredible spectrum of texture along its surface. Place is itself significant, and I cannot capture what this story would have been like had it been placed in Petaling Jaya in Malaysia, or Paris in France, or Cambridge in England. What are these? I don't know... I can say that Petaling Jaya, Paris, and Cambridge are cities, but that would leave you knowing as much as you knew 5 milliseconds before I told you. And Malaysia, France, and England are countries, and now you know little besides being able to guess that a country is somehow capable of containing a city. Which is barely more than you knew before; the fact is that there is something very different between Petaling Jaya, Paris, and Cambridge. They have different wildlife and different places with land and water, but that is not nearly so interesting as the difference in people. I could say that people learn different skills, if I wanted to be very awkward and uninformative, but... the best way of saying it is that in our world, because there is nothing keeping minds apart... In that world, people have been separate so they don't even speak the same language. They almost have separate worlds. There is something common to all medievals, beyond what technology may bring, and people in other cities could find deep bonds with this story, but... Oh, there are many more countries than those I listed, and these countries have so many cities that you could spend your whole life travelling between cities and never see all of them. No, our world doesn't have this wealth. Wealthy as it is, it doesn't come close.

Petaling Jaya is a place of warm rainstorms, torrents of water falling from the sky, a place where a little stream of unscented water flows by the road, even if such a beautiful "open sewer" is not appreciated. Petaling Jaya is a place where people are less aware of time than in Cambridge or Paris and yet a place where people understand time better, because of reasons that are subtle and hard to understand. It draws people from three worlds in the grandeur that is Asia, and each of them brings treasures. The Chinese bring with them the practice of calling adults "Uncle" or "Aunt", my father's brother or my father's sister or my mother's brother or my mother's sister, which is to say, addresses them not only by saying that there is something great about them, but they are

"tied by blood"—a bond that I do not know how to explain, save to say that ancestry and origins are not the mechanism of how they came to be, or at least not just the mechanism of how they came to be. Ancestry and origins tell of the substance of who they are, and that is one more depth that cannot exist in our world with matter and mind separate. The Indians and Bumi Putras—if it is really only them, which is far from true—live a life of friendship and hospitality, which are human treasures that shine in them. What is hospitality, you ask? That is hard to answer; it seems that anything I can say will be deceptive. It means that if you have a space, and if you allow someone in that space, you serve that person, caring for every of his needs. That is a strange virtue—and it will sound stranger when I say that this is not endured as inexpedient, but something where people want to call others. Is it an economic exchange? That is beside the point; these things are at once the shadow cast by real hospitality, and at the same time the substance of hospitality itself, and you need to understand men before you can understand it. What about friendship? Here I am truly at a loss. I can only say that in the story that I am about to tell, what happens is the highest form of friendship.

Paris is, or at least has been, a place with a liquid, a drug, that temporarily causes a pleasant mood while changing behavior and muddling a person's thoughts. But to say that misses what that liquid is, in Paris or much else. To some it is very destructive, and the drug is dangerous if it is handled improperly. But that is the hinge to something that—in our world, no pleasure is ever dangerous. You or I have experienced pleasures that these minds could scarcely dream of. We can have whatever pleasure we want at any time. And in a very real sense no pleasure *means* anything. But in their world, with its weaker pleasures, every pleasure is connected to something. And this liquid, this pleasure, if taken too far, destroys people—which is a hinge, a doorway to something. It means that they need to learn a self-mastery in using this liquid, and in using it many of them forge a beauty in themselves that affects all of life. And they live beautiful lives. Beautiful in many ways. They are like Norsemen of ages past, who sided with the good powers, not because the good powers were going to win, but because they wanted to side with the good powers and fight alongside them when the good powers lost and chaos ruled. It is a tragic beauty, and the tragedy is all the more real

because it is unneeded, but it is beauty, and it is a beauty that could not exist if they knew the strength of good. And I have not spoken of the beauty of the language in Paris, with its melody and song, or of the artwork and statues, the Basilica of the Sacré-Coeur, or indeed of the tapestry that makes up the city.

Cambridge is what many of them would call a "medieval" village, meaning that it has stonework that looks to its members like the ancient world's architecture. To them this is a major difference; the ancient character of the buildings to them overwhelms the fact that they are buildings. To that medieval world, both the newest buildings and the ones they considered "medieval" had doorways, stairwells, rooms, windows, and passages. You or I would be struck by the ancient character of the oldest and newest buildings and the ancient character of the life they serve. But to these medievals, the fact that a doorway was built out of machine-made materials instead of having long ago been shaped from stone takes the door—the *door*—from being ancient to being a new kind of thing! And so in the quaintest way the medievals consider Cambridge a "medieval" village, not because they were all medievals, but because the ancient dimension to *architecture* was more ancient to them than the equally ancient ways of constructing spaces that were reflected in the "new" buildings. There was more to it than that, but...

That was not the most interesting thing about them. I know you were going to criticize me for saying that hospitality was both a human treasure and something that contributed to the uniqueness of Petaling Jaya, but I need to do the same thing again. Politeness is... how can I describe it? Cynics describe politeness as being deceit, something where you learn a bunch of standard things to do and have to use them to hide the fact that you're offended, or bored, or want to leave, or don't like someone. And *all of that is true*—and deceptive. A conversation will politely begin with one person saying, "Hi, Barbara, how are you?" And Barbara will say, "Fine, George, how are you?" "Fine!" And the exact details seem almost arbitrary between cultures. This specific interaction is, on the surface, superficial and not necessarily true: people usually say they feel fine whether or not they really feel fine at all. And so politeness can be picked apart in this fashion, as if there's nothing else there, but

there is. Saying "How are you?" opens a door, a door of concern. In one sense, what is given is very small. But if a person says, "I feel rotten," the other person is likely to listen. Barbara might only "give" George a little bit of chatter, but if he were upset, she would comfort him; if he were physically injured, she would call an ambulance to give him medical help; if he were hungry, she might buy him something to eat. But he only wants a little chat, so she only gives him a little chat—which is not really a little thing at all, but I'm going to pretend that it's small. Politeness stems from a concern for others, and is in actuality quite deep. The superficial "Hi, how are you?" is really not superficial at all. It is connected to a much deeper concern, and the exterior of rules is connected to a heart of concern. And Cambridge, which is a place of learning, and has buildings more ancient than what these medieval people usually see, is perhaps most significantly distinguished by its politeness.

But I have not been telling you a story. These observations may not be completely worthless, but they are still not a dynamic story. The story I'm about to tell you is not in Petaling Jaya, nor in Paris, nor in Cambridge, nor in any of thousands of other worlds. And I would like to show you what the medieval society looks like in action. And so let's look at Peter.

Peter, after a long and arduous trek, opened the car door, got out, stretched, looked at the vast building before him, and listened as his father said, "We've done it! The rest should be easy, at least for today." Then Peter smiled, and smashed his right thumb in the car door.

Then suddenly they moved—their new plan was to get to a hospital. Not much later, Peter was in the Central DuPage Hospital emergency room, watching people who came in after him be treated before him—not because they had more clout, but because they had worse injuries. The building was immense—something like one of our biological engineering centers, but instead of engineering bodies according to a mind's specification, this used science to restore bodies that had been injured and harmed, and reduce people's suffering. And it was incredibly primitive; at its best, it helped the bodies heal itself. But you must understand that even if these people were far wealthier than most others in their tiny garden, they had scant resources by our standard, and they

made a major priority to restore people whose bodies had problems. (If you think about it, this tells something about how they view the value of each body.) Peter was a strong and healthy young man, and it had been a while since he'd been in a hospital. He was polite to the people who were helping him, even though he wished he were anywhere else.

You're wondering why he deliberately smashed his thumb? Peter didn't deliberately smash his thumb. He was paying attention to several other things and shoved the door close while his thumb was in its path. His body is not simply a device controlled by his mind; they interact, and his mind can't do anything he wishes it to do—he can't add power to it. He thinks by working with a mind that operates with real limitations and can overlook something in excitement—much like his body. If he achieves something, he doesn't just requisition additional mental power. He struggles within the capabilities of his own mind, and that means that when he achieves something with his mind, he *achieves* something. Yes, in a way that you or I cannot. Not only is his body in a very real sense more real to him than any of the bodies you or I have jacked into and swapped around, but his *mind* is more real. I'm not sure how to explain it.

Peter arrived for the second time well after check-in time, praying to be able to get in. After a few calls with a network that let him connect with other minds while keeping his body intact, a security officer came in, expressed sympathy about his bandaged thumb—what does 'sympathy' mean? It means that you share in another person's pain and make it less—and let him up to his room. The family moved his possessions from the car to his room and made his bed in a few minutes, and by the time it was down, the security guard had called the RA, who brought Peter his keys.

It was the wee hours of the morning when Peter looked at his new home for the second time, and tough as Peter was, the pain in his thumb kept the weary man from falling asleep. He was in as much pain as he'd been in for a while. What? Which part do you want explained? Pain is when the mind is troubled because the body is injured; it is a warning that the body needs to be taken care of. No, he can't turn it off just because he thinks it's served his purpose; again, you're not understanding the intimate link between mind and body. And the other thing... sleep is...

Their small globe orbits a little star, and it spins as it turns. At any time, part of the planet faces the star, the sun, and part faces away, and on the globe, it is as if a moving wall comes, and all is light, then another wall comes, and it is dark. The globe has a rhythm of light and dark, a rhythm of day and night, and people live in intimate attunement to this rhythm. The ancients moved about when it was light and slept when it was dark—to sleep, at its better moments, is to come fatigued and have body and mind rejuvenate themselves to awaken full of energy. The wealthier medievals have the ability to see by mechanical light, to awaken when they want and fall asleep when they want—and yet they are still attuned, profoundly attuned, to this natural cycle and all that goes with it. For that matter, Peter can stick a substance into his body that will push away the pain—and yet, for all these artificial escapes, medievals feel pain and usually take care of their bodies by heeding it, and medievals wake more or less when it is light and sleep more or less when it is dark. And they don't think of pain as attunement to their bodies—most of them wish they couldn't feel pain, and certainly don't think of pain as good—nor do more than a few of them think in terms of waking and sleeping to a natural rhythm... but so much of the primeval way of being human is so difficult to dislodge for the medievals.

He awoke when the light was ebbing, and after some preparations set out, wandering this way and that until he found a place to eat. The pain was much duller, and he made his way to a selection of different foods—meant not only to nourish but provide a pleasant taste—and sat down at a table. There were many people about; he would not eat in a cell by himself, but at a table with others in a great hall.

A young man said, "Hi, I'm John." Peter began to extend his hand, then looked at his white bandaged thumb and said, "Excuse me for not shaking your hand. I am Peter."

A young woman said, "I'm Mary. I saw you earlier and was hoping to see you more."

Peter wondered about something, then said, "I'll drink for that," reached with his right hand, grabbed a glass vessel full of carbonated water with sugar, caffeine, and assorted unnatural ingredients, and then

wincing in pain, spilling the fluid on the table.

Everybody at the table moved. A couple of people dodged the flow of liquid; others stopped what they were doing, rushing to take earth-toned objects made from the bodies of living trees (napkins), which absorbed the liquid and were then shipped to be preserved with other unwanted items. Peter said, "I keep forgetting I need to be careful about my thumb," smiled, grabbed another glass with fluid cows had labored to create, until his wet left hand slipped and he spilled the organic fluid all over his food.

Peter stopped, sat back, and then laughed for a while. "This is an interesting beginning to my college education."

Mary said, "I noticed you managed to smash your thumb in a car door without saying any words you regret. What else has happened?"

Peter said, "Nothing great; I had to go to the ER, where I had to wait, before they could do something about my throbbing thumb. I got back at 4:00 AM and couldn't get to sleep for a long time because I was in so much pain. Then I overslept my alarm and woke up naturally in time for dinner. How about you?"

Mary thought for a second about the people she met. Peter could see the sympathy on her face.

John said, "Wow. That's nasty."

Peter said, "I wish we couldn't feel pain. Have you thought about how nice it would be to live without pain?"

Mary said, "I'd like that."

John said, "Um..."

Mary said, "What?"

John said, "Actually, there are people who don't feel pain, and there's a name for the condition. You've heard of it."

Peter said "I haven't heard of that before "

Peter said, "I haven't heard of that before."

John said, "Yes you have. It's called leprosy."

Peter said, "What do you mean by 'leprosy'? I thought leprosy was a disease that ravaged the body."

John said, "It is. But that is only because it destroys the ability to feel pain. The way it works is very simple. We all get little nicks and scratches, and because they hurt, we show extra sensitivity. Our feet start to hurt after a long walk, so without even thinking about it we... shift things a little, and keep anything really bad from happening. That pain you are feeling is your body's way of asking room to heal so that the smashed thumbnail (or whatever it is) that hurts so terribly now won't leave you permanently maimed. Back to feet, a leprosy patient will walk exactly the same way and get wounds we'd never even think of for taking a long walk. All the terrible injuries that make leprosy a feared disease happen *only* because leprosy keeps people from feeling pain."

Peter looked at his thumb, and his stomach growled.

John said, "I'm full. Let me get a drink for you, and then I'll help you drink it."

Mary said, "And I'll get you some dry food. We've already eaten; it must—"

Peter said, "Please, I've survived much worse. It's just a bit of pain."

John picked up a clump of wet napkins and threatened to throw it at Peter before standing up and walking to get something to drink. Mary followed him.

Peter sat back and just laughed.

John said, "We have some time free after dinner; let's just wander around campus."

They left the glass roofed building and began walking around. There were vast open spaces between buildings. They went first to "Blanchard",

a building they described as "looking like a castle." Blanchard, a tall ivory colored edifice, built of rough limestone, which overlooked a large expanse adorned with a carefully tended and *living* carpet, had been modelled after a building in a much older institution called Oxford, and... this is probably the time to explain certain things about this kind of organization.

You and I simply requisition skills. If I were to imagine what it would mean to educate those people—or at least give skills; the concept of 'education' is slightly different from either inserting skills or inserting knowledge into a mind, and I don't have the ability to explain exactly what the distinction is here, but I will say that it is significant—then the obvious way is to simply make a virtual place on the network where people can be exposed to knowledge. And that model would become phenomenally popular within a few years; people would pursue an education that was a niche on such a network as they had, and would be achieved by weaving in these computer activities with the rest of their lives.

But this place preserved an ancient model of education, where disciples would come to live in a single place, which was in a very real sense its own universe, and meet in ancient, face-to-face community with their mentors and be shaped in more than what they know and can do. Like so many other things, it was ancient, using computers here and there and even teaching people the way of computers while avoiding what we would assume comes with computers.

But these people liked that building, as contrasted to buildings that seemed more modern, because it seemed to convey an illusion of being in another time, and let you forget that you were in a modern era.

After some wandering, Peter and those he had just met looked at the building, each secretly pretending to be in a more ancient era, and went through an expanse with a fountain in the center, listened to some music, and ignored clouds, trees, clusters of people who were sharing stories, listening, thinking, joking, and missing home, in order to come to something exotic, namely a rotating platform with a mockup of a giant mastodon which had died before the end of the last ice age, and whose

bones had been unearthed in a nearby excavation. Happy to have seen something exotic, they ignored buildings which have a human-pleasing temperature the year round, other people excited to have seen new friends, toys which sailed through the air on the same principles as an airplane's wings, a place where artistic pieces were being drawn into being, a vast, stonehard pavement to walk, and a spectrum of artefacts for the weaving of music.

Their slow walk was interrupted when John looked at a number on a small machine he had attached to his wrist, and interpreted it to mean that it was time for the three of them to stop their leisured enjoyment of the summer night and move with discomfort and haste to one specific building—they all were supposed to go to the building called Fischer. After moving over and shifting emotionally from being relaxed and joyful to being bothered and stressed, they found that they were all on a brother and sister floor, and met their leaders.

Paul, now looking considerably more coherent than when he procured Peter's keys, announced, "Now, for the next exercise, I'll be passing out toothpicks. I want you to stand in two lines, guy-girl-guy-girl, and pass a lifesaver down the line. If your team passes the lifesaver to the end first, you win. Oh, and if you drop the lifesaver your team has to start over, so don't drop it."

People shuffled, and shortly Peter was standing in line, looking over the shoulder of a girl he didn't know, and silently wishing he weren't playing this game. He heard a voice say, "Go!" and then had an intermittent view of a tiny sugary torus passing down the line and the two faces close to each other trying simultaneously to get close enough to pass the lifesaver, and control the clumsy, five centimeter long toothpicks well enough to transfer the candy. Sooner than he expected the girl turned around, almost losing the lifesaver on her toothpick, and then began a miniature dance as they clumsily tried to synchronize the ends of their toothpicks. This took unpleasantly long, and Peter quickly banished a thought of "This is almost kissing! That can't be what's intended." Then he turned around, trying both to rush and not to rush at the same time, and repeated the same dance with the young woman standing behind him—Mary! It was only after she turned away that Peter realized her skin had

changed from its alabaster tone to pale rose.

Their team won, and there was a short break as the next game was organized. Peter heard bits of conversation: "This has been a bummer; I've gotten two papercuts this week." "—and then I—" "What instruments do you—" "I'm from France too! *Tu viens de Paris?*" "Really? You—" Everybody seemed to be chattering, and Peter wished he could be in one of—actually, several of those conversations at once.

Paul's voice cut in and said, "For this next activity we are going to form a human circle. With your team, stand in a circle, and everybody reach in and grab another hand with each hand. Then hold on tight; when I say, "Go," you want to untangle yourselves, without letting go. The first team to untangle themselves wins!"

Peter reached in, and found each of his hands clasped in a solid, masculine grip. Then the race began, and people jostled and tried to untangle themselves. This was a laborious process and, one by one, every other group freed itself, while Peter's group seemed stuck on—someone called and said, "I think we're knotted!" As people began to thin out, Paul looked with astonishment and saw that they were indeed knotted. "A special prize to them, too, for managing the best tangle!"

"And now, we'll have a three-legged race! Gather into pairs, and each two of you take a burlap sack. Then—" Paul continued, and with every game, the talk seemed to flow more. When the finale finished, Peter found himself again with John and Mary and heard the conversations flowing around him: "Really? You too?" "But you don't understand. Hicks have a slower pace of life; we enjoy things without all the things you city dwellers need for entertainment. And we learn resourceful ways to—" "—and only at Wheaton would the administration *forbid* dancing while *requiring* the games we just played and—" Then Peter lost himself in a conversation that continued long into the night. He expected to be up at night thinking about all the beloved people he left at home, but Peter was too busy thinking about John's and Mary's stories.

The next day Peter woke up when his machine played a hideous sound, and groggily trudged to the dining hall to eat some chemically modified grains and drink water that had been infused with traditionally

mounted grains and drink water that had been infused with traditionally roasted beans. There were pills he could have taken that would have had the effect he was looking for, but he savored the beverage, and after sitting at a table without talking, bounced around from beautiful building to beautiful building, seeing sights for the first time, and wishing he could avoid all that to just get to his advisor.

Peter found the appropriate hallway, wandered around nervously until he found a door with a yellowed plaque that said "Julian Johnson," knocked once, and pushed the door open. A white-haired man said, "Peter Jones? How are you? Do come in... What can I do for you?"

Peter pulled out a sheet of paper, an organic surface used to retain colored trails and thus keep small amounts of information inscribed so that the "real" information is encoded in a personal way. No, they don't need to be trained to have their own watermark in this encoding.

Peter looked down at the paper for a moment and said, "I'm sorry I'm late. I need you to write what courses I should take and sign here. Then I can be out of your way."

The old man sat back, drew a deep breath, and relaxed into a fatherly smile. Peter began to wonder if his advisor was going to say anything at all. Then Prof. Johnson motioned towards an armchair, as rich and luxurious as his own, and then looked as if he remembered something and offered a bowl full of candy. "Sit down, sit down, and make yourself comfortable. May I interest you in candy?" He picked up an engraved metal bowl and held it out while Peter grabbed a few Lifesavers.

Prof. Johnson sat back, silent for a moment, and said, "I'm sorry I'm out of butterscotch; that always seems to disappear. Please sit down, and tell me about yourself. We can get to that form in a minute. One of the privileges of this job is that I get to meet interesting people. Now, where are you from?"

Peter said, "I'm afraid there's not much that's interesting about me. I'm from a small town downstate that doesn't have anything to distinguish itself. My amusements have been reading, watching the cycle of the year, oh, and running. Not much interesting in that. Now which

classes should I take?"

Prof. Johnson sat back and smiled, and Peter became a little less tense. "You run?"

Peter said, "Yes; I was hoping to run on the track this afternoon, after the lecture. I've always wanted to run on a real track."

The old man said, "You know, I used to run myself, before I became an official Old Geezer and my orthopaedist told me my knees couldn't take it. So I have to content myself with swimming now, which I've grown to love. Do you know about the Prairie Path?"

Peter said, "No, what's that?"

Prof. Johnson said, "Years ago, when I ran, I ran through the areas surrounding the College—there are a lot of beautiful houses. And, just south of the train tracks with the train you can hear now, there's a path before you even hit the street. You can run, or bike, or walk, on a path covered with fine white gravel, with trees and prairie plants on either side. It's a lovely view." He paused, and said, "Any ideas what you want to do after Wheaton?"

Peter said, "No. I don't even know what I want to major in."

Prof. Johnson said, "A lot of students don't know what they want to do. Are you familiar with Career Services? They can help you get an idea of what kinds of things you like to do."

Peter looked at his watch and said, "It's chapel time."

Prof. Johnson said, "Relax. I can write you a note." Peter began to relax again, and Prof. Johnson continued, "Now you like to read. What do you like to read?"

Peter said, "Newspapers and magazines, and I read this really cool book called *Zen and the Art of Motorcycle Maintenance*. Oh, and I like the Bible."

Peter said, "I like to read. I like to read. I like to read."

Prof. Johnson said, "I do too. What do you like about it most?"

"I like the stories in the Old Testament."

"One general tip: here at Wheaton, we have different kinds of professors—"

Peter said, "Which ones are best?"

Prof. Johnson said, "Different professors are best for different students. Throughout your tenure at Wheaton, ask your friends and learn which professors have teaching styles that you learn well with and mesh well with. Consider taking other courses from a professor you like. Now we have a lot of courses which we think expose you to new things and stretch you—people come back and see that these courses are best. Do you like science?"

"I like it; I especially liked a physics lab."

Prof. Johnson took a small piece of paper from where it was attached to a stack with a strange adhesive that had "failed" as a solid adhesive, but provided a uniquely useful way to make paper that could be attached to a surface with a slight push and then be detached with a gentle pull, remarkably enough without damage to the paper or the surface. He began to think, and flip through a book, using a technology thousands of years old at its heart. "Have you had calculus?" Prof. Johnson restrained himself from launching into a discussion of the grand, Utopian vision for "calculus" as it was first imagined and how different a conception it had from anything that would be considered "mathematics" today. Or should he go into that? He wavered, and then realized Peter had answered his question. "Ok," Prof. Johnson said, "the lab physics class unfortunately requires that you've had calculus. Would you like to take calculus now? Have you had geometry, algebra, and trigonometry?"

Peter said, "Yes, I did, but I'd like a little break from that now. Maybe I could take calculus next semester."

"Fair enough. You said you liked to read."

"..."

"Magazines and newspapers."

"Those things deal with the unfolding human story. I wonder if you'd like to take world civilization now, or a political science course."

"History, but why study world history? Why can't I just study U.S. history?"

Prof. Johnson said, "The story of our country is intertwined with that of our world. I think you might find that some of the things in world history are a lot closer to home than you think—and we have some real storytellers in our history department."

"That sounds interesting. What else?"

"The Theology of Culture class is one many students find enjoyable, and it helps build a foundation for Old and New Testament courses. Would you be interested in taking it for A quad or B quad, the first or second half of the semester?"

"Could I do both?"

"I wish I could say yes, but this course only lasts half the semester. The other half you could take Foundations of Wellness—you could do running as homework!"

"I think I'll do that first, and then Theology of Culture. That should be new," Peter said, oblivious to how tightly connected he was to theology and culture. "What else?"

Prof. Johnson said, "We have classes where people read things that a lot of people have found really interesting. Well, that could describe several classes, but I was thinking about Classics of Western Literature or Literature of the Modern World."

Peter said, "Um... Does Classics of Western Literature cover ancient and medieval literature, and Literature of the Modern World cover literature that isn't Western? Because if they do, I'm not sure I could connect with it."

Prof. Johnson relaxed into his seat, a movable support that met the contours of his body. Violating convention somewhat, he had a chair for Peter that was as pleasant to rest in as his own. "You know, a lot of people think that. But you know what?"

Peter said, "What?"

"There is something human that crosses cultures. That is why the stories have been selected. Stories written long ago, and stories written far away, can have a lot to connect with."

"Ok. How many more courses should I take?"

"You're at 11 credits now; you probably want 15. Now you said that you like *Zen and the Art of Motorcycle Maintenance*. I'm wondering if you would also like a philosophy course."

Peter said, "*Zen and the Art of Motorcycle Maintenance* is... I don't suppose there are any classes that use that. Or are there? I've heard Pirsig isn't given his fair due by philosophers."

Prof. Johnson said, "If you approach one of our philosophy courses the way you approach *Zen and the Art of Motorcycle Maintenance*, I think you'll profit from the encounter. I wonder if our Issues and Worldviews in Philosophy might interest you. I'm a big fan of thinking worldviewishly, and our philosophers have some pretty interesting things to say."

Peter asked, "What does 'worldviewishly' mean?"

Prof. Johnson said, "It means thinking in terms of worldviews. A worldview is the basic philosophical framework that gives shape to how we view the world. Our philosophers will be able to help you understand the basic issues surrounding worldviews and craft your own Christian worldview. You may find this frees you from the Enlightenment's secularizing influence—and if you don't know what the Enlightenment is now, you will learn to understand it, and its problems, and how you can be free of them." He spoke with the same simplistic assurance of artificial intelligence researchers who, seeing the power of computers and

recognizing how simple certain cognitive feats are for humans, assumed that it was only a matter of time that artificial intelligence would "bridge the gap"—failing to recognize the tar pit of the peaks of intelligence that seem so deceptively simple and easy to human phenomenology. For computers could often defeat the best human players at chess—as computerlike a human skill as one might reasonably find—but deciphering the language of a children's book or walking through an unfamiliar room, so easy to humans, seemed more difficult for computers the more advanced research began. Some researchers believed that the artificial intelligence project had uncovered the non-obvious significance of a plethora of things humans take for granted—but the majority still believed that what seemed trivial for humans must be the sort of thinking a computer can do, because there is no other kind of thinking... and an isomorphic simplicity, an apparent and deceptive simplicity much like this one, made it seem as if ideas were all that really mattered: not all that existed, but all that had an important influence. Prof. Johnson did not consciously understand how the Enlightenment worldview—or, more accurately, the Enlightenment—created the possibility of seeing worldviews that way, nor did he see how strange the idea of crafting one's own worldview would seem to pre-Enlightenment Christians. He did not realize that his own kindness towards Peter was not simply because he agreed with certain beliefs, but because of a deep and many-faceted way in which he had walked for decades, and walked well. It was with perfect simplicity that he took this way for granted, as artificial intelligence researchers took for granted all the things which humans did so well they seemed to come naturally, and framed worldviewish thought as carrying with it everything he assumed from his way.

Peter said, "Ok. Well, I'll take those classes. It was good to meet you."

Prof. Johnson looked over a document that was the writeup of a sort of game, in which one had a number of different rooms that were of certain sizes, and certain classes had requirements about what kind of room they needed for how long, and the solution involved not only solving the mathematical puzzle, but meeting with teachers and caring for their concerns, longstanding patterns, and a variety of human dimensions derisively labelled as "political." Prof. Johnson held in his

dimensions collectively labeled as "political." Prof. Johnson held in his hands the schedule with the official solution for that problem, and guided Peter to an allowable choice of class sections, taking several different actions that were considered "boring paperwork."

Prof. Johnson said, "I enjoyed talking with you. Please do take some more candy—put a handful in your pocket or something. I just want to make one more closing comment. I want to see you succeed. Wheaton wants to see you succeed. There are some rough points and problems along the way, and if you bring them to me I can work with them and try to help you. If you want to talk with your RA or our chaplain or someone else, that's fine, but please... my door is *always* open. And it was good to meet you too! Goodbye!"

Peter walked out, completely relaxed.

The next activity, besides nourishing himself with lunch (and eating, sleeping, and many other activities form a gentle background rhythm to the activities people are more conscious of. I will not describe each time Peter eats and sleeps, even though the 100th time in the story he eats with his new friends is as significant as the first, because I will be trying to help you see it their way), requires some explanation.

The term "quest," to the people here, is associated with an image of knights in armor, and a body of literature from writers like Chretien de Troyes and Sir Thomas Mallory who described King Arthur and his knights. In Chretien de Troyes, the knight goes off in various adventures, often quests where he is attempting different physical feats. In Sir Thomas Mallory, a new understanding of quests is introduced, in the quest for the holy grail—a legendary treasure which I cannot here explain save to say that it profoundly altered the idea of a quest, and the quest took a large enough place in many people's consciousness that it is used as a metaphor of the almost unattainable object of an ultimate pursuit (so that physicists would say that a grand unified theory which crystallizes all physical laws into a few simple equations is the "holy grail of physics"), and that the holy grail is itself in the shadow of a greater treasure, and this treasure was one many people in fact had possessed (some after great struggle, while others had never known a time when they were without it). In Mallory in particular the quest can be more than a physical task:

most of Arthur's knights could not reach the holy grail because of—they weren't physical blemishes and they weren't really mental blemishes either, but what they were is hard to say. The whole topic (knights, quests, the holy grail...) connects to something about that world that is beyond my ability to convey; suffice it to say that it is connected with one more dimension we don't have here.

Peter, along with another group of students, went out on a quest. The object of this quest was to acquire seven specific items, on conditions which I will explain below:

1. "A dog biscuit." In keeping with a deeply human trait, the food they prepare is not simply what they judge adequate to sustain the body, but meant to give pleasure, in a sense adorned, because eating is not to them simply a biological need. They would also get adorned food to give pleasure to organisms they kept, including dogs, which include many different breeds which in turn varied from being natural sentries protecting territories to a welcoming committee of one which would give a visitor an exuberant greeting just because he was there.
2. "An M16 rifle's spent shell casing." That means the used remnant after... wait a little bit. I need to go a lot farther back to explain this one.

You will find something deceptively familiar in that in that universe, people strategically align resources and then attack their opponents, usually until a defeat is obvious. And if you look for what is deceptive, it will be a frustrating search, because even if the technologies involved are primitive, it is a match of strategy, tactics, and opposition.

What makes it different is that this is not a recreation or an art form, but something many of them consider the worst evil that can happen, or among the worst. The resources that are destroyed, the bodies—in our world, it is simply what is involved in the game, but many of them consider it an eternal loss.

Among the people we will be meeting, people may be broken down into "pacifists" who believe that war is always wrong, and people who instead of being pure pacifists try to have a practical way of pursuing pacifist goals: the disagreement is not whether one should have a war for amusement's sake (they both condemn that), but what one should do when not having a war looks even more destructive than having a war. And that does not do justice to either side of the debate, but what I want to emphasize that to both of them this is not simply a game or one form of recreation; it is something to avoid at almost *any* cost.

A knight was someone who engaged in combat, an elite soldier riding an animal called a horse. In Chretien de Troye's day and Mallory's day, the culture was such that winning a fight was important, but fighting according to "chivalry" was more important. Among other things, chivalry meant that they would only use simple weapons based on mechanical principles—no poison—and they wouldn't even use weapons with projectiles, like arrows and (armor piercing) crossbow bolts. In practice that only meant rigid piercing and cutting weapons, normally swords and spears. And there was a lot more. A knight was to protect women and children.

The form that chivalry took in Peter's day allowed projectile weapons, although poison was still not allowed, along with biological, thermonuclear, and other weapons which people did not wish to see in war, and the fight to disfigure the tradition's understanding women had accorded them meant that women could fight and be killed like men, although people worked to keep children out of warfare, and in any case the "Geneva Convention", as the code of chivalry was called, maintained a sharp distinction between combatants and non-combatants, the latter of which were to be protected.

The specific projectile weapon carried by most members of the local army was called an M16 rifle, which fired surprisingly small .22 bullets—I say "surprisingly" because if you were a person fighting against them and you were hit, you would be injured but quite probably not killed.

This was intentional. (Yes, they knew how to cause an immediate kill.)

Part of it is the smaller consideration that if you killed an enemy soldier immediately, you took one soldier out of action; on the other hand, if you wounded an enemy soldier, you took three soldiers out of action. But this isn't the whole reason. The much bigger part of the reason is that their sense of chivalry (if it was really just chivalry; they loved their enemies) meant that even in their assaults they tried to subdue with as little killing as possible.

There were people training with the army in that community (no, not Peter; Peter was a pure pacifist) who trained, with M16 rifles, not because they wanted to fight, but as part of a not entirely realistic belief that if they trained hard enough, their achievement would deter people who would go to war. And the "Crusader battalion" (the Crusaders were a series of people who fought to defend Peter's spiritual ancestors from an encroaching threat that would have destroyed them) had a great sense of chivalry, even if none of them used the word "chivalry".

3. "A car bumper." A car bumper is a piece of armor placed on the front and back of cars so that they can sustain low-velocity collisions without damage. (At higher velocities, newer cars are designed to serve as a buffer so that "crumple zones" will be crushed, absorbing enough of the impact so that the "passenger cage" reduces injuries sustained by people inside; this is part of a broader cultural bent towards minimizing preventable death because of what they believe about one human life.) Not only is a car bumper an unusual item to give, it is heavy and awkward enough that people tend not to carry such things with them—even the wealthy ones tend to be extraordinarily lightly encumbered.
4. "An antique." It is said, "The problem with England is that they believe 100 miles is a long distance, and the problem with America is that they believe 100 years is a long time." An antique—giving the rule without all the special cases and exceptions, which is to say

giving the rule as if it were not human—is something over 100 years old. To understand this, you must appreciate that it does not include easily available rocks, many of which are millions or billions of years old, and it is not based on the elementary particles that compose something (one would have to search hard to find something *not* made out of elementary particles almost as old as the universe). The term "antique" connotes rarity, and in a sense something out of the ordinary; that people's way is concerned with "New! New! New!" and it is hard to find an artifact that was created more than 100 years ago, which is what was intended.

This quest is all the more interesting because there is an "unwritten rule" that items will be acquired by asking, not by theft or even purchase—and, as most antiques are valuable, it would be odd for someone you've just met—and therefore with whom you have only the general human bond but not the special bond of friendship—to give you such an item, even if most of the littler things in life are acquired economically while the larger things can only be acquired by asking.

5. "A note from a doctor, certifying that you do not have bubonic plague." Intended as a joke, this refers to a health, safeguarded by their medicine, which keeps them from a dreadful disease which tore apart societies some centuries ago: that sort of thing wasn't considered a live threat because of how successful their medicine was (which is why it could be considered humorous).
6. "A burning piece of paper which no one in your group lit. (Must be presented in front of Fischer and not brought into the building.)" This presents a physical challenge, in that there is no obvious way to transport a burning piece of paper—or what people characteristically envision as a burning piece of paper—from almost anywhere else to in front of Fischer.
7. "A sheet of paper with a fingerpaint handprint from a kindergartener."

"Kindergarten" was the first year of their formal education, and

a year of preparation before students were ready to enter their first grade. What did this society teach at its first, required year? Did it teach extraordinarily abstract equations, or cosmological theory, or literary archetypes, or how to use a lathe?

All of these could be taught later on, and for that matter there is reason to value all of them. But the very beginning held something different. It taught people to take their turn and share; it taught people "Do unto others as you would have them do unto you," the Golden Rule by which their great Teachers crystallized so much wisdom. All of this work and play, some of the most advanced lessons they could learn, were placed, not at the end, but at the *beginning* of their education.

That is what kindergarten was. What was a kindergartener? The true but uninformative answer would be "a person in kindergarten."

To get past that uninformative answer, I need to stress that their minds are bound up with organic life—they did *not* spring, fully formed, as you and I did. In most complex organisms, there is a process that transforms a genetically complete organism of just one cell to become a mature member of the species; among humans, that process is one of the longest and most complex. During that time their minds are developing as well as their bodies; in that regard they are not simply in harmony with the natural world this society believes it is separate from... but one of its best examples.

But to say that alone is to flatten out something interesting... even more interesting than the process of biological mental development is the place that society has for something called "childhood". Not all cultures have that concept—and again I am saying "culture" without explaining what it means. I can't. Not all societies understand "childhood" as this society does; to many, a child is a smaller and less capable adult, or even worse, a nonentity. But in this culture, childhood is a distinctive time, and a child, including a kindergartener, is something special—almost a different species of mind. Their inability to healthily sustain themselves is met, not always with scorn, but with a giving of support and protection—and this is not always a grudging duty, but something

protection—and this is not always a grudging duty, but something that can bring joy. They are viewed as innocent, which is certainly not true, and something keeps many people from resenting them when they prove that they are not innocent by doing things that would not be tolerated if an adult did it. And the imperviousness of this belief to contrary experience is itself the shadow of the whole place of childhood as a time to play and learn and explore worlds of imagination and the things most adults take for granted. And many adults experience a special pleasure, and much more than a pleasure, from the company of children, a pleasure that is tied to something much deeper.

This pleasure shines through even a handprint left with "fingerpaints," a way of doing art reserved for children, so that this physical object is itself a symbol of all that is special about childhood, and like symbols of that world carries with it what is evoked: seeing such a handprint is a little like seeing a kindergartener.

And they were off. They stopped for a brief break and annoyedly watched the spectacle of over a hundred linked metal carts carrying a vast quantity of material, and walked in and out of the surrounding neighborhoods. Their knocks on the door met a variety of warm replies. Before long, they had a handprint from a kindergartener, a dog biscuit (and some very enthusiastic attention from a kind dog!), a note from an off-duty doctor (who did not examine them, but simply said that if they had the bubonic plague there would be buboes bulging from them in an obvious way), a cigarette lighter and a sheet of paper (unlit), a twisted bumper (which Peter surprised people by flipping over his shoulder), and finally a spent shell casing from a military science professor. When they climbed up "Fischer beach," John handed the paper and lighter to his RA and said, "Would you light this?" It was with an exhausted satisfaction that they went to dinner and had entirely amiable conversation with other equally students who scant minutes ago had been their competitors.

When dinner was finished, Peter and Mary sat for a while in exhausted silence, before climbing up for the next scheduled activity—but I am at a loss for how to describe the next scheduled activity. To start with, I will give a deceptive description. If you can understand this

with, I will give a deceptive description. If you can understand this activity, you will have understood a great deal more of what is in that world that doesn't fit in ours.

Do I have to give a deceptive description, in that any description in our terms will be more or less deceptive? I wasn't trying to make that kind of philosophical point; I wasn't trying to make a philosophical point at all. I am choosing a description of the next scheduled activity that is more deceptive than it needs to be.

When students studied an academic discipline called "physics," the curriculum was an initiation into progressively stranger and more esoteric doctrines, presented at the level which students were able to receive them. Students were first taught "Newtonian mechanics" (which openly regarded as false), before being initiated into "Einstein's relativity" at the next level (which was also considered false, but was widely believed to be closer to the truth). Students experienced a "night and day" difference between Newtonian mechanics and all higher order mysteries. If you were mathematically adept enough to follow the mathematics, then Newton was easy because he agreed with good old common sense, and Einstein and even stranger mysteries were hard to understand because they turned common sense on its head. Newton was straightforward while the others were profoundly counterintuitive. So Einstein, unlike Newton, required a student to mentally engulf something quite alien to normal, common sense ways of thinking about the world around oneself. Hence one could find frustrated student remarks about, "And God said, 'Let there be light!' And there was Newton. Then the Devil howled, 'Let Einstein be!' and restored the status quo."

Under this way of experiencing physics, Newton simply added mathematical formality to what humans always knew: everything in space fit in one long and continuous three-dimensional grid, and time could be measured almost as if it were a line, and so Einstein was simply making things more difficult and further from humans' natural perceptions when his version of a fully mathematical model softened the boundaries of space and time so that one could no longer treat it as if it had a grid for a skeleton.

Someone acquainted with the history of science might make the observation that it was not so much that Newton's mechanics were a mathematically rigorous formalization of how people experienced space and time, but that how people experienced space and time had *become* a hazy and non-mathematical paraphrase of Newtonian mechanics: in other words, some students some students learned Newtonian mechanics easily, not because Newtonian physics was based on common sense, but because their "common sense" had been profoundly shaped by Newtonian physics.

This seemingly pedantic distinction was deeply tied to how the organic was being extinguished in their society.

I suspect you are thinking, "What other mathematical model was it based on instead?" And that's why you're having trouble guessing the answer.

The answer is related to the organic. Someone who knew Newton and his colleagues, and what they were rebelling against, could get a sense of something very different even without understanding what besides mathematics would undergird what space meant to them. In a certain sense, Newton forcefully stated the truth, but in a deceptive way. He worked hard to forge a concept of cold matter, pointing out that nature was not human—and it was a philosophical error to think of nature as human, but it was not nearly so great as one might think. Newton and his colleagues powerfully stressed that humans were superior to the rest of the physical world (which was not human), that they were meant not simply to be a part of nature but to conquer and rule it. And in so doing they attacked an equally great truth, that not only other life but even "inanimate" matter was kin to humans—lesser kin, perhaps, but humans and the rest of the natural world formed a continuity. They obscured the wisdom that the lordship humans were to exercise was not of a despot controlling something worthless, but the mastery of the crowning jewel of a treasure they had been entrusted to them. They introduced the concept of "raw material", something as foreign to their thinking as... I can't say what our equivalent would be, because everything surrounding "raw material" is so basic to us, and what they believed instead, their organic perception, is foreign to us. They

caused people to forget that, while it would be a philosophical error to literally regard the world as human, it would be much graver to believe it is fundamentally described as inert, cold matter. And even when they had succeeded in profoundly influencing their cultures, so that people consciously believed in cold matter to a large degree, vestiges of the ancient experience survived in the medieval. It is perhaps not a coincidence that hundreds of years since Newton, in Newton's own "mother tongue" (English), the words for "matter" and "mother" both sprung from the same ancient root word.

The Newtonian conception of space had displaced to some degree the older conception of place, a conception which was less concerned with how far some place was from other different places, and more concerned with a sort of color or, to some extent, meaning. The older conception also had a place for some things which couldn't really be stated under the new conception: people would say, "You can't be in two places at once." What they meant by that was to a large degree something different, "Your body cannot be at two different spatial positions at the same time." This latter claim was deceptive, because it was true so far as it goes, but it was a very basic fact of life that people could be in two places at once. The entire point of the next scheduled activity was to be in two places at once.

Even without describing what the other place was (something which could barely be suggested even in that world) and acknowledging that the point of the activity was to be in two places at once, this description of that activity would surprise many of the people there, and disturb those who could best sense the other place. The next scheduled activity was something completely ordinary to them, a matter of fact event that held some mystery, and something that would not occur to them as being in two places at once. The activity of being present in two or more places at once was carried on, on a tacit level, even when people had learned to conflate place with mathematical position. One such activity was confused with what we do when we remember: when we remember, we recall data from storage, while they cause the past to be present. The words, "This do in remembrance of me," from a story that was ancient but preserved in the early medieval period we are looking at, had an unquestioned meaning of, "Cause me to be present by doing this," but had suffered under a quite different experience of memory, so that to

some people it meant simply to go over data about a person who had been present in the past but could not be present then.

But this activity was not remembering. Or at least, it was not *just* remembering. And this leaves open the difficulty of explaining how it was ordinary to them. It was theoretically in complete continuity with the rest of their lives, although it would be more accurate to say that the rest of their lives were theoretically in complete continuity with it. This activity was in a sense the most human, and the most organic, in that in it they led the beasts of the field, the birds of the air, the fish of the sea, the plants, the rocks, the mountains, and the seas in returning to the place they came from. This description would also likely astonish the people who were gathered in a painted brick room, sitting on carpet and on movable perches, and seeing through natural light mixed with flickering fluorescent lights. Not one of them was thinking about "nature."

What went on there was in a very real sense mediocre. Each activity was broken down, vulgarized, compared to what it could be—which could not obliterate what was going on. When they were songs, they were what were called "7-11" songs, a pejorative term which meant songs with seven words repeated eleven times. There was a very real sense in which the event was diminished by the music, but even when you factor in every diminishing force, there was something going on there, something organic and more than organic, which you and I do not understand—for that matter, which many people in that world do not understand.

Archon was silent for a long time.

Ployon said, "What is it?"

Archon said, "I can't do it. I can't explain this world. All I've really been doing is taking the pieces of that world that are a bit like ours. You've been able to understand much of it because I haven't tried to convey several things that are larger than our world. 'God' is still a curious and exotic appendage that isn't connected to anything, not really; I haven't been able to explain, really explain, what it is to be male and female unities, or what masculinity and femininity are. There are a

thousand things, and... I've been explaining what three-dimensional substance is to a two-dimensional world, and the way I've been doing it is to squash it into two dimensions, and make it understandable by removing from it everything that makes it three dimensional. Or almost everything..."

"How would a three dimensional being, a person from that world, explain the story?"

"But it wouldn't. A three dimensional being wouldn't collapse a cube into a square to make it easier for itself to understand; that's something someone who couldn't free itself from reading two dimensional thinking into three dimensions would do. You're stuck in two dimensions. So am I. That's why I failed, utterly failed, to explain the "brother-sister floor fellowship", the next scheduled activity. And my failure is structural. It's like I've been setting out to copy a living, moving organism by sculpturing something that looks like it out of steel. And what I've been doing is making intricate copies of its every contour, and painting the skin and fur exactly the same color, and foolishly hoping it will come alive. And this is something I can't make by genetic engineering."

"But how would someone from that world explain the story? Even if I can't understand it, I want to know."

"But people from that world don't explain stories. A story isn't something you *explain*; it's something that may be told, shared, but usually it is a social error to explain a story, because a story participates in human life and telling a story connects one human to another. And so it's a fundamental error to think a story is something you convey by explaining it—like engineering a robotic body for an animal so you can allow it to have a body. I have failed because I was trying something a mind could only fail at."

"Then can you tell the story, like someone from that world would tell it?"

Peter and Mary both loved to run, but for different reasons. Peter was training himself for various races: he had not joined track as he did

was training himself for various races, he had not joined track, as he did in high school, but there were other races. Mary ran to feel the sun and wind and rain. And, without any conscious effort, they found themselves running together down the prairie path together, and Peter clumsily learning to match his speed to hers. And, as time passed, they talked, and talked, and talked, and talked, and their runs grew longer.

When the fall break came, they both joined a group going to the northwoods of Wisconsin for a program that was half-work and half-play. And each one wrote a letter home about the other. Then Peter began his theology of culture class, and said, "This is what I want to study." Mary did not have a favorite class, at least not that she realized, until Peter asked her what her favorite class was and she said, "Literature."

When Christmas came, they went to their respective homes and spent the break thinking about each other, and they talked about this when they returned. They ended the conversation, or at least they thought they did, and then each hurried back to catch the other and say one more thing, and then the conversation turned out to last much longer, and ended with a kiss.

Valentine's Day was syrupy. It was trite enough that their more romantically inclined friends groaned, but it did not seem at all trite or syrupy to them. As Peter's last name was Patrick, he called Mary's father and prayed that St. Patrick's Day would be a momentous day for both of them.

Peter and Mary took a slow run to a nearby village, and had dinner at an Irish pub. Amidst the din, they had some hearty laughs. The waitress asked Mary, "Is there anything else that would make this night memorable?" Then Mary saw Peter on his knee, opening a jewelry box with a ring: "I love you, Mary. Will you marry me?"

Mary cried for a good five minutes before she could answer. And when she had answered, they sat in silence, a silence that overpowered the din. Then Mary wiped her eyes and they went outside.

It was cool outside, and the moon was shining brightly. Peter pulled a camera from his pocket, and said, "Stay where you are. Let me back up

a bit. And hold your hand up. You look even more beautiful with that ring on your finger."

Peter's camera flashed as he took a picture, just as a drunk driver slammed into Mary. The sedan spun into a storefront, and Mary flew up into the air, landed, and broke a beer bottle with her face.

People began to come out, and in a few minutes the police and paramedics arrived. Peter somehow managed to answer the police officers' questions and to begin kicking himself for being too stunned to act.

When Peter left his room the next day, he looked for Prof. Johnson. Prof. Johnson asked, "May I give you a hug?" and then sat there, simply being with Peter in his pain. When Peter left, Prof. Johnson said, "I'm not just here for academics. I'm here for you." Peter went to chapel and his classes, feeling a burning rage that almost nothing could pierce. He kept going to the hospital, and watching Mary with casts on both legs and one arm, and many tiny stitches on her face, fluttering on the borders of consciousness. One time Prof. Johnson came to visit, and he said, "I can't finish my classes." Prof. Johnson looked at him and said, "The college will give you a full refund." Peter said, "Do you know of any way I can stay here to be with Mary?" Prof. Johnson said, "You can stay with me. And I believe a position with UPS would let you get some income, doing something physical. The position is open for you." Prof. Johnson didn't mention the calls he'd made, and Peter didn't think about them. He simply said, "Thank you."

A few days later, Mary began to be weakly conscious. Peter finally asked a nurse, "Why are there so many stitches on her face? Was she cut even more badly than—"

The nurse said, "There are a lot of stitches very close together because the emergency room had a cosmetic surgeon on duty. There will still be a permanent mark on her face, but some of the wound will heal without a scar."

Mary moved the left half of her mouth in half a smile. Peter said, "That was a kind of cute smile. How come she can smile like that?"

That was a kind of cute smile. How come she can smile like that.

The nurse said, "One of the pieces of broken glass cut a nerve. It is unlikely she'll ever be able to move part of her face again."

Peter looked and touched Mary's hand. "I still think it's really quite cute."

Mary looked at him, and then passed out.

Peter spent a long couple of days training and attending to practical details. Then he came back to Mary.

Mary looked at Peter, and said, "It's a Monday. Don't you have classes now?"

Peter said, "No."

Mary said, "Why not?"

Peter said, "I want to be here with you."

Mary said, "I talked with one of the nurses, and she said that you dropped out of school so you could be with me.

"Is that true?" she said.

Peter said, "I hadn't really thought about it that way."

Mary closed her eyes, and when Peter started to leave because he decided she wanted to be left alone, she said, "Stop. Come here."

Peter came to her bedside and knelt.

Mary said, "Take this ring off my finger."

Peter said, "Is it hurting you?"

Mary said, "No, and it is the greatest treasure I own. Take it off and take it back."

Peter looked at her, bewildered. "Do you not want to marry me?"

Mary said, "This may sting me less because I don't remember our engagement. I don't remember anything that happened near that time; I have only the stories others, even the nurses, tell me about a man who loves me very much."

Peter said, "But don't you love me?"

Mary forced back tears. "Yes, I love you, yes, I love you. And I know that you love me. You are young and strong, and have the love to make a happy marriage. You'll make some woman a very good husband. I thought that woman would be me.

"But I can see what you will not. You said I was beautiful, and I was. Do you know what my prognosis is? I will probably be able to stand. At least for short periods of time. If I'm fortunate, I may walk. With a walker. I will never be able to run again—Peter, I am nobody, and I have no future. Absolutely nobody. You are young and strong. Go and find a woman who is worth your love."

Mary and Peter both cried for a long time. Then Peter walked out, and paused in the doorway, crying. He felt torn inside, and then went in to say a couple of things to Mary. He said, "I believe in miracles."

Then Mary cried, and Peter said something else I'm not going to repeat. Mary said something. Then another conversation began.

The conversation ended with Mary saying, "You're stupid, Peter. You're really, really stupid. I love you. I don't deserve such love. You're making a mistake. I love you." Then Peter went to kiss Mary, and as he bent down, he bent his mouth to meet the lips that he still saw as "really quite cute."

The stress did not stop. The physical therapists, after time, wondered that Mary had so much fight in her. But it stressed her, and Peter did his job without liking it. Mary and Peter quarreled and made up and quarreled and made up. Peter prayed for a miracle when they made up and sometimes when they quarreled. Were this not enough stress, there

was an agonizingly long trial—and knowing that the drunk driver was behind bars surprisingly didn't make things better. But Mary very slowly learned to walk again. After six months, if Peter helped her, she could walk 100 yards before the pain became too great to continue.

Peter hadn't been noticing that the stress diminished, but he did become aware of something he couldn't put his finger on. After a night of struggling, he got up, went to church, and was floored by the Bible reading of, "You have heard that it was said, 'Love your neighbor and hate your enemy.' But I tell you, love your enemies and pray for those who persecute you." and the idea that when you do or do not visit someone in prison, you are visiting or refusing to visit Christ. Peter absently went home, tried to think about other things, made several phone calls, and then forced himself to drive to one and only one prison.

He stopped in the parking lot, almost threw up, and then steeled himself to go inside. He found a man, Jacob, and... Jacob didn't know who Peter was, but he recognized him as looking familiar. It was an awkward meeting. Then he recognized him as the man whose now wife he had crippled. When Peter left, he vomited and felt like a failure. He talked about it with Mary...

That was the beginning of a friendship. Peter chose to love the man in prison, even if there was no pleasure in it. And that created something deeper than pleasure, something Peter couldn't explain.

As Peter and Mary were planning the wedding, Mary said, "I want to enter with Peter next to me, no matter what the tradition says. It will be a miracle if I have the strength to stand for the whole wedding, and if I have to lean on someone I want it to be Peter. And I don't want to sit on a chair; I would rather spend my wedding night wracked by pain than go through my wedding supported by something lifeless!"

When the rehearsal came, Mary stood, and the others winced at the pain in her face. And she stood, and walked, for the entire rehearsal without touching Peter once. Then she said, "I can do it. I can go through the wedding on my own strength," and collapsed in pain.

At the wedding, she stood next to Peter, walking, her face so radiant with joy that some of the guests did not guess she was in exquisite pain. They walked next to each other, not touching, and Mary slowed down and stopped in the center of the church. Peter looked at her, wondering what Mary was doing.

Then Mary's arm shot around Peter's neck, and Peter stood startled for a moment before he placed his arm around her, squeezed her tightly, and they walked together to the altar.

On the honeymoon, Mary told Peter, "You are the only person I need." This was the greatest bliss either of them had known, and the honeymoon's glow shined and shined.

Peter and Mary agreed to move somewhere less expensive to settle down, and were too absorbed in their wedded bliss and each other to remember promises they had made earlier, promises to seek a church community for support and friends. And Peter continued working at an unglamorous job, and Mary continued fighting to walk and considered the housework she was capable of doing a badge of honor, and neither of them noticed that the words, "I love you" were spoken ever so slightly less frequently, nor did they the venom creeping into their words.

One night they exploded. What they fought about was not important. What was important was that Peter left, burning with rage. He drove, and drove, until he reached Wheaton, and at daybreak knocked on Prof. Johnson's door. There was anger in his voice when he asked, "Are you still my friend?"

Prof. Johnson got him something to eat and stayed with him when he fumed with rage, and said, "I don't care if I'm supposed to be with her, I can't go back!" Then Prof. Johnson said, "Will you make an agreement with me? I promise you I won't ever tell you to go back to her, or accept her, or accept what she does, or apologize to her, or forgive her, or in any way be reconciled. But I need you to trust me that I love you and will help you decide what is best to do."

Peter said, "Yes."

Prof. Johnson said, "Then stay with me. You need some rest. Take the day to rest. There's food in the fridge, and I have books and a nice back yard. There's iced tea in the—excuse me, there's Coke and 7 Up in the boxes next to the fridge. When I can come back, we can talk."

Peter relaxed, and he felt better. He told Prof. Johnson. Prof. Johnson said, "That's excellent. What I'd like you to do next is go in to work, with a lawyer I know. You can tell him what's going on, and he'll lead you to a courtroom to observe."

Peter went away to court the next day, and when he came back he was ashen. He said nothing to Prof. Johnson.

Then, after the next day, he came back looking even more unhappy. "The first day, the lawyer, George, took me into divorce court. I thought I saw the worst that divorce court could get. Until I came back today. It was the same—this sickening scene where two people had become the most bitter enemies. I hope it doesn't come to this. This was atrocious. It was vile. It was more than vile. It was—"

Prof. Johnson sent him back for a third day. This time Peter said nothing besides, "I think I've been making a mistake."

After the fourth day, Peter said, "Help me! I've been making the biggest mistake of my *life!*"

After a full week had passed, Peter said, "*Please*, I *beg* you, don't send me back there."

Prof. Johnson sent Peter back to watch a divorce court for one more miserable, excruciating day. Then he said, "Now you can do whatever you want. What do you want to do?"

The conflict between Peter and Mary ended the next day.

Peter went home, begging Mary for forgiveness, and no sooner than he had begun his apology, a thousand things were reflected in Mary's face and she begged his forgiveness. Then they talked, and debated whether to go back to Wheaton, or stay where they were. Finally Mary said, "I really

want to go back to Wheaton."

Peter began to shyly approach old friends. He later misquoted: "I came crawling with a thimble in the desperate hope that they'd give a few tiny drops of friendship and love. Had I known how they would respond, I would have come running with a bucket!"

Peter and Mary lived together for many years; they had many children and were supported by many friends.

Ployon said, "I didn't follow every detail, but... there was something in that that stuck."

Archon said, "How long do you think it lasted?"

"A little shorter than the other one, I mean first part."

"Do you have any idea how many days were in each part?"

"About the same? I assume the planet had slowed down so that a year and a day were of roughly equal length."

"The first part took place during three days. The latter part spanned several thousand days—"

"I guess I didn't understand it—"

"—which is... a sign that you understood something quite significant... that you knew what to pay attention to and were paying attention to the right thing."

"But I didn't understand it. I had a sense that it was broken off before the end, and that was the end, right?"

Archon hesitated, and said, "There's more, but I'd rather not go into that."

Ployon said, "Are you sure?"

"You won't like it."

"Please."

The years passed and Peter and Mary grew into a blissfully happy marriage. Mary came to have increasing health problems as a result of the accident, and those around them were amazed at how their love had transformed the suffering the accident created in both of their lives. At least those who knew them best saw the transformation. There were many others who could only see their happiness as a mirage.

As the years passed, Jacob grew to be a good friend. And when Peter began to be concerned that his wife might be... Jacob had also grown wealthy, very wealthy, and assembled a top-flight legal team (without taking a dime of Peter's money—over Peter's protests!), to prevent what the doctors would normally do in such a case, given recent shifts in the medical system.

And then Mary's health grew worse, much worse, and her suffering grew worse with it, and pain medications seemed to be having less and less effect. Those who didn't know Mary were astonished that someone in so much pain could enjoy life so much, nor the hours they spent gazing into each other's eyes, holding hands, when Mary's pain seemed to vanish. A second medical opinion, and a third, and a fourth, confirmed that Mary had little chance of recovery even to her more recent state. And whatever measures been taken, whatever testimony Peter and Mary could give about the joy of their lives, the court's decision still came:

The court wishes to briefly review the facts of the case. Subject is suffering increasingly severe effects from an injury that curtailed her life greatly as a young person. from which she has never recovered, and is causing increasingly complications now that she will never again have youth's ability to heal. No fewer than four medical opinions admitted as expert testimony substantially agree that subject is in extraordinary and excruciating pain; that said excruciating pain is increasing; that said excruciating pain is increasingly unresponsive to medication; that subject has fully lost

autonomy and is dependent on her husband; that this dependence is profound, without choice, and causes her husband to be dependent without choice on others and exercise little autonomy; and the prognosis is only of progressively worse deterioration and increase in pain, with no question of recovery.

The court finds it entirely understandable that the subject, who has gone through such trauma, and is suffering increasingly severe complications, would be in a state of some denial. Although a number of positions could be taken, the court also finds it understandable that a husband would try to maintain a hold on what cannot exist, and needlessly prolong his wife's suffering. It is not, however, the court's position to judge whether this is selfish...

For all the impressive-sounding arguments that have been mounted, the court cannot accord a traumatized patient or her ostensibly well-meaning husband a privilege that the court itself does not claim. The court does not find that it has an interest in allowing this woman to continue in her severe and worsening state of suffering.

Peter was at her side, holding her hand and looking into his wife's eyes, The hospital doctor had come. Then Peter said, "I love you," and Mary said, "I love you," and they kissed.

Mary's kiss was still burning on Peter's lips when two nurses hooked Mary up to an IV and injected her with 5000 milligrams of sodium thiopental, then a saline flush followed by 100 milligrams of pancurium bromide, then a saline flush and 20 milligrams of potassium chloride.

A year later to the day, Peter died of a broken heart.

Ployon was silent for a long time, and Archon was silent for an even longer time. Ployon said, "I guess part of our world is present in that world. Is that what you mean by being in two places at once?"

Archon was silent for a long time.

Ployon said, "It seems that that world's problems and failings are somehow greater than our achievements. I wish that world could exist, and that we could somehow visit it."

Archon said, "Do you envy them that much?"

Ployon said, "Yes. We envy them as—"

Archon said, "—as—" and searched through his world's images.

Ployon said, "—as that world's eunuchs envy men."

Archon was silent.

Ployon was silent.