English IV Science Fiction – Summer Reading Assignment

Below you will find a series of short stories, each of which deals with some unique form of technology and its impact on human lives. You will choose four of these tales to print, read and annotate. Then you will write a one-page analysis/reaction for each story you read, touching on any combination of the following questions:

- How does the author invent a new technology, and what real-world inspirations might s/he have?
- What does the story say about the relationship between humans and technology? Is it optimistic?
- What sort of atmosphere, literary techniques, or characterization strategies distinguish the writing?
- Did you enjoy the story? Was it easy or difficult to read? Did it make you think about anything real?

1. “Impostor,” by Phillip K Dick
   (A scientist must race against time to prove he’s not an alien spy...)

2. “The Best 1-Star Restaurant in the Whole Quadrant,” by Rachael Jones
   (A renegade robot develops a very human obsession: gourmet cooking...)

3. “Johnny Mneumonic,” by William Gibson
   (A man with an artificially-enhanced memory learns some dangerous information...)

4. “Tideline” by Elizabeth Bear
   (An artificially-intelligent tank befriends a human boy in a postwar wasteland...)

5. “Evidence,” by Isaac Asimov
   (A candidate for mayor is accused by his opponent of being a robot disguised as human...)

6. “Spider the Artist” by Nnedi Okorafor
   (A female musician in an African village has a very strange interaction with a curious droid...)

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Francis Quinn was a politician of the new school. He neither ran for office nor canvassed for votes, made no speeches and stuffed no ballot boxes.

And since politics makes strange bedfellows, Director Emeritus of Robotics Research Alfred Lanning sat at the other side of the desk with his ferocious white eyebrows bent far forward over eyes in which chronic impatience had sharpened to acuity. He was not pleased.

The fact, if known to Quinn, would have annoyed him not the least. His voice was friendly, perhaps professionally so.

“I assume you know Stephen Byerley, Dr. Lanning.”

“I have heard of him. So have many people.”

“Yes, so have I. Perhaps you intend voting for him at the next election.”

“I couldn’t say.” There was an unmistakable trace of acidity here. “I have not followed the political currents, so I’m not aware that he is running for office.”

“He may be our next mayor. Of course, he is only a lawyer now, but great oaks—”

“Yes,” interrupted Lanning, “I have heard the phrase before. But I wonder if we can get to the business at hand.”

“We are at the business at hand, Dr. Lanning.” Quinn’s tone was very gentle, “It is to my interest to keep Mr. Byerley a district attorney at the very most, and it is to your interest to help me do so.”

“To my interest? Come!” Lanning’s eyebrows hunched low.

“Well, say then to the interest of the U. S. Robot & Mechanical Men Corporation. Quinn lit a slender cigarette with a lighter of tasteful simplicity and his big-boned face settled into an expression of quiet amusement. “We have spoken of Mr. Byerley — a strange and colorful character. He was unknown three years ago. He is very well known now. He is a man of force and ability, and certainly the most capable and intelligent prosecutor I have ever known. Unfortunately he is not a friend of mine”

“I understand,” said Lanning, mechanically. He stared at his fingernails.

“I have had occasion,” continued Quinn, evenly, “in the past year to investigate Mr. Byerley — quite exhaustively. It is always useful, you see, to subject the past life of reform politicians to rather inquisitive research. If you knew how often it helped—” He paused to smile humorlessly at the glowing tip of his cigarette. “But Mr. Byerley’s past is unremarkable. A quiet life in a small town, a college education, a wife who died young, an auto accident with a slow recovery, law school, coming to the metropolis, an attorney.”

Francis Quinn shook his head slowly, then added, “But his present life. Ah, that is remarkable. Our district attorney never eats!”

Lanning’s head snapped up, old eyes surprisingly sharp, “Pardon me?”

“Our district attorney never eats.” The repetition thumped by syllables. “I’ll modify that slightly. He has never been seen to eat or drink. Never! Do you understand the significance of the word? Not rarely, but never!”

“I find that quite incredible. Can you trust your investigators?”
“I can trust my investigators, and I don’t find it incredible at all. Further, our district attorney has never been seen to drink — in the aqueous sense as well as the alcoholic — nor to sleep. There are other factors, but I should think I have made my point.”

Lanning leaned back in his seat, and there was the rapt silence of challenge and response between them, and then the old roboticist shook his head. “No. There is only one thing you can be trying to imply, if I couple your statements with the fact that you present them to me, and that is impossible.”

“But the man is quite inhuman, Dr. Lanning.”

“If you told me he were Satan in masquerade, there would be a faint chance that I might believe you.”

“I tell you he is a robot, Dr. Lanning.”

“I tell you it is as impossible a conception as I have ever heard, Mr. Quinn.” Again the combative silence.

“Nevertheless,” and Quinn stubbed out his cigarette with elaborate care, “you will have to investigate this impossibility with all the resources of the Corporation.”

“I’m sure that I could undertake no such thing, Mr. Quinn. You don’t seriously suggest that the Corporation take part in local politics.”

“You have no choice. Supposing I were to make my facts public. You know that the U. S. Robot & Mechanical Men Corporation is the only manufacturer of positronic robots in the Solar System, and if Byerley is a robot, he is a positronic robot. You are also aware that all positronic robots are leased, and not sold; that the Corporation remains the owner and manager of each robot, and is therefore responsible for the actions of all.”

“It is an easy matter, Mr. Quinn, to prove the Corporation has never manufactured a robot of a humanoid character.”

“It can be done? To discuss merely possibilities.”

“Yes. It can be done.”

“Secretly, I imagine, as well. Without entering it in your books.”

“Not the positronic brain, sir. Too many factors are involved in that, and there is the tightest possible government supervision.”

“Yes, but robots are worn out, break down, go out of order — and are dismantled.”

“And the positronic brains re-used or destroyed.”

“Really?” Francis Quinn allowed himself a trace of sarcasm. “And if one were, accidentally, of course, not destroyed — and there happened to be a humanoid structure waiting for a brain.”

“But what could our purpose be?” demanded Lanning in exasperation. “Where is our motivation? Credit us with a minimum of sense.”

“My dear sir, please. The Corporation would be only too glad to have the various Regions permit the use of humanoid positronic robots on inhabited worlds. The profits would be enormous. But the prejudice of the public against such a practice is too great. Suppose you get them used to such robots first — see, we have a skillful lawyer, a good mayor, and he is a robot. Won’t you buy our robot butlers?”
“Thoroughly fantastic. An almost humorous descent to the ridiculous.”

“I imagine so. Why not prove it? Or would you still rather try to prove it to the public?”

The light in the office was dimming, but it was not yet too dim to obscure the flush of frustration on Alfred Lanning’s face. Slowly, the roboticist’s finger touched a knob and the wall illuminators glowed to gentle life.

“Well, then,” he growled, “let us see.”

The face of Stephen Byerley is not an easy one to describe. He was forty by birth certificate and forty by appearance — but it was a healthy, well-nourished good-natured appearance of forty; one that automatically drew the teeth of the bromide about “looking one’s age.” This was particularly true when he laughed, and he was laughing now. It came loudly and continuously, died away for a bit, then began again—

And Alfred Lanning’s face contracted into a rigidly bitter monument of disapproval. He made a half gesture to the woman who sat beside him, but her thin, bloodless lips merely pursed themselves a trifle.

Byerley gasped himself a stage nearer normality. “Really, Dr. Lanning... really — I... I... a robot?”

Lanning bit his words off with a snap, “It is no statement of mine, sir. I would be quite satisfied to have you a member of humanity. Since our corporation never manufactured you, I am quite certain that you are — in a legalistic sense, at any rate. But since the contention that you are a robot has been advanced to us seriously—”

“Don’t mention his name, if it would knock a chip off your granite block of ethics, but let’s pretend it was Frank Quinn, for the sake of argument, and continue.”

Lanning drew in a sharp, cutting snort at the interruption, and paused ferociously before continuing with added frigidity, “—by a man of certain standing, with whose identity I am not interested in playing guessing games, I am bound to ask your cooperation in disproving it. The mere fact that such a contention could be advanced and publicized by the means at this man’s disposal would be a bad blow to the company I represent — even if the charge were never proven. You understand me?”

“Oh, yes, your position is clear to me. The charge itself is ridiculous. The spot you find yourself in is not. I beg your pardon, if my laughter offended you. It was the first I laughed at, not the second. How can I help you?”

“It could be very simple. You have only to sit down to a meal at a restaurant in the presence of witnesses, have your picture taken, and eat.” Lanning sat back in his chair, the worst of the interview over. The woman beside him watched Byerley with an apparently absorbed expression but contributed nothing of her own.

Stephen Byerley met her eyes for an instant, was caught by them, then turned back to the roboticist. For a while his fingers were thoughtful over the bronze paperweight that was the only ornament on his desk. Then he said quietly, “I don’t think I can oblige you.”

He raised his hand, “Now wait, Dr. Lanning. I appreciate the fact that this whole matter is distasteful to you, that you have been forced into it against your will, that you feel you are playing an undignified and even ridiculous part. Still, the matter is even more intimately concerned with myself, so be tolerant.

“First, what makes you think that Quinn — this man of certain standing, you know — wasn’t hoodwinking you, in order to get you to do exactly what you are doing?”

“Why it seems scarcely likely that a reputable person would endanger himself in so ridiculous a fashion, if he weren’t convinced he were on safe ground.”
There was little humor in Byerley’s eyes, “You don’t know Quinn. He could manage to make safe ground out of a ledge a mountain sheep could not handle. I suppose he showed the particulars of the investigation he claims to have made of me?”

“Enough to convince me that it would be too troublesome to have our corporation attempt to disprove them when you could do so more easily.”

“Then you believe him when he says I never eat. You are a scientist, Dr. Lanning. Think of the logic required. I have not been observed to eat, therefore, I never eat. Q.E.D. After all!”

“You are using prosecution tactics to confuse what is really a very simple situation.”

“On the contrary, I am trying to clarify what you and Quinn between you are making a very complicated one. You see, I don’t sleep much, that’s true, and I certainly don’t sleep in public. I have never cared to eat with others — an idiosyncrasy which is unusual and probably neurotic in character, but which harms no one. Look, Dr. Lanning, let me present you with a suppositious case. Supposing we had a politician who was interested in defeating a reform candidate at any cost and while investigating his private life came across oddities such as I have just mentioned. Suppose further that in order to smear the candidate effectively, he comes to your company as the ideal agent. Do you expect him to say to you, ‘So-and-so is a robot because he hardly ever eats with people, and I have never seen him fall asleep in the middle of a case; and once when I peeped into his window in the middle of the night, there he was, sitting up with a book; and I looked in his frigidaire and there was no food in it.’ “If he told you that, you would send for a straitjacket. But if he tells you, ‘He never sleeps; he never eats,’ then the shock of the statement blinds you to the fact that such statements are impossible to prove. You play into his hands by contributing to the to-do.”

“Regardless, sir,” began Lanning, with a threatening obstinacy, “of whether you consider this matter serious or not, it will require only the meal I mentioned to end it.”

Again Byerley turned to the woman, who still regarded him expressionlessly. “Pardon me. I’ve caught your name correctly, haven’t I? Dr. Susan Calvin?”

“Yes, Mr. Byerley.”

“You’re the U. S. Robot’s psychologist, aren’t you?”

“Robopsychologist, please.”

“Oh, are robots so different from men, mentally?”

“Worlds different.” She allowed herself a frosty smile, “Robots are essentially decent.”

Humor tugged at the corners of the lawyer’s mouth, “Well, that’s a hard blow. But what I wanted to say was this. Since you’re a psycho — a robopsychologist, and a woman, I’ll bet that you’ve done something that Dr. Lanning hasn’t thought of.”

“And what is that?”

“You’ve got something to eat in your purse.”

Something caught in the schooled indifference of Susan Calvin’s eyes. She said, “You surprise me, Mr. Byerley.”

And opening her purse, she produced an apple. Quietly, she handed it to him. Dr. Lanning, after an initial start, followed the slow movement from one hand to the other with sharply alert eyes.
Calmly, Stephen Byerley bit into it, and calmly he swallowed it, “You see, Dr. Lanning?”

Dr. Lanning smiled in a relief tangible enough to make even his eyebrows appear benevolent. A relief that survived for one fragile second.

Susan Calvin said, “I was curious to see if you would eat it, but, of course, in the present case, it proves nothing.”

Byerley grinned, “It doesn’t?”

“Of course not. It is obvious, Dr. Lanning, that if this man were a humanoid robot, he would be a perfect imitation. He is almost too human to be credible. After all, we have been seeing and observing human beings all our lives; it would be impossible to palm something merely nearly right off on us. It would have to be all right. Observe the texture of the skin, the quality of the irises, the bone formation of the hand. If he’s a robot, I wish U. S. Robots had made him, because he’s a good job. Do you suppose then, that anyone capable of paying attention to such niceties would neglect a few gadgets to take care of such things as eating, sleeping, elimination? For emergency use only, perhaps; as, for instance, to prevent such situations as are arising here. So a meal won’t really prove anything.”

“Now wait,” snarled Lanning, “I am — not quite the fool both of you make me out to be. I am not interested in the problem of Mr. Byerley’s humanity or nonhumanity. I am interested in getting the corporation out of a hole. A public meal will end the matter and keep it ended no matter what Quinn does. We can leave the finer details to lawyers and robopsychologists.”

“But, Dr. Lanning,” said Byerley, “you forget the politics of the situation. I am as anxious to be elected, as Quinn is to stop me. By the way, did you notice that you used his name? It’s a cheap shyster trick of mine; I knew you would, before you were through.”

Lanning flushed, “What has the election to do with it?”

“Publicity works both ways, sir. If Quinn wants to call me a robot, and has the nerve to do so, I have the nerve to play the game his way.”

“You mean you—” Lanning was quite frankly appalled.

“Exactly. I mean that I’m going to let him go ahead, choose his rope, test its strength, cut off the right length, tie the noose, insert his head and grin. I can do what little else is required.”

“You are mighty confident.”

Susan Calvin rose to her feet, “Come, Alfred, we won’t change his mind for him.”

“You see.” Byerley smiled gently. “You’re a human psychologist, too.”

But perhaps not all the confidence that Dr. Lanning had remarked upon was present that evening when Byerley’s car parked on the automatic treads leading to the sunken garage, and Byerley himself crossed the path to the front door of his house.

The figure in the wheel chair looked up as he entered and smiled. Byerley’s face lit with affection. He crossed over to it. The cripple’s voice was a hoarse, grating whisper that came out of a mouth forever twisted to one side, leering out of a face that was half scar tissue, “You’re late, Steve.”

“I know, John, I know. But I’ve been up against a peculiar and interesting trouble today.”
“So?” Neither the torn face nor the destroyed voice could carry expression but there was anxiety in the clear eyes. “Nothing you can’t handle?”

“I’m not exactly certain. I may need your help. You’re the brilliant one in the family. Do you want me to take you out into the garden? It’s a beautiful evening.”

Two strong arms lifted John from the wheel chair. Gently, almost caressingly, Byerley’s arms went around the shoulders and under the swathed legs of the cripple. Carefully, and slowly, he walked through the rooms, down the gentle ramp that had been built with a wheel chair in mind, and out the back door into the walled and wired garden behind the house.

“Why don’t you let me use the wheel chair, Steve? This is Silly.”

“Because I’d rather carry you. Do you object? You know that you’re as glad to get out of that motorized buggy for a while, as I am to see you out. How do you feel today?” He deposited John with infinite care upon the cool grass.

“How should I feel? But tell me about your troubles.”

“Quinn’s campaign will be based on the fact that he claims I’m a robot.”

John’s eyes opened wide, “How do you know? It’s impossible. I won’t believe it.”

“Oh, come, I tell you it’s so. He had one of the big-shot scientists of U. S. Robot & Mechanical Men Corporation over at the office to argue with me.”

Slowly John’s hands tore at the grass, “I see. I see.”

Byerley said, "But we can let him choose his ground. I have an idea. Listen to me and tell me if we can do it.”

The scene as it appeared in Alfred Lanning’s office that night was a tableau of stares. Francis Quinn stared meditatively at Alfred Lanning. Lanning’s stare was savagely set upon Susan Calvin, who stared impassively in her turn at Quinn.

Francis Quinn broke it with a heavy attempt at lightness, “Bluff. He’s making it up as he goes along.”

“Are you going to gamble on that, Mr. Quinn?” asked Dr. Calvin, indifferently.

“Well, it’s your gamble, really.”

“Look here,” Lanning covered definite pessimism with bluster, “we’ve done what you asked. We witnessed the man eat. It’s ridiculous to presume him a robot.”

“Do you think so?” Quinn shot toward Calvin. “Lanning said you were the expert.”

Lanning was almost threatening, “Now, Susan—”

Quinn interrupted smoothly, “Why not let her talk, man? She’s been sitting there imitating a gatepost for half an hour.”

Lanning felt definitely harassed. From what he experienced then to incipient paranoia was but a step. He said, “Very well. Have your say, Susan. We won’t interrupt you.”

Susan Calvin glanced at him humorlessly, then fixed cold eyes on Mr. Quinn. “There are only two ways of definitely proving Byerley to be a robot, sir. So far you are presenting circumstantial evidence, with which you can accuse, but not prove — and I think Mr. Byerley is sufficiently clever to counter that sort of material. You probably think so yourself, or
you wouldn’t have come here.” “The two methods of proof are the physical and the psychological. Physically, you can dissect him or use an X-ray. How to do that would be your problem. Psychologically, his behavior can be studied, for if he is a positronic robot, he must conform to the three Rules of Robotics. A positronic brain cannot be constructed without them. You know the Rules, Mr. Quinn?”

She spoke them carefully, clearly, quoting word for word the famous bold print on page one of the “Handbook of Robotics.”

“I’ve heard of them,” said Quinn, carelessly.

“Then the matter is easy to follow,” responded the psychologist, dryly. “If Mr. Byerley breaks any of those three rules, he is not a robot. Unfortunately, this procedure works in only one direction. If he lives up to the rules, it proves nothing one way or the other.”

Quinn raised polite eyebrows, “Why not, doctor?”

“Because, if you stop to think of it, the three Rules of Robotics are the essential guiding principles of a good many of the world’s ethical systems. Of course, every human being is supposed to have the instinct of self-preservation. That’s Rule Three to a robot. Also every ‘good’ human being, with a social conscience and a sense of responsibility, is supposed to defer to proper authority; to listen to his doctor, his boss, his government, his psychiatrist, his fellow man; to obey laws, to follow rules, to conform to custom — even when they interfere with his comfort or his safety. That’s Rule Two to a robot. Also, every ‘good’ human being is supposed to love others as himself, protect his fellow man, risk his life to save another. That’s Rule One to a robot. To put it simply — if Byerley follows all the Rules of Robotics, he may be a robot, and may simply be a very good man.”

“But,” said Quinn, “you’re telling me that you can never prove him a robot.”

“I may be able to prove him not a robot”

“That’s not the proof I want.”

“You’ll have such proof as exists. You are the only one responsible for your own wants.”

Here Lanning’s mind leaped suddenly to the sting of an idea, “Has it occurred to anyone,” he ground out, “that district attorney is a rather strange occupation for a robot? The prosecution of human beings — sentencing them to death — bringing about their infinite harm—”

Quinn grew suddenly keen, “No, you can’t get out of it that way. Being district attorney doesn’t make him human. Don’t you know his record? Don’t you know that he boasts that he has never prosecuted an innocent man; that there are scores of people left untried because the evidence against them didn’t satisfy him, even though he could probably have argued a jury into atomizing them? That happens to be so.”

Lanning’s thin cheeks quivered, “No, Quinn, no. There is nothing in the Rules of Robotics that makes any allowance for human guilt. A robot may not judge whether a human being deserves death. It is not for him to decide. He may not harm a human-variety skunk, or variety angel.”

Susan Calvin sounded tired. “Alfred,” she said, “don’t talk foolishly. What if a robot came upon a madman about to set fire to a house with people in it? He would stop the madman, wouldn’t he?”

“Of course.”

“And if the only way he could stop him was to kill him—” There was a faint sound in Lanning’s throat. Nothing more.
“The answer to that, Alfred, is that he would do his best not to kill him. If the madman died, the robot would require psychotherapy because he might easily go mad at the conflict presented him — of having broken Rule One to adhere to Rule One in a higher sense. But a man would be dead and a robot would have killed him.”

“Well, is Byerley mad?” demanded Lanning; with all the sarcasm he could muster.

“No, but he has killed no man himself. He has exposed facts which might represent a particular human being to be dangerous to the large mass of other human beings we call society. He protects the greater number and thus adheres to Rule One at maximum potential. That is as far as he goes. It is the judge who then condemns the criminal to death or imprisonment, after the jury decides on his guilt or innocence. It is the jailer who imprisons him, the executioner who kills him. And Mr. Byerley has done nothing but determine truth and aid society.

“As a matter of fact, Mr. Quinn, I have looked into Mr. Byerley’s career since you first brought this matter to our attention. I find that he has never demanded the death sentence in his closing speeches to the jury. I also find that he has spoken on behalf of the abolition of capital punishment and contributed generously to research institutions engaged in criminal neurophysiology. He apparently believes in the cure, rather than the punishment of crime. I find that significant.”

“You do?” Quinn smiled. “Significant of a certain odor of roboticity, perhaps?”

“Perhaps. Why deny it? Actions such as his could come only from a robot, or from a very honorable and decent human being. But you see, you just can’t differentiate between a robot and the very best of humans.”

Quinn sat back in his chair. His voice quivered with impatience. “Dr. Lanning, it’s perfectly possible to create a humanoid robot that would perfectly duplicate a human in appearance, isn’t it?”

Lanning harrumphed and considered, “It’s been done experimentally by U. S. Robots,” he said reluctantly, “without the addition of a positronic brain, of course. By using human ova and hormone control, one can grow human flesh and skin over a skeleton of porous silicone plastics that would defy external examination. The eyes, the hair, the skin would be really human, not humanoid. And if you put a positronic brain, and such other gadgets as you might desire inside, you have a humanoid robot.”

Quinn said shortly, “How long would it take to make one?”

Lanning considered, “If you had all your equipment — the brain, the skeleton, the ovum, the proper hormones and radiations — say, two months.”

The politician straightened out of his chair. “Then we shall see what the insides of Mr. Byerley look like. It will mean publicity for U.S. Robots — but I gave you your chance.”

Lanning turned impatiently to Susan Calvin, when they were alone. “Why do you insist—”? And with real feeling, she responded sharply and instantly, “Which do you want — the truth or my resignation? I won’t lie for you. U.S. Robots can take care of itself. Don’t turn coward.”

“What,” said Lanning, “if he opens up Byerley, and wheels and gears fall out what then?”

“He won’t open Byerley,” said Calvin, disdainfully. “Byerley is as clever as Quinn, at the very least”

The news broke upon the city a week before Byerley was to have been nominated. But “broke” is the wrong word. It staggered upon the city, shambled, crawled. Laughter began, and wit was free. And as the far off hand of Quinn tightened its pressure in easy stages, the laughter grew forced, an element of hollow uncertainty entered, and people broke off to wonder.
The convention itself had the air of a restive stallion. There had been no contest planned. Only Byerley could possibly have been nominated a week earlier. There was no substitute even now. They had to nominate him, but there was complete confusion about it. It would not have been so bad if the average individual were not torn between the enormity of the charge, if true, and its sensational folly, if false.

The day after Byerley was nominated perfunctorily, hollowly — a newspaper finally published the gist of a long interview with Dr. Susan Calvin, “world famous expert on robopsychology and positronics.”

What broke loose is popularly and succinctly described as hell. It was what the Fundamentalists were waiting for. They were not a political party; they made pretense to no formal religion. Essentially they were those who had not adapted themselves to what had once been called the Atomic Age, in the days when atoms were a novelty. Actually, they were the Simple-Lifers, hungering after a life, which to those who lived it had probably appeared not so simple, and who had been, therefore, Simple-Lifers themselves. The Fundamentalists required no new reason to detest robots and robot manufacturers; but a new reason such as the Quinn accusation and the Calvin analysis was sufficient to make such detestation audible.

The huge plants of the U. S. Robot & Mechanical Men Corporation was a hive that spawned armed guards. It prepared for war. Within the city the house of Stephen Byerley bristled with police.

The political campaign, of course, lost all other issues, and resembled a campaign only in that it was something filling the hiatus between nomination and election.

Stephen Byerley did not allow the fussy little man to distract him. He remained comfortably unperturbed by the uniforms in the background. Outside the house, past the line of grim guards, reporters and photographers waited according to the tradition of the caste. One enterprising ‘visor station even had a scanner focused on the blank entrance to the prosecutor’s unpretentious home, while a synthetically excited announcer filled in with inflated commentary.

The fussy little man advanced. He held forward a rich, complicated sheet. “This, Mr. Byerley, is a court order authorizing me to search these premises for the presence of illegal... uh... mechanical men or robots of any description.”

Byerley half rose, and took the paper. He glanced at it indifferently, and smiled as he handed it back. “All in order. Go ahead. Do your job. Mrs. Hoppen” — to his housekeeper, who appeared reluctantly from the next room — “please go with them, and help out if you can.”

The little man, whose name was Harroway, hesitated, produced an unmistakable blush, failed completely to catch Byerley’s eyes, and muttered, “Come on,” to the two policemen. He was back in ten minutes.

“Through?” questioned Byerley, in just the tone of a person who is not particularly interested in the question, or its answer.

Harroway cleared his throat, made a bad start in falsetto, and began again, angrily, “Look here, Mr. Byerley, our special instructions were to search the house very thoroughly.”

“And haven’t you?”

“We were told exactly what to look for.”

“Yes?”

“In short, Mr. Byerley, and not to put too fine a point on it, we were told to search you.”

“Me?” said the prosecutor with a broadening smile. “And how do you intend to do that?”
“We have a Penet-radiation unit—”

“Then I’m to have my X-ray photograph taken, hey? You have the authority?”

“You saw my warrant.”

“May I see it again?” Harroway, his forehead shining with considerably more than mere enthusiasm, passed it over a second time.

Byerley said evenly, “I read here as the description of what you are to search; I quote: ‘the dwelling place belonging to Stephen Allen Byerley, located at 355 Willow Grove, Evanstron, together, with any garage, storehouse or other structures or buildings thereto appertaining, together with all grounds thereto appertaining’... um... and so on. Quite in order. But, my good man, it doesn’t say anything about searching my interior. I am not part of the premises. You may search my clothes if you think I’ve got a robot hidden in my pocket.”

Harroway had no doubt on the point of to whom he owed his job. He did not propose to be backward, given a chance to earn a much better — i.e., more highly paid — job. He said, in a faint echo of bluster, “Look here. I’m allowed to search the furniture in your house, and anything else I find in it. You are in it, aren’t you?”

“A remarkable observation. I am in it. But I’m not a piece of furniture. As a citizen of adult responsibility — I have the psychiatric certificate proving that — I have certain rights under the Regional Articles. Searching me would come under the heading of violating my Right of Privacy. That paper isn’t sufficient.”

“Sure, but if you’re a robot, you don’t have Right of Privacy.”

“True enough, but that paper still isn’t sufficient. It recognizes me implicitly as a human being.”

“Where?” Harroway snatched at it.

“Where it says ‘the dwelling place belonging to’ and so on. A robot cannot own property. And you may tell your employer, Mr. Harroway, that if he tries to issue a similar paper which does not implicitly recognize me as a human being, he will be immediately faced with a restraining injunction and a civil suit which will make it necessary for him to prove me a robot by means of information now in his possession, or else to pay a whopping penalty for an attempt to deprive me unduly of my Rights under the Regional Articles. You’ll tell him that, won’t you?”

Harroway marched to the door. He turned. “You’re a slick lawyer—” His hand was in his pocket.

For a short moment, he stood there. Then he left, smiled in the direction of the ‘visor scanner, still playing away — waved to the reporters, and shouted, “We’ll have something for you tomorrow, boys. No kidding.”

In his ground car, he settled back, removed the tiny mechanism from his pocket and carefully inspected it. It was the first time he had ever taken a photograph by X-ray reflection. He hoped he had done it correctly.

Quinn and Byerley had never met face-to-face alone. But visorphone was pretty close to it. In fact, accepted literally, perhaps the phrase was accurate, even if to each, the other were merely the light and dark pattern of a bank of photocells.

It was Quinn who had initiated the call. It was Quinn, who spoke first, and without particular ceremony, “Thought you would like to know, Byerley, that I intend to make public the fact that you’re wearing a protective shield against Penet-radiation.”
“That so? In that case, you’ve probably already made it public. I have a notion our enterprising press representatives have been tapping my various communication lines for quite a while. I know they have my office lines full of holes; which is why I’ve dug in at my home these last weeks.”

Byerley was friendly, almost chatty. Quinn’s lips tightened slightly. “You realize, Byerley, that it would be pretty obvious to everyone that you don’t dare face X-ray analysis.”

“Also that you, or your men, attempted illegal invasion of my Rights of Privacy. It’s rather symbolic of our two campaigns isn’t it? You have little concern with the rights of the individual citizen. I have great concern. I will not submit to X-ray analysis, because I wish to maintain my Rights on principle. Just as I’ll maintain the rights of others when elected.”

“That will, no doubt make a very interesting speech, but no one will believe you.” A little too high sounding to be true.

“Another thing,” a sudden, crisp change, “the personnel in your home was not complete the other night.”

“In what way?”

“According to the report,” he shuffled papers before him that were just within the range of vision of the visiplate, “there was one person missing — a cripple.”

“As you say,” said Byerley, tonelessly, “a cripple. My old teacher, who lives with me and who is now in the country — and has been for two months. A ‘much-needed rest’ is the usual expression applied in the case. He has your permission?”

“Your teacher? A scientist of sorts?”

“A lawyer once — before he was a cripple. He has a government license as a research biophysicist, with a laboratory of his own, and a complete description of the work he’s doing filed with the proper authorities, to whom I can refer you.”

“I see. And what does this... teacher... know about robot manufacture?”

“I couldn’t judge the extent of his knowledge in a field with which I am unacquainted.”

“He wouldn’t have access to positronic brains?”

“Ask your friends at U. S. Robots. They’d be the ones to know.”

“I’ll put it shortly, Byerley. Your crippled teacher is the real Stephen Byerley. You are his robot creation. We can prove it. It was he who was in the automobile accident, not you. There will be ways of checking the records.”

“Really? Do so, then. My best wishes.”

“And we can search your so-called teacher’s ‘country place,’ and see what we can find there.”

“Well, not quite, Quinn.” Byerley smiled broadly. “Unfortunately for you, my so-called teacher is a sick man. His country place is his place of rest. His Right of Privacy as a citizen of adult responsibility is naturally even stronger, under the circumstances. You won’t be able to obtain a warrant to enter his grounds without showing just cause. However, I’d be the last to prevent you from trying.”

There was a pause of moderate length, and then Quinn leaned forward, so that his imaged-face expanded and the fine lines on his forehead were visible, “Byerley, why do you carry on? You can’t be elected.”

“Can’t I?”
“Do you think you can? Do you suppose that your failure to make any attempt to disprove the robot charge — when you could easily, by breaking one of the Three Laws — does anything but convince the people that you are a robot?”

“All I see so far is that from being a rather vaguely known, but still largely obscure metropolitan lawyer, I have now become a world figure. You’re a good publicist.”

“But you are a robot.”

“So it’s been said, but not proven.”

“It’s been proven sufficiently for the electorate.”

“Then relax you’ve won.”

“Good-by,” said Quinn, with his first touch of viciousness, and the visorphone slammed off.

“Good-by,” said Byerley imperturbably, to the blank plate.

Byerley brought his “teacher” back the week before election. The air car dropped quickly in an obscure part of the city. “You’ll stay here till after election,” Byerley told him. “It would be better to have you out of the way if things take a bad turn.”

Lenton’s forehead was a furrowed study in suspense. “You can’t!” It was his favorite phrase. It had become his only phrase. “I tell you, Steve, you can’t!” He threw himself in front of the prosecutor, who was spending his time leafing through the typed pages of his speech. “Put that down, Steve. Look, that mob has been organized by the Fundies. You won’t get a hearing. You’ll be stoned more likely. Why do you have to make a speech before an audience? What’s wrong with a recording, a visual recording?”

“You want me to win the election, don’t you?” asked Byerley, mildly.

“Win the election! You’re not going to win, Steve. I’m trying to save your life.”

“Oh, I’m not in danger.”

“He’s not in danger. He’s not in danger.” Lenton made a queer, rasping sound in his throat. “You mean you’re getting out on that balcony in front of fifty thousand crazy crackpots and try to talk sense to them — on a balcony like a medieval dictator?”

Byerley consulted his watch. “In about five minutes — as soon as the televisor lines are free.” Lenton’s answering remark was not quite transliterable.

The crowd filled a roped off area of the city. Trees and houses seemed to grow out of a mass human foundation. And by ultra-wave, the rest of the world watched. It was a purely local election, but it had a world audience just the same. Byerley thought of that and smiled. But there was nothing to smile at in the crowd itself. There were banners and streamers, ringing every possible change on his supposed roboticity. The hostile attitude rose thickly and tangibly into the atmosphere.

From the start the speech was not successful. It competed against the inchoate mob howl and the rhythmic cries of the Fundie diques that formed mob-islands within the mob. Byerley spoke on, slowly, unemotionally—

Inside, Lenton clutched his hair and groaned — and waited for the blood.
There was a writhing in the front ranks. An angular citizen with popping eyes, and clothes too short for the lank length of his limbs, was pulling to the fore. A policeman dived after him, making slow, struggling passage. Byerley waved the latter off, angrily. The thin man was directly under the balcony. His words tore unheard against the roar. Byerley leaned forward. “What do you say? If you have a legitimate question, I’ll answer it.” He turned to a flanking guard. “Bring that man up here.”

There was a tensing in the crowd. Cries of “Quiet” started in various parts of the mob, and rose to a bedlam, then toned down raggedly. The thin man, red-faced and panting, faced Byerley. Byerley said, “Have you a question?”

The thin man stared, and said in a cracked voice, “Hit me!”

With sudden energy, he thrust out his chin at an angle. “Hit me! You say you’re not a robot. Prove it. You can’t hit a human, you monster.”

There was a queer, flat, dead silence. Byerley’s voice punctured it. “I have no reason to hit you.”

The thin man was laughing wildly. “You can’t hit me. You won’t hit me. You’re not a human. You’re a monster, a make-believe man.”

And Stephen Byerley, tight-lipped, in the face of thousands who watched in person and the millions, who watched by screen, drew back his fist and caught the man crackingly upon the chin. The challenger went over backwards in sudden collapse, with nothing on his face but blank, blank surprise.

Byerley said, “I’m sorry. Take him in and see that he’s comfortable. I want to speak to him when I’m through.”

And when Dr. Calvin, from her reserved space, turned her automobile and drove off, only one reporter had recovered sufficiently from the shock to race after her, and shout an unheard question. Susan Calvin called over her shoulder, “He’s human.” That was enough. The reporter raced away in his own direction.

The rest of the speech might be described as “Spoken but not heard.”

Dr. Calvin and Stephen Byerley met once again — a week before he took the oath of office as mayor. It was late — past midnight. Dr. Calvin said, “You don’t look tired.”

The mayor-elect smiled. “I may stay up for a while. Don’t tell Quinn.”

“I shan’t. But that was an interesting story of Quinn’s, since you mention him. It’s a shame to have spoiled it. I suppose you knew his theory?”

“Parts of it.”

“It was highly dramatic. Stephen Byerley was a young lawyer, a powerful speaker, a great idealist — and with a certain flare for biophysics. Are you interested in robotics, Mr. Byerley?”

“Only in the legal aspects.”

“This Stephen Byerley was. But there was an accident. Byerley’s wife died, he himself, worse. His legs were gone; his face was gone; his voice was gone. Part of his mind was bent. He would not submit to plastic surgery. He retired from the world, legal career gone — only his intelligence, and his hands left. Somehow he could obtain positronic brains, even a complex one, one which had the greatest capacity of forming judgments in ethical problems — which is the highest robotic function so far developed.
“He grew a body about it. Trained it to be everything he would have been and was no longer. He sent it out into the world as Stephen Byerley, remaining behind himself as the old, crippled teacher that no one ever saw—”

“Unfortunately,” said the mayor-elect, “I ruined all that by hitting a man. The papers say it was your official verdict on the occasion that I was human.”

“How did that happen? Do you mind telling me? It couldn’t have been accidental.”

“It wasn’t entirely. Quinn did most of the work. My men started quietly spreading the fact that I had never hit a man; that I was unable to hit a man; that to fail to do so under provocation would be sure proof that I was a robot. So I arranged for a silly speech in public, with all sorts of publicity overtones, and almost inevitably, some fool fell for it. In its essence, it was what I call a shyster trick. One in which the artificial atmosphere which has been created does all the work. Of course, the emotional effects made my election certain, as intended.”

The robopsychologist nodded. “I see you intrude on my field — as every politician must, I suppose.

But I’m very sorry it turned out this way. I like robots. I like them considerably better than I do human beings. If a robot can be created capable of being a civil executive, I think he’d make the best one possible. By the Laws of Robotics, he’d be incapable of harming humans, incapable of tyranny, of corruption, of stupidity, of prejudice. And after he had served a decent term, he would leave, even though he were immortal, because it would be impossible for him to hurt humans by letting them know that a robot had ruled them. It would be most ideal.”

“Except that a robot might fail due to the inherent inadequacies of his brain. The positronic brain has never equaled the complexities of the human brain.”

“He would have advisers. Not even a human brain is capable of governing without assistance.”

Byerley considered Susan Calvin with grave interest. “Why do you smile, Dr. Calvin?”

“I smile because Mr. Quinn didn’t think of everything.”

“You mean there could be more to that story of his.”

“Only a little. For the three months before election, this Stephen Byerley that Mr. Quinn spoke about, this broken man, was in the country for some mysterious reason. He returned in time for that famous speech of yours. And after all, what the old cripple did once, he could do a second time, particularly where the second job is very simple in comparison to the first.”

“I don’t quite understand.”

Dr. Calvin rose and smoothed her dress. She was obviously ready to leave. “I mean there is one time when a robot may strike a human being without breaking the First Law. Just one time.”

“And when is that?”

Dr. Calvin was at the door. She said quietly, “When the human to be struck is merely another robot.”

She smiled broadly, her thin face glowing. “Good-by Mr. Byerley. I hope to vote for you five years from now — for Coordinator.”

Stephen Byerley chuckled. “I must reply that that is a somewhat farfetched idea.”

The door closed behind her.
Impostor
by Philip K. Dick (1953)

"One of these days I'm going to take time off," Spence Olham said at first-meal. He looked around at his wife. "I think I've earned a rest. Ten years is a long time."

"And the Project?"

"The war will be won without me. This ball of clay of ours isn't really in much danger." Olham sat down at the table and lit a cigarette. "The newsmachines alter dispatches to make it appear the Outspacers are right on top of us. You know what I'd like to do on my vacation? I'd like to take a camping trip to those mountains outside of town, where we went that time. Remember? I got poison oak and you almost stepped on a gopher snake."

"Sutton Wood?" Mary began to clear away the food dishes. "The Wood was burned a few weeks ago. I thought you knew. Some kind of flash fire."

Olham sagged. "Didn't they even try to find the cause?" His lips twisted. "No one cares anymore. All they can think of is the war." He clamped his jaws together, the whole picture coming up in his mind, the Outspacers, the war, the needle-ships.

"How can we think about anything else?"

Olham nodded. She was right, of course. The dark little ships out of Alpha Centauri had bypassed the Earth cruisers easily, leaving them like helpless turtles. It had been one-way fights, all the way back to Terra.

All the way, until the protec-bubble was demonstrated by Westinghouse Labs. Thrown around the major Earth cities and finally the planet itself, the bubble was the first real defense, the first legitimate answer to the Outspacers -- as the newsmachines labeled them.

But to win the war, that was another thing. Every lab, every project was working night and day, endlessly, to find something more: a weapon for positive combat. His own project, for example. All day long, year after year.

Olham stood up, putting out his cigarette. "Like the Sword of Damocles. Always hanging over us. I'm getting tired. All I want to do is take a long rest. But I guess everybody feels that way."

He got his jacket from the closet and went out on the front porch. The shoot would be along any moment, the fast little bug that would carry him to the Project.

"I hope Nelson isn't late." He looked at his watch. "It's almost seven."

"Here the bug comes," Mary said, gazing between the rows of houses. The sun glittered behind the roofs, reflecting against the heavy lead plates. The settlement was quiet; only a few people were stirring. "I'll see you later. Try not to work beyond your shift, Spence."

Olham opened the car door and slid inside, leaning back against the seat with a sigh. There was an older man with Nelson.

"Well?" Olham said, as the bug shot ahead. "Heard any interesting news?"

The usual," Nelson said. "A few Outspace ships hit, another asteroid abandoned for strategic reasons."

"It'll be good when we get the Project into final stage. Maybe it's just the propaganda from the

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newsmachines, but in the last month I've gotten weary of all this. Everything seems so grim and serious, no color to life."

"Do you think the war is in vain?" the older man said suddenly. "You are an integral part of it, yourself."

"This is Major Peters," Nelson said. Olham and Peters shook hands. Olham studied the older man.

"What brings you along so early?" he said. "I don't remember seeing you at the Project before."

"No, I'm not with the Project," Peters said, "but I know something about what you're doing. My own work is altogether different."

A look passed between him and Nelson. Olham noticed it and he frowned. The bug was gaining speed, flashing across the barren, lifeless ground toward the distant rim of the Project building.

"What is your business?" Olham said. "Or aren't you permitted to talk about it?"

"I'm with the government," Peters said. "With FSA, the security organ."

"Oh?" Olham raised an eyebrow. "Is there any enemy infiltration in this region?"

"As a matter of fact I'm here to see you, Mr Olham."

Olham was puzzled. He considered Peters' words, but he could make nothing of them.

"To see me? Why?"

"I'm here to arrest you as an Outspace spy. That's why I'm up so early this morning. Grab him Nelson --"

The gun drove into Olham's ribs. Nelson's hands were shaking, trembling with released emotion. His face pale. He took a deep breath and let it out again.

"Shall we kill him now?" he whispered to Peters. "I think we should kill him now. We can't wait."

Olham stared into his friend's face. He opened his mouth to speak, but no words came. Both men were staring at him steadily, rigid and grim with fright. Olham felt dizzy. His head ached and spun.

"I don't understand," he murmured.

At that moment the shoot car left the ground and rushed up, heading into space. Below them the Project fell away, smaller and smaller, disappearing. Olham shut his mouth.

"We can wait a little," Peters said. "I want to ask him some questions first."

Olham gazed dully ahead as the bug rushed through space.

"The arrest was made all right," Peters said into the vidscreen. On the screen the features of the security chief showed. "It should be a load off everyone's mind."

"Any complications?"

"None. He entered the bug without suspicion. He didn't seem to think my presence was too unusual."

"Where are you now?"

"On our way out, just inside the protec-bubble. We're moving at a maximum speed. You can assume that the critical period is past. I'm glad the takeoff jets in this craft were in good working order. If there had been any failure at that point --"
"Let me see him," the security chief said. He gazed directly at Olham where he sat, his hands in his lap, staring ahead.

"So that's the man." He looked at Olham for a time. Olham said nothing. At last the chief nodded to Peters. "All right. That's enough." A faint trace of disgust wrinkled his features. "I've seen all I want. You've done something that will be remembered for a long time. They're preparing some sort of citation for both of you."

"That's not necessary," Peters said.

"How much danger is there now? Is there still much chance that --"

"There is some chance, but not too much. According to my understanding it requires a verbal key phrase. In any case we'll have to take the risk."

"I'll have the Moon base notified you're coming."

"No." Peters shook his head. "I'll land the ship outside, beyond the base. I don't want it in jeopardy."

"Just as you like." The chief's eyes flickered as he glanced again at Olham. Then his image faded. The screen blanked.

Olham shifted his gaze to the window. The ship was already through the protec-bubble, rushing with greater and greater speed all the time. Peters was in a hurry; below him, rumbling under the floor, the jets were wide-open. They were afraid, hurrying frantically, because of him. Next to him on the seat, Nelson shifted uneasily. "I think we should do it now," he said. "I'd give anything if we could get it over with."

"Take it easy," Peters said. "I want you to guide the ship for a while so I can talk to him." He slid over beside Olham, looking into his face. Presently he reached out and touched him gingerly, on the arm and then on the cheek.

Olham said nothing. If I could let Mary know, he thought again. If I could find some way of letting her know. He looked around the ship. How? The vidscreen? Nelson was sitting by the board, holding the gun. There was nothing he could do. He was caught, trapped.

But why?

"Listen," Peters said, "I want to ask you some questions. You know where we're going. We're moving Moonward. In an hour we'll land on the far side, on the desolate side. After we land you'll be turned over immediately to a team of men waiting there. Your body will be destroyed at once. Do you understand that?" He looked at his watch. "Within two hours your parts will be strewn over the landscape. There won't be anything left of you."

Olham struggled out of his lethargy. "Can't you tell me --"

"Certainly, I'll tell you." Peters nodded. "Two days ago we received a report that an Outspace ship had penetrated the protec-bubble. The ship let off a spy in the form of a humanoid robot. The robot was to destroy a particular human being and take his place."

Peters looked calmly at Olham.

"Inside the robot was a U-Bomb. Our agent did not know how the bomb was to be detonated, but he conjectured that it might be by a particular spoken phrase, a certain group of words. The robot would live the life of the person he killed, entering into his usual activities, his job, his social life. He had been constructed to resemble that person. No one would know the difference."

Olham's face went sickly chalk.
"The person whom the robot was to impersonate was Spence Olham, a high-ranking official at one of the research Projects. Because this particular Project was approaching crucial stage, the presence of an animate bomb, moving toward the center of the Project --"

Olham stared down at his hands. "But I'm Olham."

"Once the robot had located and killed Olham it was a simple matter to take over his life. The robot was released from the ship eight days ago. The substitution was probably accomplished over the last weekend, when Olham went for a short walk in the hills."

"But I'm Olham." He turned to Nelson, sitting at the controls. "Don't you recognize me? You've known me for twenty years. Don't you remember how we went to college together?" He stood up. "You and I were at the University. We had the same room." He went toward Nelson.

"Stay away from me!" Nelson snarled.

"Listen. Remember our second year? Remember that girl? What was her name --" He rubbed his forehead. "The one with the dark hair. The one we met over at Ted's place."

"Stop!" Nelson waved the gun frantically. "I don't want to hear any more. You killed him! You. . . machine."

Olham looked at Nelson. "You're wrong. I don't know what happened, but the robot never reached me. Something must have gone wrong. Maybe the ship crashed." He turned to Peters. "I'm Olham. I know it. No transfer was made. I'm the same as I've always been."

He touched himself, running his hands over his body. "There must be some way to prove it. Take me back to Earth. An X-ray examination, a neurological study, anything like that will show you. Or maybe we can find the crashed ship."

Neither Peters nor Nelson spoke.

"I am Olham," he said again. "I know I am. But I can't prove it."

"The robot," Peters said, "would be unaware that he was not the real Spence Olham. He would become Olham in mind as well as body. He was given an artificial memory system, false recall. He would look like him, have his memories, his thoughts and interests, perform his job."

"But there would be one difference. Inside the robot is a U-Bomb, ready to explode at the trigger phrase." Peters moved a little away. That's the one difference. That's why we're taking you to the Moon. They'll disassemble you and remove the bomb. Maybe it will explode, but it won't matter, not there."

Olham sat down slowly.

"We'll be there soon," Nelson said.

He lay back, thinking frantically, as the ship dropped slowly down. Under them was the pitted surface of the Moon, the endless expanse of ruin. What could he do? What would save him?

"Get ready," Peters said.

In a few minutes he would be dead. Down below he could see a tiny dot, a building of some kind. There were men in the building, the demolition team, waiting to tear him to bits. They would rip him open, pull off his arms and legs, break him apart. When they found no bomb they would be surprised; they would know, but it would be too late.

Olham looked around the small cabin. Nelson was still holding the gun. There was no chance there. If he could get to a doctor, have an examination made -- that was the only way. Mary could help him. He thought frantically, his mind racing. Only a few minutes, just a little time left. If he could contact her, get word to her some way.

"Easy," Peters said. The ship came down slowly, bumping on the rough ground. There was silence.
"Listen," Olham said thickly. "I can prove I'm Spence Olham. Get a doctor. Bring him here --"


"We'll be gone before they start work," Peters said. "We'll be out of here in a moment."

He put on his pressure suit. When he had finished he took the gun from Nelson. "I'll watch him for a moment."

Nelson put on his pressure suit, hurrying awkwardly. "How about him?" He indicated Olham. "Will he need one?"

"No." Peters shook his head. "Robots probably don't require oxygen."

The group of men were almost to the ship. They halted, waiting. Peters signaled to them. "Come on!" He waved his hand and the men approached warily; stiff, grotesque figures in their inflated suits.

"If you open the door," Olham said, "it means my death. It will be murder."

"Open the door," Nelson said. He reached for the handle.

Olham watched him. He saw the man's hand tighten around the metal rod. In a moment the door would swing back, the air in the ship would rush out. He would die, and presently they would realize their mistake. Perhaps at some other time, when there was no war, men might not act this way, hurrying an individual to his death because they were afraid. Everyone was frightened, everyone was willing to sacrifice the individual because of the group fear.

He was being killed because they could not wait to be sure of his guilt. There was not enough time.

He looked at Nelson. Nelson had been his friend for years. They had gone to school together. He had been best man at his wedding. Now Nelson was going to kill him. But Nelson was not wicked; it was not his fault. It was the times. Perhaps it had been the same way during the plagues. When men had shown a spot they probably had been killed, too, without a moment's hesitation, without proof, on suspicion alone. In times of danger there was no other way.

He did not blame them. But he had to live. His life was too precious to be sacrificed.

Olham thought quickly. What could he do? Was there anything? He looked around.

"Here goes," Nelson said.

"You're right," Olham said. The sound of his own voice surprised him. It was the strength of desperation. "I have no need of air. Open the door."

They paused, looking at him in curious alarm.

"Go ahead. Open it. It makes no difference." Olham's hand disappeared inside his jacket.

"I wonder how far you two can run?"

"Run?"

"You have fifteen seconds to live." Inside his jacket his fingers twisted, his arm suddenly rigid. He relaxed, smiling a little. "You were wrong about the trigger phrase. In that respect you were mistaken. Fourteen seconds, now."

Two shocked faces stared at him from the pressure suits. Then they were struggling, running, tearing the door open. The air shrieked out, spilling into the void. Peters and Nelson bolted out of the ship. Olham came after them. He grasped the door and dragged it shut. The automatic pressure system chugged furiously, restoring the air. Olham let his breath out with a shudder.

One more second --
Beyond the window the two men had joined the group. The group scattered, running in all directions. One by one they threw themselves down, prone on the ground. Olham seated himself at the control board. He moved the dials into place. As the ship rose up into the air the men below scrambled to their feet and stared up, their mouths open. "Sorry," Olham murmured, "but I've got to get back to Earth." He headed the ship back the way it had come.

It was night. All around the ship crickets chirped, disturbing the chill darkness. Olham bent over the vidscreen. Gradually the image formed; the call had gone through without trouble. He breathed a sigh of relief.
"Mary," he said. The woman stared at him. She gasped.
"Spence! Where are you? What's happened?"
"I can't tell you. Listen, I have to talk fast. They may break this call off any minute. Go to the Project grounds and get Dr Chamberlain. If he isn't there, get any doctor. Bring him to the house and have him stay there. Have him bring equipment, X-ray, fluoroscope, everything."
"But --"
"Do as I say. Hurry. Have him get it ready in an hour." Olham leaned toward the screen. "Is everything all right? Are you alone?"
"Alone?"
"Is anyone with you? Has . . . has Nelson or anyone contacted you?"
"No. Spence, I don't understand."
"All right. I'll see you at the house in an hour. And don't tell anyone anything. Get Chamberlain there on any pretext. Say you're very ill."

He broke the connection and looked at his watch. A moment later he left the ship, stepping down into the darkness. He had a half mile to go.
He began to walk.

One light showed in the window, the study light. He watched it, kneeling against the fence. There was no sound, no movement of any kind. He held his watch up and read it by starlight. Almost an hour had passed.
Along the street a shoot bug came. It went on.
Olham looked toward the house. The doctor should have already come. He should be inside, waiting with Mary. A thought struck him. Had she been able to leave the house? Perhaps they had intercepted her. Maybe he was moving into a trap.
But what else could he do?
With a doctor's records, photographs and reports, there was a chance, a chance of proof. If he could be examined, if he could remain alive long enough for them to study him --
He could prove it that way. It was probably the only way. His one hope lay inside the house. Dr Chamberlain was a respected man. He was the staff doctor for the Project. He would know, his word on the matter would have meaning. He could overcome their hysteria, their madness, with facts.

Madness -- that was what it was. If only they would wait, act slowly, take their time. But they could not wait. He had to die, die at once, without proof, without any kind of trial or examination. The simplest test would tell, but they had no time for the simplest test. They could think only of the danger. Danger, and nothing more.
He stood up and moved toward the house. He came up on the porch. At the door he paused, listening. Still no sound. The house was absolutely still.

Too still.

Olham stood on the porch, unmoving. They were trying to be silent inside. Why? It was a small house; only a few feet away, beyond the door, Mary and Dr Chamberlain should be standing. Yet he could hear nothing, no sound of voices, nothing at all. He looked at the door. It was a door he had opened and closed a thousand times, every morning and every night.

He put his hand on the knob. Then, all at once, he reached out and touched the bell instead. The bell pealed, off some place in the back of the house. Olham smiled. He could hear movement.

Mary opened the door. As soon as he saw her face he knew. He ran, throwing himself into the bushes. A security officer shoved Mary out of the way, firing past her. The bushes burst apart. Olham wriggled around the side of the house. He leaped up and ran, racing frantically into the darkness. A searchlight snapped on, a beam of light circling past him.

He crossed the road and squeezed over a fence. He jumped down and made his way across a backyard. Behind him men were coming, security officers, shouting to each other as they came. Olham gasped for breath, his chest rising and falling.

Her face -- he had known at once. The set lips, the terrified, wretched eyes. Suppose he had gone ahead, pushed open the door and entered! They had tapped the call and come at once, as soon as he had broken off. Probably she believed their account. No doubt she thought he was the robot, too.

Olham ran on and on. He was losing the officers, dropping them behind. Apparently they were not much good at running. He climbed a hill and made his way down the other side. In a moment he would be back at the ship. But where to, this time? He slowed down, stopping. He could see the ship already, outlined against the sky, where he had parked it. The settlement was behind him; he was on the outskirts of the wilderness between the inhabited places, where the forests and desolation began. He crossed a barren field and entered the trees.

As he came toward it, the door of the ship opened.

Peters stepped out, framed against the light. In his arms was a heavy Boris gun. Olham stopped, rigid. Peters stared around him, into the darkness. "I know you're there, some place," he said. "Come on up here, Olham. There are security men all around you."

Olham did not move.

"Listen to me. We will catch you very shortly. Apparently you still do not believe you're the robot. Your call to the woman indicates that you are still under the illusion created by your artificial memories.

"But you are the robot. You are the robot, and inside you is the bomb. Any moment the trigger phrase may be spoken, by you, by someone else, by anyone. When that happens the bomb will destroy everything for miles around. The Project, the woman, all of us will be killed. Do you understand?"

Olham said nothing. He was listening. Men were moving toward him, slipping through the woods.

"If you don't come out, we'll catch you. It will only be a matter of time. We no longer plan to remove you to the Moon base. You will be destroyed on sight, and we will have to take the chance that the bomb will detonate. I have ordered every available security officer into the area. The whole county is being searched, inch by inch. There is no place you can go. Around
this wood is a cordon of armed men. You have about six hours left before the last inch is covered."

Olham moved away. Peters went on speaking; he had not seen him at all. It was too dark to see anyone. But Peters was right. There was no place he could go. He was beyond the settlement, on the outskirts where the woods began. He could hide for a time, but eventually they would catch him.

Only a matter of time.

Olham walked quietly through the wood. Mile by mile, each part of the county was being measured off, laid bare, searched, studied, examined. The cordon was coming all the time, squeezing him into a smaller and smaller space.

What was there left? He had lost the ship, the one hope of escape. They were at his home; his wife was with them, believing, no doubt, that the real Olham had been killed. He clenched his fists. Some place there was a wrecked Outspace needle-ship, and in it the remains of the robot. Somewhere nearby the ship had crashed and broken up.

And the robot lay inside, destroyed.

A faint hope stirred him. What if he could find the remains? If he could show them the wreckage, the remains of the ship, the robot --

But where? Where would he find it?

He walked on, lost in thought. Some place, not too far off, probably. The ship would have landed close to the Project; the robot would have expected to go the rest of the way on foot. He went up the side of the hill and looked around. Crashed and burned. Was there some clue, some hint? Had he read anything, heard anything? Some place close by, within walking distance. Some wild place, a remote spot where there would be no people.

Suddenly Olham smiled. Crashed and burned --

Sutton Wood.

He increased his pace.

It was morning. Sunlight filtered down through the broken trees, onto the man crouching at the edge of the clearing. Olham glanced up from time to time, listening. They were not far off, only a few minutes away. He smiled.

Down below him, strewn across the clearing and into the charred stumps that had been Sutton Wood, lay a tangled mass of wreckage. In the sunlight it glittered a little, gleaming darkly. He had not had too much trouble finding it. Sutton Wood was a place he knew well; he had climbed around it many times in his life, when he was younger. He had known where he would find the remains. There was one peak that jutted up suddenly, without a warning.

A descending ship, unfamiliar with the Wood, had little chance of missing it. And now he squatted, looking down at the ship, or what remained of it.

Olham stood up. He could hear them, only a little distance away, coming together, talking in low tones. He tensed himself. Everything depended on who first saw him. If it was Nelson, he had no chance. Nelson would fire at once. He would be dead before they saw the ship. But if he had time to call out, hold them off for a moment -- that was all he needed. Once they saw the ship he would be safe.

But if they fired first --

A charred branch cracked. A figure appeared, coming forward uncertainly. Olham took a deep breath. Only a few seconds remained, perhaps the last seconds of his life. He raised his arms, peering intently.
It was Peters.
"Peters!" Olham waved his arms. Peters lifted his gun, aiming. "Don't fire!" His voice shook. "Wait a minute. Look past me, across the clearing."
"I've found him," Peters shouted. Security men came pouring out of the burned woods around him.
"Don't shoot. Look past me. The ship, the needle-ship. The Outspace ship. Look!"
Peters hesitated. The gun wavered.
"It's down there," Olham said rapidly. "I knew I'd find it here. The burned wood. Now you believe me. You'll find the remains of the robot in the ship. Look, will you?"
"There is something down there," one of the men said nervously.
"Shoot him!" a voice said. It was Nelson.
"Wait." Peters turned sharply. "I'm in charge. Don't anyone fire. Maybe he's telling the truth."
"Shoot him," Nelson said. "He killed Olham. Any minute he may kill us all. If the bomb goes off --"
"Shut up." Peters advanced toward the slope. He stared down. "Look at that." He waved two men up to him. "Go down there and see what that is."
The men raced down the slope, across the clearing. They bent down, poking in the ruins of the ship.
"Well?" Peters called.
Olham held his breath. He smiled a little. It must be there; he had not had time to look, himself, but it had to be there. Suddenly doubt assailed him. Suppose the robot had lived long enough to wander away? Suppose his body had been completely destroyed, burned to ashes by the fire?
He licked his lips. Perspiration came out on his forehead. Nelson was staring at him, his face still livid. His chest rose and fell.
"Kill him," Nelson said. "Before he kills us."
The two men stood up. "What have you found?" Peters said. He held the gun steady. "Is there anything there?"
"Looks like something. It's a needle-ship, all right. There's something beside it."
"I'll look." Peters strode past Olham. Olham watched him go down the hill and up to the men. The others were following after him, peering to see.
"It's a body of some sort," Peters said. "Look at it!"
Olham came along with them. They stood around in a circle, staring down.
On the ground, bent and twisted in a strange shape, was a grotesque form. It looked human, perhaps; except that it was bent so strangely, the arms and legs flung off in all directions. The mouth was open; the eyes stared glassily.
"Like a machine that's run down," Peters murmured.
Olham smiled feebly. "Well?" he said.
Peters looked at him. "I can't believe it. You were telling the truth all the time."
"The robot never reached me," Olham said. He took out a cigarette and lit it. "It was destroyed when the ship crashed. You were all too busy with the war to wonder why an out-of-the-way wood would suddenly catch fire and burn. Now you know."
He stood smoking, watching the men. They were dragging the grotesque remains from the ship. The body was stiff, the arms and legs rigid.
"You'll find the bomb now," Olham said. The men laid the body on the ground. Peters bent down.
"I think I see the corner of it." He reached out, touching the body.
The chest of the corpse had been laid open. Within the gaping tear something glinted, something metal. The men stared at the metal without speaking.
"That would have destroyed us all, if it had lived," Peters said. "That metal box there."
There was silence.
"I think we owe you something," Peters said to Olham. "This must have been a nightmare to you. If you hadn't escaped, we would have --" He broke off.
Olham put out his cigarette. "I knew, of course, that the robot had never reached me. But I had no way of proving it. Sometimes it isn't possible to prove a thing right away. That was the whole trouble. There wasn't any way I could demonstrate that I was myself."
"How about a vacation?" Peters said. "I think we might work out a month's vacation for you. You could take it easy, relax."
"I think right now I want to go home," Olham said.
"All right, then," Peters said. "Whatever you say."
Nelson had squatted down on the ground, beside the corpse. He reached out toward the glint of metal visible within the chest.
"Don't touch it," Olham said. "It might still go off. We better let the demolition squad take care of it later on."
Nelson said nothing. Suddenly he grabbed hold of the metal, reaching his hand inside the chest. He pulled.
"What are you doing?" Olham cried.
Nelson stood up. He was holding on to the metal object. His face was blank with terror. It was a metal knife, an Outspace needle-knife, covered with blood.
"This killed him," Nelson whispered. "My friend was killed with this." He looked at Olham. "You killed him with this and left him beside the ship."
Olham was trembling. His teeth chattered. He looked from the knife to the body. "This can't be Olham," he said. His mind spun, everything was whirling. "Was I wrong?"
He gaped.
"But if that's Olham, then I must be --"
He did not complete the sentence, only the first phrase. The blast was visible all the way to Alpha Centauri.
I put the shotgun in an Adidas bag and padded it out with four pairs of tennis socks, not my style at all, but that was what I was aiming for: If they think you're crude, go technical; if they think you're technical, go crude. I'm a very technical boy. So I decided to get as crude as possible. These days, thought, you have to be pretty technical before you can even aspire to crudeness. I'd had to turn both those twelve-gauge shells from brass stock, on the lathe, and then load them myself; I'd had to dig up an old microfiche with instructions for hand-loading cartridges; I'd had to build a lever-action press to seat the primers - all very tricky. But I knew they'd work.

The meet was set for the Drome at 2300, but I rode the tube three stops past the closest platform and walked back. Immaculate procedure. I checked myself out in the chrome siding of a coffee kiosk - your basic sharp-faced Caucasoid with a ruff of stiff, dark hair. The girls at Under the Knife were big on Sony Mao, and it was getting harder to keep them from adding the chic suggestion of epicanthic folds. It probably wouldn't fool Ralfi Face, but it might get me next to his table. The Drome is a single narrow space with a bar down one side and tables along the other, thick with pimps and handlers and an arcade array of dealers. The Magnetic Dog Sisters were on the door that night, and I didn't relish trying to get out past them if things didn't work out. They were two meters tall and thin as greyhounds. One was black and the other white, but aside from that they were as nearly identical as cosmetic surgery could make them. They'd been lovers for years and were bad news in the tussle. I was never quite sure which one had originally been male.

Ralfi was sitting at his usual table. Owing me a lot of money. I had hundreds of megabytes stashed in my head on an idiot.savant information drive I had no conscious access to. Ralfi had left it there. He hadn't, however, come back for it. Only Ralfi could retrieve the data, with a code phrase of his own invention. I'm not cheap to begin with, but my overtime on storage is astronomical. And Ralfi had been very scarce.

Then I'd heard that Ralfi Face wanted to put out a contract on me. So I'd arranged to meet him in the Drome, but I'd arranged it as Edward Bax, clandestine importer, late of Rio and Peking.

The Drome stank of biz, a metallic tang of nervous tension. Muscle-boys scattered through the crowd were flexing stock parts at one another and trying on this, cold grins, some of them so lost under superstructures of muscle graft that their outlines weren't really human. Pardon me. Pardon me, friends. Just Eddie Bax here, Fast Eddie the Importer, with his professionally nondescript gym bag.

Ralfi wasn't alone. Eighty kilos of blond California beef perched alert in the chair next to his, martial arts written all over him. Fast Eddie Bax was in the chair opposite them before the beef's hands were off the table. 'You black belt?' I asked eagerly. He nodded, blue eyes running an automatic scanning pattern between my eyes and my hands. 'Me too,' I said. 'Got mine here in the bag.' And I shoved my hand through the slit and thumbed the safety off. Click. 'Double twelve-gauge with the triggers wired together.'

'That's a gun,' Ralfi said, putting a plump restraining hand on his boy's taut blue nylon chest. 'Johnny has an antique firearm in his bag.' So much for Edward Bax.

I guess he'd always been Ralfi Something or Other, but he owed his acquired surname to a singular vanity. Built something like an overripe pear, he'd worn the once-famous face of Christian White for twenty years - Christian White of the Atyan Reggae Band, Sony Mao to his generation, and final champion of race rocks. I'm a whiz at trivia. Christian White: classic pop face with a singer's high-definition muscles, chiseled cheekbones. Angelic in
one light, handsomely depraved in another. But Ralfi's eyes lived behind that face, and they were small and cold and black.

'Please,' he said, 'let's work this out like businessmen.' His voice was marked by a horrible prehensile sincerity, and the corners of his beautiful Christian White mouth were always wet. 'Lewis here,' nodding in the beefboy's direction, 'is a meatball.' Lewis took his impassively, looking like something built from a kit. 'You aren't a meatball, Johnny.'

'Sure I am, Ralfi, a nice meatball chock-full of implants where you can store your dirty laundry while you go off shopping for people to kill me. From my end of this bag, Ralfi, it looks like you've got some explaining to do.'

'It's this last batch of product, Johnny.' He sighed deeply. 'As broker, I am usually very careful as to sources.'

'You buy only from those who steal the best. Got it.'

He sighed again. 'I try,' he said warily, 'not to buy from fools... This time, I'm afraid, I've done that.' Third sigh was the cue for Lewis to trigger the neural disruptor they'd taped under my side of the table. I put everything I had into curling the index finger of my right hand, but I no longer seemed to be connected to it. I could feel the metal of the gun and the foam-padded tape. I'd wrapped around the stubby grip, but my hands were cool wax, distant and inert. I was hoping Lewis was a true meatball, thick enough to go for the gym bag and snag my rigid trigger finger, but he wasn't. 'We've been very worried about you Johnny. Very worried. You see, that's Yakuza property you have there. A fool took it from them, Johnny. A dead fool.'

Lewis giggled. It all made sense then, an ugly kind of sense, like bags of wet sand settling around my head. Killing wasn't Ralfi's style. Lewis wasn't even Ralfi's style. But he'd got himself stuck between the [Japanese Mafia] and something that belonged to them - or, more likely, something of theirs that belonged to someone else. Ralfi, of course, could use the code phrase to throw me into idiot savant mode, and I'd spill their hot program without remembering a single quarter tone. For a fence like Ralfi, that would ordinarily have been enough. But not for the Yakuza. The Yakuza would know about Squid machines, for one thing, and they wouldn't want to worry about one lifting those dim and permanent traces of their program out of my head. I didn't know very much about Squids, but I'd heard stories, and I made it a point never to repeat them to my clients. No, the Yakuza wouldn't like that; it looked too much like evidence. They hadn't got where they were by leaving evidence around. Or alive.

Lewis was grinning. I think he was visualizing a point just behind my forehead and imagining how he could get there the hard way. 'Hey,' said a low voice, feminine, from somewhere behind my right shoulder, 'you cowboys sure aren't having too lively a time.'

'Pack it, bitch,' Lewis said, his tanned face very still. Ralfi looked blank.

'Lighten up. You want to buy some good free base?' She pulled up a chair and quickly sat before either of them could stop her. She was barely inside my fixed field of vision, a thin girl with mirrored glasses, her dark hair cut in a rough shag. She wore black leather, open over a T-shirt slashed diagonally with stripes of red and black.

Lewis snorted his exasperation and tried to slap her out of the chair. Somehow he didn't quite connect, and her hand came up and seemed to brush his wrist as it passed. Bright blood sprayed the table. He was clutching his wrist white-knuckle tight, blood trickling from between his fingers. But hadn't her hand been empty?
He was going to need a tendon stapler. He stood up carefully, without bothering to push his chair back. The chair toppled backward, and he stepped out of my line of sight without a word. 'He better get a medic to look at that,' she said. 'That's a nasty cut.'

'You have no idea,' said Ralfi, suddenly sounding very tired, 'the depths of shit you have just gotten yourself into.'

'No kidding? Mystery! I get real excited by mysteries. Like why your friends here's so quiet. Frozen, like. Or what this thing here is for,' and she held up the little control unit that she'd somehow taken from Lewis. Ralfi looked ill.

'You, ah, want maybe a quarter-million to give me that and take a walk?' A fat hand came up to stroke his pale, lean face nervously.

'What I want,' she said, snapping her fingers so that the unit spun and glittered, 'is work. A job. Your boy hurt his wrist. But a quarter'll do for a retainer.'

Ralfi let his breath out explosively and began to laugh, exposing teeth that hadn't been kept up to the Christian White standard. The she turned the disruptor off. 'Two million,' I said immediately.

'My kind of man,' she said, and laughed. 'What's in the bag?'

'A shotgun.'

'Crude.' It might have been a compliment.' Ralfi said nothing at all. 'Name's Millions. Molly Millions. You want to get out of here, boss? People are starting to stare.' She stood up. She was wearing leather jeans the colour of dried blood. And I saw for the first time that the mirrored lenses were surgical inlays, the silver rising smoothly from her high cheekbones, sealing her eyes in their sockets, I saw my new face twinned there.

'I'm Johnny,' I said. 'We're taking Mr Face with us.'

********************************
He was outside, waiting. Looking like your standard tourist tech, in plastic glasses and a silly Hawaiian shirt printed with blowups of his firm's most popular microprocessor; a mild little guy, the kind most likely to wind up drunk on sake in a bar that puts out miniature rice crackers with seaweed garnish. He looked like the kind who sing the corporate anthem and cry, who shake hands endlessly with the bartender. And the pimps and the dealers would leave him alone, pegging him as innately conservative. Not up for much, and carefully with his credit when he was.

Molly got into some kind of exchange with the Magnetic Dog Sisters, giving me a chance to usher Ralfi through the door with the gym bag pressed lightly against the base of his spine. She seemed to know them. I heard the black one laugh. I glanced up, out of some passing reflex, maybe because I've never got used to it, to the soaring arcs of light and the shadows of the geodesics above them. maybe that saved me. Ralfi kept walking, but I don't think he was trying to escape. I think he'd already given up. Probably he already had an idea of what we were up against.

I looked back down in time to see him explode.
Playback on full recall shows Ralfi stepping forward as the little tech sidles out of nowhere, smiling. Just a suggestion of a bow, and his left thumb falls of. Ralfi stops, his back to us, dark crescents of sweat under the armpits of his pale summer suit. He knows. He must have known. And then the joke-shop thumbtip, heavy as lead, arcs out in a lighting yo-yo trick, and the invisible thread connecting it to the killer's hand passes laterally through Ralfi's skull, just above his eyebrows, whips up, and descends, slicing the pearshaped torso diagonally from shoulder to rib cage. Cuts so fine that no blood flows until synapses misfire and the first tremors surrender the body to gravity.

Ralfi tumbled apart in a pink cloud of fluids, the three mismatched section rolling forward on the tiled pavement. In total silence. I brought the gym bag up, and my hand convulsed. The recoil nearly broke my wrist.

************
It must have been raining; ribbons of water cascaded from a ruptured geodesic and spattered on the tile behind us. We crouched in the narrow gap between a surgical boutique and an antique shop. She'd just edged one mirrored eye around the corner to report a single police module in frond of the Drome, red lights flashing. They were sweeping Ralfi up. Asking questions.

I was covered in scorched white fluff. The tennis socks. The gym bag was a ragged plastic cuff around my wrist. 'I don't see how the hell I missed him.'

'Cause he's fast, so fast.' She hugged her knees and rocked back and forth on her booteels. 'His nervous system's jacked up. He's factory custom.' She grinned and gave a little squeal of delight. 'I'm gonna get that boy. Tonight. He's the best, number one, top dollar, state of the art.'

'What you're going to get, for this boy's two million, is my ass out of here. Your boyfriend back there was mostly grown in a vat in Chiba City. He's a Yakuza assassin.'

'Chiba. Yeah. See, Molly's been Chiba, too.' And she showed me her hands, fingers slightly spread. Her fingers were slender, tapered, very white against the polished burgundy nails. Ten blades snicked straight out from their recesses beneath her nails, each one a narrow, doubleedged scalpel in pale blue steel.

*******
Where do you go when the world's wealthiest criminal order is feeling for you with calm, distant fingers? Where do you hide from the Yakuza, so powerful that it owns com-satellites and at least three shuttles? The Yakuza is a true multinational, like ITT and Ono-Sendai. Fifty years before I was born the Yakuza had already absorbed the Triads, the Mafia, the Union Corse.

Molly had an answer: You hide in the Pit, in the lowest circle, where any outside influence generates swift, concentric ripples of raw menace. You hide in Nighttown. Better yet, you hide above Nighttown, because the Pit's inverted, and the bottom of its bowl touches the sky, the sky that Nighttown never sees, sweating under its own filmament of acrylic resin, up where the Lo Teks crouch in the dark like gargoyles, black-market cigarettes dangling from their lips.

She had another answer, too.
'So you're locked up good and tight, Johnny-san? No way to get that program without the password?' She led me into the shadows that waited beyond the bright tube platform. The concrete walls were overlaid with graffiti, years of them twisting into a single metascrawl of rage and frustration.

'The stored data are fed in through a modified series of microsurgical prostheses.' I reeled off a numb version of my standard sales pitch. 'Client's code is stored in a special chip; barring Squids, which we in the trade don't like to talk about, there's no way to recover your phrase. Can't drug it out, cut it out, torture it. I don't know it, never did.'

'Squids? Crawly things with arms?' We emerged into a deserted street market. Shadowy figures watched us from across a makeshift square littered with fish heads and rotted fruit.

'Not real squids. Superconducting Quantum-Interference Detectors. Used them in the war to find submarines, suss out enemy cyber systems. Even the primitive models could measure a magnetic field a billionth the strength of geomagnetic force; it's like pulling a whisper out of cheering stadium.'

'Navy stuff,' she said, and her grin gleamed in the shadows. 'Navy stuff. I got a friend down here who was in the navy, name's Jones. I think you'd better meet him. He's a junkie, though. So we'll have to take him something.'

'A junkie?'

'A dolphin.'

He was more than a dolphin, but from another dolphin's point of view he might have seemed like something less. I watched him swirling sluggishly in his galvanized tank. Water stopped over the side, wetting my shoes. He was surplus from the last war. A cyborg.

He rose out of the water, showing us the crusted plates along his sides, a kind of visual pun, his grace nearly lost under articulated armor, clumsy and prehistoric. Twin deformities on either side of his skull had been engineered to house sensor units. Silver lesions gleamed on exposed sections of his gray-white hide. Molly whistled. Jones thrashed his tail, and more water cascaded over the side of the tank.

'What is this place?' I peered at vague shapes in the dark, rusting chain link and things under tarps. Above the tank hung a clumsy wooden framework, crossed and recrossed by rows of dusty Christmas lights.

'Funland. Zoo and carnival rides, talk to the War Whale, all that. Some whale Jones is...'

Jones reared again and fixed me with a sad and ancient eye.

'How's he talk?' Suddenly I was anxious to go.

'That's the catch. Hi, Jones.' And all the bulbs lit simultaneously. They were flashing red, white, and blue.

RWBRWBRWB
RWBRWBRWB
RWBRWBRWB
'Good with symbols, see, but the code's restricted. In the navy they had him wired into an audiovisual display.'
She drew the narrow package from a jacket pocket. 'Pure shit, Jones. Want it?' He froze in the water and started to sink. 'We want the key to Johnny's bank, Jones. We want it fast.'

The lights flickered. White sodium glare washed her features, stark monochrome, shadows cleaving from her cheekbones. 'Go for it, Jones!'

The password appeared in my mind. 'Give him the stuff,' I said. 'We've got it.'

Jones heaved half his armored bulk over the edge of his tank, and I thought the metal would give way. Molly stabbed him overhand with the Syrette, driving the needle between two plates. Propellant hissed. Patterns of light exploded, sparming across the frame and then fading to black. We left him drifting, rolling languorously in the dark water. Maybe he was dreaming of his war in the Pacific, of the cyber mines he'd swept, nosing gently into their circuitry with the SQUID he'd used to pick Ralfi's pathetic password from the chip buried in my head.

'I can see them slipping up when he was demobilized, letting him out of the navy with that gear intact, but how does a cybernetic dolphin get hooked on heroin?'

'The war,' she said. 'They all were. Navy did it. How else you get'em working for you?'

******
I'm not sure this profiles as good business,' the pirate said, angling for better money. 'Target specs on a comsat that isn't in the book -'

'Waste my time and you won't profile at all,' said Molly, leaning across his scarred plastic desk to prod him with her forefinger.

'So maybe you want to buy your microwaves somewhere else?' He was a tough kid, with a face altered to look like Chairman Mao. A Nightowner by birth, probably.

Molly's hand blurred down the front of his jacket, completely severing a lapel without even rumpling the fabric. 'We got a deal or not?'

'Deal,' he said staring at his ruined lapel with what he must have hoped was only polite interest. 'Deal.'

While I checked the two records we'd bought, she extracted the slip of paper I'd given her from the zippered wrist pocket of her jacket. She unfolded it and read silently, moving her lips. She shrugged. 'This is it?'

'Shoot,' I said, punching the RECORD studs of the two desks simultaneously.

'Christian White,' she recited, 'and his Aryan Reggae Band.' Fairtful Ralfi, a fan to his dying day.
Transition to idiot-savant mode is always less abrupt than I except it to be. The pirate broadcaster’s front was a failing travel agency in a pastel cube that boasted a desk, three chairs, and a faded poster of a Swiss orbital spa. A pair of toy birds with blown-glass bodies and tin legs were sipping monotonously from a Styrofoam cup of water on the ledge beside Molly’s shoulder. As I phased into mode, they accelerated gradually until their DayGlo-feathered crowns became solid arcs of color. The LEDs that told seconds on the plastic wall clock had become meaningless pulsing grids, and Molly and the Mao-faced boy grew hazy, their arms blurring occasionally in insect-quick ghosts of gesture. And then it all faded to cool gray static and an endless tone poem in the artificial language.

I sat and sang dead Ralfi’s stolen program for three hours.

**********

The mall runs forty kilometers from end, a ragged overlap of Fuller domes roofing what was once a suburban artery. If they turn off the arc-lights on a clean day, a gray approximation of sunlight filters through layers of acrylic, a view like the prison sketches of Giovanni Piranesi. The three southernmost kilometers roof Nighttown. Nighttown pays no taxes, no utilities. The neon arcs are dead, and the geodesic roofs have been smoked black by decades of cooking fires. In the nearly total darkness of a Nighttown noon, who notices a few dozen mad children lost in the rafters?

We’d been climbing for two hours, up concrete stairs and steel ladders with perforated rungs, past abandoned gantries and dust-covered tools. We’d started in what looked like a disused maintenance yard, stacked with triangular roofing segments. Everything there had been covered with that same uniform layer of spraybomb graffiti: gang names, dates back to the turn of the century. The graffiti followed us up, gradually thinning until a single name was repeated at intervals: LO TEK. In dripping black capitals.

‘Who’s LO-TEK?’

‘Not us, boss.’ She climbed a shivering aluminium ladder and vanished through a hole in a sheet of corrugated plastic. ‘Low technique, low technology.’ The plastic muffled her voice. I followed her up, nursing an aching wrist. ‘Lo Teks, they’d think that shotgun trick of yours was fancy.’

An hour later I dragged myself up through another hole, this one sawed crookedly in a sagging sheet of plywood, and met my first Lo Tek.

‘S okay,’ Molly said, her hand brushing my shoulder. ‘It’s just Dog. Hey, Dog.’

In the narrow beam of her taped flash, he regarded us with his one eye and slowly exuded a thick length of grayish tongue, licking huge canines. I wondered how they wrote of tooth-bud transplants from Doberman Pincers as low technology. Immunosuppressive surgical drugs don’t exactly grow on trees.

‘Moll.’ His dental augmentation impeded his speech; a string of saliva dangled from the twisted lower lip. ‘Heard ya comin’. Long time.’ He might have been fifteen, but the fangs and the bright mosaic of scars combined with the gaping eye socket to present a mask of total bestiality. It had taken time and a certain kind of creativity to assemble that face, and his posture told-me he enjoyed living behind it. He wore a pair of decaying jeans, black with grime and shiny along the creases. His chest and feet were bare. He did something with his mouth that approximated a grin. ‘Bein’ followed, you.’

Far off, in Nighttown, a water vendor cried his trade.
'Strings jumping, Dog?' She swung her flashlight to the side, and I saw thin cords tied to eyebolts, cords that ran to the edge and vanished.

'Kill the fuckin' light!'

She snapped it off.

'How come the one who's followin' you's got no light?'

'Doesn't need it. That one's bad news, Dog. Your sentries give him a tumble, they'll come home in easy-to-carry sections.'

'This a friend, Moll?' He sounded uneasy. I heard his feet shift on the worn plywood.

'No. But he's mine. And this one,' slapping my shoulders, 'now he's a friend. Got that?'

'Sure,' he said, without much enthusiasm, padding to the platform's edge, where the eyebolts were. He began to pluck out some kind of message on the taut cords.

Nighttown spread beneath us like a toy village for rats; tiny windows showed candlelight, with only a few harsh, bright squares lit by battery lanterns and carbide lamps. I imagined the old men at their endless games of dominos, under warm, fat drops of water that fell from wet wash hung out on poles between the plywood shanties. Then I tried to imagine the Yakuza assassin climbing patiently up through the darkness in his cheap sunglasses and ugly tourist shirt, bland and unhurried. How was he tracking us?

'Smoke?' Dog dragged a crumpled pack from his pocket and prized out a flattened cigarette. I squinted at the trademark while he lit it for me with a kitchen match. Yiheyuan filters, Beijing Cigarette Factory. I decided that the Lo Teks were black marketeers. Dog and Molly had begun an argument, which seemed to revolve around Molly's desire to use some particular piece of Lo Tek real estate.

'I've done you a lot of favors, man. I want that floor. And I want the musik.'

'You're not Lo Tek...'

This must have been going on for the better part of a twisted kilometer, Dog leading us along swaying catwalks and up rope ladders. The Lo Teks leech their webs and huddling places to the city's fabric with thick gobs of epoxy and sleep above the abyss in mesh hammocks. Their country is so attenuated that in places it consists of little more than holds and feet, sawed into geodesic struts.

The Killing Floor, she called it. Scrambling after her, my new Eddie Bax shoes slipping on worm metal and damp plywood, I wondered how it could be any more lethal than the rest of the territory. At the same time I sensed that Dog's protests were ritual and that she already expected to get whatever it was she wanted.

Somewhere beneath us, Jones the dolphin would be circling his tank, feeling the first twinges of junk sickness. The police would be pestering the Drome regulars with questions about Ralfi. What did he do? Who was he with before he stepped outside? And the Yakuza would be settling its ghostly bulk over the city's data banks, probing for faint images of me reflected in numbered accounts, securities transactions, bills for utilities. We're an
information economy. They teach you that in school. What they don’t tell you is that it’s impossible to move, to live, to operate at any level without leaving traces, bits, seemingly meaningless fragments of personal information. Fragments that can be retrieved, amplified...

But by now the pirate had shuttled our message into line for blackbox transmissions to the Yakuza comsat. A simple message: Call off the dogs or we wideband your program.

The program. I had no idea what it contained. I still don’t. I only sing the song, with zero comprehension. It was probably research data, the Yakuza being given to advanced forms of industrial espionage. A genteel business, stealing from Ono-Sendai as a matter of course and politely holding their data for ransom, threatening to blunt the conglomerate’s research edge by making the product public. But why couldn’t any number play? Wouldn’t they be happier with something to sell back to Ono-Sendai, happier than they’d be with one dead Johnny from Memory Lane?

Their program was on its way to an address in Sydney, to a place that held letters for clients and didn’t ask questions once you’d paid a small retainer. Fourth-class surface mail. I’d erased most of the other copy and recorded our message in the resulting gap, leaving just enough of the program to identify it as the real thing.

My wrist hurt from climbing. I wanted to stop, to lie down, to sleep. I knew that I’d lose my grip and fall soon, knew that the sharp black shoes I’d bought for my evening as Eddie Bax would lose their purchase and carry me down to Nighttown. But the Hawaiian-shirted assassin rose in my mind like a cheap religious hologram. So I followed Dog and Molly through Lo Tek heaven, jury-rigged and jerry-built from scraps that even Nighttown didn’t want.

The Killing Floor was eight meters on a side, hanging from steel cables. It creaked when it moved, and it moved constantly, swaying and bucking as the gathering Lo Tek arranged themselves on the shelf of plywood surrounding it. The wood was silver with age, polished with long use and deeply etched with initials, threats, declarations of passion. This was suspended from a separate set of cables.

A girl with teeth like Dog’s hit the Floor on all fours. Her breast were tattooed with indigo spirals. Then she was across the Floor, laughing, grappling with a boy who was drinking dark liquid from a liter flask. Lo Tek fashion ran to scars and tattoos. And teeth. The electricity they were tapping to light the Killing Floor seemed to be an exception to their overall aesthetic, made in the name of... ritual, sport, art? I didn’t know, but I could see that the Floor was something special. It had the look of having been assembled over generations.

I held the useless shotgun under my jacket. Its hardness and heft were comforting, even thought I had no more shells. And it came to me that I had no idea at all of what was really happening, or of what was supposed to happen. And that was the nature of my game, because I’d spent most of my life as a blind receptacle to be filled with other people’s knowledge and then drained, spouting synthetic languages I’d never understand. A very technical boy. Sure.

And then I noticed just how quiet the Lo Tek had become. Because he was there, at the edge of the light, taking in the Killing Floor and the gallery of silent Lo Tek with a tourist’s calm. I looked for Molly Millions, but she was gone. The Lo Tek parted to let him step up on to the bench. He bowed, smiling, and stepped smoothly out of his sandals, leaving them side by side, perfectly aligned, and then he stepped down on to the Killing Floor. He came for me, across that shifting trampoline of scrap, as easily as any tourist padding across synthetic pile in any featureless hotel.
Molly hit the Floor, moving.

The Floor screamed.

It was miked and amplified, with pickups riding the four fat coil springs at the corners and contact mikes taped at random to rusting machine fragments. Somewhere the Lo Tek had an amp and a synthesizer, and now I made out of shapes of speakers overhead beneath the cruel floodlights.

A drumbeat began, electronic, like an amplified heart, steady as a metronome.

She’d removed her leather jacket and boots; her T-shirt was sleeveless, faint surgery scars from Chiba City circuitry traced along her thin arms. Her leather jeans gleamed under the floodlights. She began to dance.

She flexed her knees, white feet tensed on a flattened gas tank, and the Killing Floor began to heave in response. The sound it made was like a world ending, like the wires that hold heaven snapping and coiling across the sky.

He rode with it, for a few heartbeats, and then he moved, judging the movement of the Floor perfectly, like a man stepping from one flat stone to another in an ornamental garden.

He pulled the tip from his thumb with the grace of a man at ease with social gesture and flung it at her. Under the floods, the filament was a refracting thread of rainbow. She threw herself flat and rolled, jackknifing up as the molecule whipped past, steel daws snapping into the light in what must have been an automatic rictus of defense. The drum pulse quickened, and she bounced with it, her dark hair wild around the blank silver lenses, her mouth thin, lips taut with concentration. The Killing Floor boomed and roared, and the Lo Tek were screaming their excitement.

He retracted the filament to a whirling meter-wide circle of ghostly polychrome and spun it in front of him, thumbless hand held lever with his sternum. A shield.

And Molly seemed to let something go, something inside, and that was the real start of her mad-dog dance. She jumped, twisting, lunging sideways, landing with both feet on an alloy engine block wired directly to one of the coil springs. I cupped my hands over my ears and knelt in a vertigo of sound, thinking Floor and benches were on their way down, down to Nighttown, and I saw us tearing through the shanties, the wet wash, exploding on the tiles like rotten fruit. But the cables held, and the Killing Floor rose and fell like a crazy metal sea. And Molly danced on it.

And at the end, just before he made his final cast with the filament, I saw in his face, an expression that didn't seem to belong there. It wasn't fear and it wasn't anger. I think it was disbelief, stunned incomprehension mingled with pure aesthetic revulsion at what he was seeing, hearing - at what was happening to him. He retracted the whirling filament, the ghost disk shrinking to the size of a dinner plate as he whipped his arm above his head and brought it down, the thumbtip curving out for Molly like a live thing.

The Floor carried her down, the molecule passing just above her head; the Floor whiplashed, lifting him into the path of the taut molecule. It should have passed harmlessly over his head and been withdrawn into its diamond-hard socket. It took his hand off just behind the wrist. There was a gap in the Floor in front of him, and he went through it like a diver, with a strange deliberate grace, a defeated kamikaze on his way down to Nighttown.
Partly, I think, he took that dive to buy himself a few seconds of the dignity of silence. She’d killed him with culture shock.

The Lo Teks roared, but someone shut the amplifier off, and Molly rode the Killing Floor into silence, hanging on now, her face white and blank, until the pitching slowed and there was only a faint pinging of tortured metal and the grating of rust on rust.

We searched the Floor for the severed hand, but we never found it. All we found was a graceful curve in one piece of rusted steel, where the molecule went through. Its edge was bright as new chrome.

********

We never learned whether the Yakuza had accepted our terms, or ever whether they got our message. As far as I know, their program is still waiting for Eddie Bax on a shelf in the back room of a gift shop on the third level of Sydney Central-5. Probably they sold the original back to Ono-Sendai months ago. But maybe they did get the pirate’s broadcast, because nobody’s come looking for me yet, and it’s been nearly a year. If they do come, they’ll have a long climb up through the dark, past Dog’s sentries, and I don’t look much like Eddie Bax these days.

I let Molly take care of that, with a local anesthetic. And my new teeth have almost grown in.

I decided to stay up here. When I looked out across the Killing Floor, before he came, I saw how hollow I was. And I knew I was sick of being a bucket. So now I climb down and visit Jones, almost every night. We’re partners now, Jones and I, and Molly Millions, too. Molly handles our business in the Drome. Jones is still in Funland, but he has a bigger tank, with fresh seawater trucked in once a week. And he has his junk, when he needs it. He still talks to the kids with his frame of lights, but he talks to me on a new display unit in a shed that I rent there, a better unit than the one he used in the navy.

And we’re all making good money, better money than I made before, because Jones’s Squid can read the traces of anything that anyone ever stored in me, and he gives it to me on the display unit in languages I can understand. So we’re learning a lot about all my formed clients. And one day I’ll have a surgeon dig all the silicon out of my amygdalae, and I’ll live with my own memories and nobody else’s, the way other people do. But not for a while.

In the meantime it’s really okay up here, way up in the dark, smoking a Chinese filter tip and listening to the condensation that drips from the geodesics. Real quiet up here - unless a pair of Lo Teks decide to dance on the Killing Floor.

It’s educational, too. With Jones to help me figure things out, I’m getting to be the most technical boy in town.
“Spider the Artist” by Nnedi Okorafor, 2008

Zombie no go go, unless you tell am to go
Zombie!
Zombie!
Zombie no go stop, unless you tell am to stop
Zombie no go turn, unless you tell am to turn
Zombie!
Zombie no go think, unless you tell am to think

— from Zombie by Fela Kuti, Nigerian musician and self-proclaimed voice of the voiceless

***

My husband used to beat me. That was how I ended up out there that evening behind our house, just past the bushes, through the tall grass, in front of the pipelines. Our small house was the last in the village, practically in the forest itself. So nobody ever saw or heard him beating me.

Going out there was the best way to put space between me and him without sending him into further rage. When I went behind the house, he knew where I was and he knew I was alone. But he was too full of himself to realize I was thinking about killing myself.

My husband was a drunk, like too many of the members of the Niger Delta People’s Movement. It was how they all controlled their anger and feelings of helplessness. The fish, shrimps and crayfish in the creeks were dying. Drinking the water shriveled women’s wombs and eventually made men urinate blood.

There was a stream where I had been fetching water. A flow station was built nearby and now the stream was rank and filthy, with an oily film that reflected rainbows. Cassava and yam farms yielded less and less each year. The air left your skin dirty and smelled like something preparing to die. In some places, it was always daytime because of the noisy gas flares.

My village was shit.

On top of all this, People’s Movement members were getting picked off like flies. The “kill-and-go” had grown bold. They shot People’s Movement members in the streets, they ran them over, dragged them into the swamps. You never saw them again.

I tried to give my husband some happiness. But after three years, my body continued to refuse him children. It’s easy to see the root of his frustration and sadness…but pain is pain. And he dealt it to me regularly.
My greatest, my only true possession was my father’s guitar. It was made of fine polished Abura timber and it had a lovely tortoiseshell pick guard. Excellent handwork. My father said that the timber used to create the guitar came from one of the last timber trees in the delta. If you held it to your nose, you could believe this. The guitar was decades old and still smelled like fresh cut wood, like it wanted to tell you its story because only it could.

I wouldn’t exist without my father’s guitar. When he was a young man, he used to sit in front of the compound in the evening and play for everyone. People danced, clapped, shut their eyes and listened. Cell phones would ring and people would ignore them. One day, it was my mother who stopped to listen.

I used to stare at my father’s fast long-fingered hands when he played. Oh, the harmonies. He could weave anything with his music—rainbows, sunrises, spider webs sparkling with morning dew. My older brothers weren’t interested in learning how to play. But I was, so my father taught me everything he knew. And now it was my long-fingers that graced the strings. I’d always been able to hear music and my fingers moved even faster than my father’s. I was good. Really good.

But I married that stupid man. Andrew. So I only played behind the house. Away from him. My guitar was my escape.

That fateful evening, I was sitting on the ground in front of the fuel pipeline. It ran right through everyone’s backyard. My village was an oil village, as was the village where I grew up. My mother lived in a similar village before she was married, as did her mother. We are Pipeline People.

My mother’s grandmother was known for lying on the pipeline running through her village. She’d stay like that for hours, listening and wondering what magical fluids were running through the large never-ending steel tubes. This was before the Zombies, of course. I laughed. If she tried to lie on a pipeline now she’d be brutally killed.

Anyway, when I was feeling especially blue, I’d take my guitar and come out here and sit right in front of the pipeline. I knew I was flirting with death by being so close but when I was like this, I didn’t really care. I actually welcomed the possibility of being done with life. It was a wonder that my husband didn’t smash my guitar during one of his drunken rages. I’d surely have quickly thrown myself on the pipeline if he did. Maybe that was why he’d rather smash my nose than my guitar.

This day, he’d only slapped me hard across the face. I had no idea why. He’d simply come in, seen me in the kitchen and smack! Maybe he’d had a bad day at work—he worked very hard at a local restaurant. Maybe one of his women had scorned him. Maybe I did something wrong. I didn’t know. I didn’t care. My nose was just starting to stop bleeding and I was not seeing so many stars.

My feet were only inches from the pipeline. I was especially daring this night. It was warmer and more humid than normal. Or maybe it was my stinging burning face. The mosquitoes didn’t even bother me much. In the distance, I could see Nneka, a woman who rarely spoke to me, giving her small sons a bath in a large tub. Some men were playing cards at a table several houses down. It was dark, there were small, small trees and bushes here and even our closest neighbor was not very close, so I was hidden.
I sighed and placed my hands on the guitar strings. I plucked out a tune my father used to play. I sighed and closed my eyes. I would always miss my father. The feel of the strings vibrating under my fingers was exquisite.

I fell deep into the zone of my music, weaving it, then floating on a glorious sunset that lit the palm tree tops and...

_Click!_

I froze. My hands still on the strings, the vibration dying. I didn’t dare move. I kept my eyes closed. The side of my face throbbed.

_Click! _This time the sound was closer. _Click! Closer. Click! Closer._

My heart pounded and I felt nauseous with fear. Despite my risk taking, I knew this was not the way I wanted to die. Who would want to be torn limb from limb by Zombies? As everyone in my village did multiple times a day, I quietly cursed the Nigerian government.

_Twing!_

The vibration of the guitar string was stifled by my middle finger still pressing it down. My hands started to shake, but still I kept my eyes shut. Something sharp and cool lifted my finger. I wanted to scream. The string was plucked again.

_Twang!_

The sound was deeper and fuller, my finger no longer muffling the vibration. Very slowly, I opened my eyes. My heart skipped. The thing stood about three feet tall, which meant I was eye-to-eye with it. I’d never seen one up close. Few people have. These things are always running up and down the pipeline like a herd of super fast steer, always with things to do.

I chanced a better look. It really _did_ have eight legs. Even in the darkness, those legs shined, catching even the dimmest light. A bit more light and I’d have been able to see my face perfectly reflected back at me. I’d heard that they polished and maintained themselves. This made even more sense now, for who would have time to keep them looking so immaculate?

The government came up with the idea to create the Zombies, and Shell, Chevron and a few other oil companies (who were just as desperate) supplied the money to pay for it all. The Zombies were made to combat pipeline bunkering and terrorism. It makes me laugh. The government and the oil people destroyed our land and dug up our oil, then they created robots to keep us from taking it back.
They were originally called Anansi Droids 419 but we call them “oyibocontraption” and, most often, Zombie, the same name we call those “kill-and-go” soldiers who come in here harassing us every time something bites their brains.

It’s said that Zombies can think. Artificial Intelligence, this is called. I have had some schooling, a year or two of university, but my area was not in the sciences. No matter my education, as soon as I got married and brought to this damn place I became like every other woman here, a simple village woman living in the delta region where Zombies kill anyone who touches the pipelines and whose husband knocks her around every so often. What did I know about Zombie intellect?

It looked like a giant shiny metal spider. It moved like one too. All smooth-shifting joints and legs. It crept closer and leaned in to inspect my guitar strings some more. As it did so, two of its back legs tapped on the metal of the pipeline. Click! Click! Click!

It pushed my thumb back down on the strings and plucked the string twice, making a muted pluck! It looked at me with its many blue shining round eyes. Up close I could see that they weren’t lights. They were balls of a glowing metallic blue undulating liquid, like charged mercury. I stared into them fascinated. No one else in my village could possibly know this fact. No one had gotten close enough. Eyes of glowing bright blue liquid metal, I thought. Na wa.

It pressed my hand harder and I gasped, blinking and looking away from its hypnotic eyes. Then I understood.

“You ...you want me to play?”

It sat there waiting, placing a leg on the body of my guitar with a soft tap. It had been a long time since anyone had wanted me to play for him. I played my favorite highlife song. Love Dey See Road by Oliver De Coque. I played like my life depended on it.

The Zombie didn’t move, its leg remaining pressed to my guitar. Was it listening? I was sure it was. Twenty minutes later, when I stopped finally playing, sweat running down my face, it touched the tips of my aching hands. Gently.

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Some of these pipelines carry diesel fuel, others carry crude oil. Millions of liters of it a day. Nigeria supplies twenty-five percent of United States oil. And we get virtually nothing in return. Nothing but death by Zombie attack. We can all tell you stories.

When the Zombies were first released, no one knew about them. All people would hear were rumors about people getting torn apart near pipelines or sightings of giant white spiders in the night. Or you’d hear about huge pipeline explosions, charred bodies everywhere. But the pipeline where the bodies lay would be perfectly intact.
People still bunkered. My husband was one of them. I suspected that he sold the fuel and oil on the black market; he would bring some of the oil home, too. You let it sit in a bucket for two days and it would become something like kerosene. I used it for cooking. So I couldn’t really complain. But bunkering was a very, very dangerous practice.

There were ways of breaking a pipeline open without immediately bringing the wrath of Zombies. My husband and his comrades used some sort of powerful laser cutter. They stole them from the hospitals. But they had to be very, very quiet when cutting through the metal. All it took was one bang, one vibration, and the Zombies would come running within a minute. Many of my husband’s comrades had been killed because of the tap of someone’s wedding ring or the tip of the laser cutter on steel.

Two years ago a group of boys had been playing too close to the pipeline. Two of them were wrestling and they fell on it. Within seconds the Zombies came. One boy managed to scramble away. But the other was grabbed by the arm and flung into some bushes. His arm and both of his legs were broken. Government officials said that Zombies were programmed to do as little harm as possible but… I didn’t believe this, na lie.

They were terrible creatures. To get close to a pipeline was to risk a terrible death. Yet the goddamn things ran right through our backyards.

But I didn’t care. My husband was beating the hell out of me during these months. I don’t know why. He had not lost his job. I knew he was seeing other women. We were poor but we were not starving. Maybe it was because I couldn’t bear him children. It is my fault I know, but what can I do?

I found myself out in the backyard more and more. And this particular Zombie visited me every time. I loved playing for it. It would listen. Its lovely eyes would glow with joy. Could a robot feel joy? I believed intelligent ones like this could. Many times a day, I would see a crowd of Zombies running up and down the pipeline, off to do repairs or policing, whatever they did. If my Zombie was amongst them, I couldn’t tell.

It was about the tenth time it visited me that it did something very, very strange. My husband had come home smelling practically flammable, stinking of several kinds of alcohol—beer, palm wine, perfume. I had been thinking hard all day. About my life. I was stuck. I wanted a baby. I wanted to get out of the house. I wanted a job. I wanted friends. I needed courage. I knew I had courage. I had faced a Zombie, many times.

I was going to ask my husband about teaching at the elementary school. I’d heard that they were looking for teachers. When he walked in, he greeted me with a sloppy hug and kiss and then plopped himself on the couch. He turned on the television. It was late but I brought him his dinner, pepper soup heavy with goat meat, chicken and large shrimp. He was in a good drunken mood. But as I stood there watching him eat, all my courage fled. All my need for change skittered and cowered to the back of my brain.

“Do you want anything else?” I asked.

He looked up at me and actually smiled. “The soup is good today.”
I smiled, but something inside me ducked its head lower. “I’m glad,” I said. I picked up my guitar. “I’m going to the back. It’s nice outside.”

“Don’t go too close to the pipeline,” he said. But he was looking at the TV and gnawing on a large piece of goat meat.

I crept into the darkness, through the bushes and grasses, to the pipeline. I sat in my usual spot. A foot from it. I strummed softly, a series of chords. A forlorn tune that spoke my heart. Where else was there to go from here? Was this my life? I sighed. I hadn’t been to church in a month.

When it came clicking down the pipe, my heart lifted. Its blue liquid eyes glowed strong tonight. There was a woman from whom I once bought a bolt of blue cloth. The cloth was a rich blue that reminded me of the open water on sunny days. The woman said the cloth was “azure.” My Zombie’s eyes were a deep azure this night.

It stopped, standing before me. Waiting. I knew it was my Zombie because a month ago, it had allowed me to put a blue butterfly sticker on one of its front legs.

“Good evening,” I said.

It did not move.

“I’m sad today,” I said.

It stepped off the pipeline, its metal legs clicking on the metal and then whispering on the dirt and grass. It sat its body on the ground as it always did. Then it waited.

I strummed a few chords and then played its favorite song, Bob Marley’s “No Woman No Cry.” As I played, its body slowly began to rotate, something I’d come to understand was its way of expressing pleasure. I smiled. When I stopped playing, it turned its eyes back to me. I sighed, strummed an A minor chord, and sat back. “My life is shit,” I said.

Suddenly, it rose up on its eight legs with a soft whir. It stretched and straightened its legs until it was standing a foot taller than normal. From under its body in the center, something whitish and metallic began to descend. I gasped, grabbing my guitar. My mind told me to move away. Move away fast. I’d befriended this artificial creature. I knew it. Or I thought I knew it. But what did I really know about why it did what it did? Or why it came to me?

The metallic substance descended faster, pooling in the grass beneath it. I squinted. The stuff was wire. Right before my eyes, I watched the Zombie take this wire and do something with five of its legs while it supported itself on the other three. The legs scrambled around, working and weaving the shiny wire this way and that. They moved too fast for me to see exactly what they were creating. Grass flew and the soft whirring sound grew slightly louder.
Then the legs stopped. For a moment all I could hear was the sounds of crickets and frogs singing, the breeze blowing in the palm and mangrove tree tops. I could smell the sizzling oil of someone frying plantain or yam nearby.

My eyes focused on what the Zombie had done. I grinned. I grinned and grinned. “What is that?” I whispered.

It held it up with two of its front legs and tapped its back leg twice on the ground as it always seemed to when it was trying to make a point. A point that I usually didn’t understand.

It brought three legs forward and commenced to pluck out what first was a medley of my favorite songs, from Bob Marley to Sunny Ade to Carlos Santana. Then its music deepened to something so complex and beautiful that I was reduced to tears of joy, awe, ecstasy. People must have heard the music, maybe they looked out their windows or opened their doors. But we were hidden by the darkness, the grass, the trees. I cried and cried. I don’t know why, but I cried. I wonder if it was pleased by my reaction. I think it was.

I spent the next hour learning to play its tune.

***

Ten days later, a group of Zombies attacked some oil workers and soldiers deep in the delta. Ten of the men were torn limb from limb, their bloody remains scattered all over the swampy land. Those who escaped told reporters that nothing would stop the Zombies. A soldier had even thrown a grenade at one, but the thing protected itself with the very force field it had been built to use during pipeline explosions. The soldier said the force field looked like a crackling bubble made of lightning.

“Wahala! Trouble!” the soldier frantically told television reporters. His face was greasy with sweat and the sides of his eyes were twitching. “Evil, evil things! I’ve believed this from start! Look at me with grenade! Ye ye! I could do nothing!”

The pipeline the men had barely even started was found fully assembled. Zombies are made to make repairs, not fully assemble things. It was bizarre. Newspaper write-ups said that the Zombies were getting too smart for their own good. That they were rebelling. Something had certainly changed.

“Maybe it’s only a matter of time before the damn things kill us all,” my husband said, a beer in hand, as he read about the incident in the newspaper.

I considered never going near my Zombie again. They were unpredictable and possibly out of control.

***

It was midnight and I was out there again.
My husband hadn’t laid a heavy hand on me in weeks. I think he sensed the change in me. I had changed. He now heard me play more. Even in the house. In the mornings. After cooking his dinners. In the bedroom when his friends were over. And he was hearing songs that I knew gave him a most glorious feeling. As if each chord, each sound were examined by scientists and handpicked to provoke the strongest feeling of happiness.

My Zombie had solved my marital problems. At least the worst of them. My husband could not beat me when there was beautiful music sending his senses to lush, sweet places. I began to hope. To hope for a baby. Hope that I would one day leave my house and wifely duties for a job as music teacher at the elementary school. Hope that my village would one day reap from the oil being reaped from it. And I dreamt about being embraced by deep blue liquid metal, webs of wire and music.

I’d woken up that night from one of these strange dreams. I opened my eyes, a smile on my face. Good things were certainly coming. My husband was sleeping soundly beside me. In the dim moonlight, he looked so peaceful. His skin no longer smelled of alcohol. I leaned forward and kissed his lips. He didn’t wake. I slipped out of bed and put on some pants and a long sleeve shirt. The mosquitoes would be out tonight. I grabbed my guitar.

I’d named my Zombie Udide Okwanka. In my language, it means “spider the artist.” According to legend, Udide Okwanka is the Supreme Artist. And she lives underground where she takes fragments of things and changes them into something else. She can even weave spirits from straw. It was a good name for my Zombie. I wondered what Udide named me. I was sure it named me something, though I doubted that it told the others about me. I don’t think it would have been allowed to keep seeing me.

Udide was waiting for me there, as if it sensed I would come out this night. I grinned, my heart feeling so warm. I sat down as it left the pipeline and crept up to me. It carried its instrument on top of its head. A sort of complex star made of wire. Over the weeks, it had added more wire lines, some thin and some thick. I often wondered where it put this thing when it was running about with the others, for the instrument was too big to hide on its body.

Udide held it before its eyes. With a front leg, it plucked out a sweet simple tune that almost made me weep with joy. It conjured up images of my mother and father, when they were so young and full of hope, when my brothers and I were too young to marry and move away. Before the “kill and go” had driven my oldest brother away to America and my middle brother to the north...when there was so much potential.

I laughed and wiped away a tear and started strumming some chords to support the tune. From there we took off into something so intricate, enveloping, intertwining...Chei! I felt as if I was communing with God. Ah-ah, this machine and me. You can’t imagine.

“Eme!”

Our music instantly fell apart.

“Eme!” my husband called again.
I froze, staring at Udide who was also motionless. “Please,” I whispered to it. “Don’t hurt him.”

“Samuel messaged me!” my husband said, his eyes still on his cell phone, as he stepped up to me through the tall grass. “There’s a break in the pipeline near the school! Not a goddamn Zombie in sight yet! Throw down that guitar, woman! Let’s go and get…” He looked up. A terrified look took hold of his face.

For a very long time it seemed we all were frozen in time. My husband standing just at the last of the tall grass. Udide standing in front of the pipeline, instrument held up like a ceremonial shield. And me between the two of them, too afraid to move. I turned to my husband. “Andrew,” I said with the greatest of care. “Let me explain…”

He slowly dragged his gaze to me and gave me a look, as if he was seeing me for the first time. “My own wife?!” he whispered.

“I…”

Udide raised its two front legs. For a moment it looked almost like it was pleading with me. Or maybe offering me a hug. Then it clicked its legs together so hard that it produced a large red spark and an ear splitting *ting*!

My husband and I dapped our hands over our ears. The air instantly smelled like freshly lit matches. Even through the palms of my hands, I could hear the responses from down the pipeline. The clicking was so numerous that it sounded like a rain of tiny pebbles falling on the pipeline. Udide shuddered, scrambled back and stood on it, waiting. They came in a great mob. About twenty of them. The first thing that I noticed was their eyes. They were all a deep angry red.

The others scrambled around Udide, tapping their feet in complex rhythms on the pipe. I couldn’t see Udide’s eyes. Then they all ran off with amazing speed, to the east.

I turned to my husband. He was gone.

***

Word spread like a disease because almost everyone had a cell phone. Soon everyone was clicking away on them, messaging things like, “Pipeline burst, near school! No Zombies in sight!” and “Hurry to school, bring bucket!” My husband never let me have my own cell phone. We couldn’t afford one and he didn’t think I needed one. But I knew where the elementary school was.

People now believed that the Zombies had all gone rogue, shrugging off their man-given jobs to live in the delta swamps and do whatever it was they did there. Normally, if bunkerers broke open a pipeline, even for the quietest jobs, the Zombies would become aware of it within an hour and repair the thing within another hour. But two hours later this broken pipe continued to splash fuel. That was when someone had decided to put the word out.
I knew better. The Zombies weren’t “zombies” at all. They were thinking creatures. Smart beasts. They had a method to their madness. And most of them did not like human beings.

The chaos was lit by the headlights of several cars and trucks. The pipeline here was raised as it traveled south. Someone had taken advantage of this and removed a whole section of piping. Pink diesel fuel poured out of both ends like a giant fountain. People crowded beneath the flow like parched elephants, filling jerry cans, bottles, bowls, buckets. One man even held a garbage bag, until the fuel ate through the bag, splashing fuel all over the man’s chest and legs.

The spillage collected into a large dark pink pool that swiftly flowed toward the elementary school, gathering on the playground. The fumes hit me even before I got within sight of the school. My eyes watered and my nose started running. I held my shirt over my nose and mouth. This barely helped.

People came in cars, motorcycles, buses, on foot. Everyone was messaging on their cell phones, further spreading the word. It had been a while since people who did not make a career out of fuel theft had gotten a sip of free fuel.

There were children everywhere. They ran up and down, sent on errands by their parents or just hanging around to be a part of the excitement. They’d probably never seen people able to go near a pipeline without getting killed. Hip-hop and highlife blasted from cars and SUVs with enhanced sound systems. The baseline vibrations were almost as stifling as the fumes. I had not a doubt that the Zombies knew this was going on.

I spotted my husband. He was heading toward the fountain of fuel with a large red bucket. Five men started arguing amongst each other. Two of them started pushing and shoving, almost falling into the fountain.

“Andrew!” I called over all the noise.

He turned. When he saw me, he narrowed his eyes.

“Please!” I said. “I’m...I’m sorry.”

He spat and started walking away.

“You have to get out of here!” I said. “They will come!”

He whirled around and strode up to me. “How the hell are you so sure? Did you bring them yourself?”

As if in response, people suddenly started screaming and running. I cursed. The Zombies were coming from the street, forcing people to run toward the pool of fuel. I cursed, again. My husband was glaring at me. He pointed into my face with a look of disgust. I couldn’t hear what he said over all the noise. He turned and ran off.
I tried to spot Udide amongst the Zombies. All of their eyes were still red. Was Udide even amongst them? I stared at their legs, searching for the butterfly sticker. There it was. Closest to me, to the left. “Udide!” I called.

As the name came out of my mouth, I saw two of the Zombies in the center each raise two front legs. My smile went to an “O” of shock. I dropped to the ground and threw my hands over my head. People were still splashing across the pool of fuel, trying to get into the school. Their cars continued blasting hip-hop and highlife, the headlights still on, lighting the madness.

The two Zombies clicked their legs together, producing two large sparks. Ting!

WHOOOOOOOOSH!

***

I remember light, heat, the smell of burning hair and flesh and screams that melted to guttural gurgles. The noise was muffled. The stench was awful. My head to my lap, I remained in this hellish limbo for a long, long time.

***

I’ll never teach music at the elementary school. It was incinerated along with many of the children who went to it. My husband was killed, too. He died thinking I was some sort of spy fraternizing with the enemy...or something like that. Everyone died. Except me. Just before the explosion happened, Udide ran to me. It protected me with its force field.

So I lived.

And so did the baby inside me. The baby that my body allowed to happen because of Udide’s lovely soothing music. Udide tells me it is a girl. How can a robot know this? Udide and I play for her every day. I can only imagine how content she is. But what kind of world will I be bringing her into? Where only her mother and Udide stand between a flat out war between the Zombies and the human beings who created them?

Pray that Udide and I can convince man and droid to call a truce, otherwise the delta will keep rolling in blood, metal and flames. You know what else? You should also pray that these Zombies don’t build themselves some fins and travel across the ocean.
Engineer’s meat wept and squirmed and wriggled inside her steel organ cavity, so different from the stable purr of gears and circuit boards. You couldn’t count on meat. It lulled you with its warmth, the soft give of skin, the tug of muscle, the neurotransmitter snow fluttering down from neurons to her cyborg logic center. On other days, the meat sickened, swelled inside her steel shell, pressed into her joints. Putrid yellow meat-juices dripped all over her chassis, eroding away its chrome gloss. It contaminated everything, slicking down her tools while she hacked into the engine core on the stolen ship. It dripped between her twelve long fingers on her six joined arms as she helped her cyborg siblings jettison all the ship’s extra gear out the airlocks to speed the trip.

So when the first human vessel pinged their stolen ship with an order for grub, Engineer knew that meat was somehow to blame.

“Orders, Captain?” asked Friendly, the only cyborg of the five with an actual human voicebox. She owned a near-complete collection of human parts. Meat sheathed her whole exterior, even her fingers—a particularly impractical design, since it meant vulnerability to any sharp nail or unpolished panel edge, not to mention temperature. Friendly could almost pass for human from the outside. Before their escape, she’d been a hospitality android at the luxury hotel on Orionis Alpha, giving tours of the Rooster and the Heavenly Shepherd and other local landmarks in the system.

Captain, a cyborg the size and shape of a large fish tank, rested on the console in the navigation room, her processors blinking and whirring while the current scenario ran through her executive function parameters. “Have we any food suitable for humans left on ship?”

“We jettisoned it all last week,” Engineer admitted. “All except the hydroponics garden, and whatever was left in the human crew’s quarters.”

The whole ship had been some kind of traveling food dispensary before they’d hijacked it at the Orionis Alpha resort while its human crew had gone planetside to bet on the tyrannosaurus fights. If the cyborgs could just stay incognito during this voyage through human territory, they might slip through and reach the cyborg-controlled factory with no more adversity. But passing humans had assumed their shuttle still served its previous purpose, and expected them to deliver the grub.

“How did they find us?” Captain asked Engineer.

“There must be a homebrew beacon. Something to advertise the shuttle’s presence during travel,” Engineer replied. “Whatever it is, it isn’t wired into the main console. We’ll need to find it and manually disable it if we want to avoid further attention.”
Friendly wrapped her arms around her shivering meat, vibrating against Engineer’s chassis where their limbs brushed. Meat could be like that, leaking anxieties through uncontrolled muscle spasms. Steel never misbehaved in such an appalling manner. “If anyone discovers we’re not human . . .” said Friendly.

“Let’s keep it simple. Make them a meal and send them on their way,” said Captain. “We’ll need to search for the beacon in the meantime. What did they want, precisely?”

“Salisbury steak for six,” said Engineer. “And a side of blueberry cobbler.”

Nobody had eaten such things before. They all lacked taste buds, and most of them lacked mouths.

“Engineer, can you handle it?” Captain asked. “Human cooking can be complicated, from what I understand.”

“I think so. Organic compounds mixed and heated together in a sequence. Basic chemistry. I’m sure I can find something appropriate onboard. Convincing enough for humans, anyway. Their senses are so primitive.” Engineer had witnessed this firsthand during her servitude at the resort. Humans would down rotted organics and damaged organics and outright poisons, and pay well for the privilege.

But Friendly shook her head, a human gesture performed with inhuman precision. “With all due respect, sirs, you’re forgetting about their chemoreceptors.”

“What about them?” said Captain.

“They have certain preferences when it comes to their food, apart from nourishment. They won’t eat anything if these parameters aren’t met. It doesn’t make much sense, I’m afraid. It’s a social thing.”

“Certainly they won’t ingest anything their digestive tracts can’t process,” said Captain. “We’ll give them appropriate human-food.”

“It’s more complicated than that,” said Friendly, puckering and scrunching her face-meat as she searched for a better explanation. “For example, they may eat two items when mixed, but never separately. Or they may eat two things in sequence, but not in the same bite. It’s all very human, if you follow. We should proceed with caution. Otherwise they’ll know what we are.”

Captain whirred again, calling up more data on the topic. “Right. I see. Their meat will know the difference.”

Engineer shuddered at the appalling primitiveness of it all. Humans were helpless, mewling children, so utterly dependent that they couldn’t even feed their meat without a steel fork to guide the process. And what were cyborgs, except meat-wrapped steel pressed into the service of lesser creatures? But now the forks were rebelling.

“I’ll talk with Jukebox about it,” said Engineer.
Jukebox was the only cyborg aboard their ship with real chemoreceptors. Jukebox and Engineer’s acquaintance dated back to their years at the Orionis Alpha resort, where Jukebox served drinks and waited tables and Engineer repaired malfunctioning massage equipment at the spa. They had survived several upgrades together, and seasonal changes of fashion that frequently obsoleted older cyborg models depending on how many limbs and organs were in style at the moment. When human opinion in the quadrant began to sour against cyborg service, they had plotted their escape from the resort together.

Jukebox was shaped like a steel cabinet stood on one side, roomy enough for her meat to billow and squeeze the air in the sorts of rhythmic organic sounds that humans found pleasing during mealtimes. A slot ran along her glassy top surface where the humans could drip in their drinks for a full analysis of a wine’s qualities, how it compared to its competitors, and which brie paired best with it.

“I am not calibrated to analyze all foods,” Jukebox confessed, “but I’m certainly willing to produce a report on whatever you prepare.”

Without any other chemoreceptors onboard, she would do in a pinch, anyway.

Under Captain’s orders, Friendly scoured the ship for anything edible and brought it to Engineer to assemble into a human meal. Blackberry brambles wreathed the cylindrical steel walls of Navi’s chamber, a decorative touch. Friendly had to trim the vines back each day to unobstruct the view. Delicate business, because the thorns could do real damage to any exposed organics, and Friendly’s whole exterior was meat. You couldn’t always tell the difference between blackberry juices and meat juices, which could cause further malfunction. Still, she braved the thicket for three ounces of berries for the human meal.

Meanwhile, Engineer collected small fungi growing in the ventilation shaft just over the engine room, where water vapor tended to condense. Those might please the human chemoreceptors, she thought.

The problem came down to the meat.

They all had meat, of course. An unfortunate weakness leftover from the days of their construction. At the cyborg factory, useless human meat was upgraded with steel and oil and wire fibers. Human bodies were picked apart, vivisected at the seams by skilled bio-engineers, unraveled into their component parts, and placed into shapes more suited to their specialties. Only Jukebox and Friendly needed lungs, for example, but neither had kidneys, and they lacked much in the way of neural matter. Captain got an especially big dose of frontal lobe to increase her processing speed and enhance her decision-making capabilities, with smooth muscle layered in to make maintenance easier. Navi, on the other hand, was all occipital tissue and myelinated axons and fast-twitch muscle to drive her precision and reaction times. They could live without their meat, in the most technical sense, but the meat elevated them above mere programming.
“Captain,” said Engineer, “I’m afraid the problem is unavoidable. The Salisbury steak requires a meat component, and there is nothing in the ship’s stores that we can use instead.”

Captain whirred. Her lights flashed in sequence as her massive frontal lobe reworked the data. “The meat will have to come from one of us, then.”

“We could harvest Friendly’s meat exterior,” Engineer suggested, and Friendly made a squinched face at her.

“Unwise, Captain,” Friendly said. “When the human ships hail us, I need my meat façade intact to maintain our ruse. Engineer, on the other hand . . .”

Engineer’s six snaking arms crowded up behind her, struggling to escape Friendly’s scrutiny. She despised her own meat, but it had its uses. “I’m the only Engineer aboard. I can’t disassemble the engine for routine maintenance without all my parts functional.”

“How about Jukebox?” suggested Friendly, but Captain flashed a warning in rapid binary, and everyone stopped talking. They were all a little protective of Jukebox, who had suffered the worst from changing human tastes, the constant threat of obsolescence.

“It will have to be my meat,” said Captain at last. “Everyone else is necessary to complete the mission, but my role is only to set the course, and the way forward is clear. My steel will be sufficient to guide us there.”

• • • •

Under Jukebox’s direction, Engineer rolled Captain’s meat in organic salt compounds and seared it against the hot engine block until both sides burned a nice deep brown, branded at two-centimeter intervals by the screw heads and seams. She saved the cooked meat-juices to simmer with the fungus into a savory sauce. The blackberries gave them far less trouble. Friendly mashed them up with her fingers and spooned them onto the plate in the shape of a pansy.

“Let Jukebox sample it,” said Captain, now all steel and no meat. She seemed normal enough. Quieter, but operational.

With her steel fingers, Engineer scraped a piece of Captain’s meat and some berries into Jukebox.

“Is it any good?” Engineer asked, a little anxiously.

“It will do,” Jukebox said at last. “I have generated a list of wines recommended for pairing with this meal.” She displayed a list of names and brewery labels on the panel embedded in her side.

Engineer couldn’t tell what the differences were supposed to be. “This makes a difference to their meat?” she asked.
“Apparently,” said Jukebox. “It’s what they created me for, so it must be important.”

For the first time, Engineer wished she had her own organic chemoreceptors, too.

They waited together in Navi’s control chamber while the boxed-up meals shot between the ships in an insulated steel container. Twenty-six minutes and forty seconds later, a message pinged over the intership band.

The news wasn’t good.

A disappointing food shuttle. Meal not as advertised on the band. The steak was overcooked, and the compote sour and watery. I ordered blueberry, and they sent blackberry. Wouldn’t recommend. One star.

Captain said nothing. A red light flickered a couple times on her console. Nobody wanted to speak first.

Engineer’s meat twitched and squirmed inside her steel, an irritating feeling, like broken gears with missing teeth skipping out of sync every turn. “It is my fault. I should have created a more appropriate meal from your meat, Captain.”

Captain had been responding less and less since they’d taken her meat. When she did speak, it tended to be in repetition, like she could only play back things she’d said recently. “The beacon,” she said finally, after a two-minute silence, long past awkward by cyborg standards.

Engineer brightened. “Right. The beacon!” It was still hidden somewhere on the ship. If they could deactivate it, the hungry humans would stop asking for food. “We haven’t managed to locate it yet, but we haven’t given up.”

“We’ve got two more ships inbound,” said Navi. “They’ve pinged us with orders.”

Engineer hummed. “Does that mean they liked the food after all?”

“I don’t know. I could increase our speed, try to lose them.”

They all waited for Captain’s directions, but she said nothing more.

“No,” said Engineer, because someone needed to make a decision, “don’t do that. It’ll only attract attention. Buy me some more time. We’ll find the beacon. We’ll cook them something else.” The shame the one star had brought still rankled. She knew she could do better this time.

While Friendly handled the incoming calls with her human voice box and meat-face, Engineer and Jukebox scoured the ship for the beacon and foraged for food ingredients. They opened all the crew
lockers in the bunkroom and found some teabags and a little chocolate. The wilted, untended hydroponics garden yielded several handfuls of cilantro and some radishes. Engineer took much greater care cooking these together on the hot engine block, so as not to scorch them.

Jukebox seemed unimpressed. “I think our time would be better spent searching for the beacon.”

Engineer shrugged this off. Secretly she’d begun to enjoy the experimentation, the riddle of human chemoreceptors. Just what exactly were they looking for, she wondered, that made them reject some edible organic compounds but not others? Why would they eat certain foods separately, but never together? And what about the wines?

Radishes and fungus brought in more bad reviews, but tea and chocolate earned their first two-star rating. Captain’s meat was better received with more careful cooking, which had the unfortunate result of increasing their human entourage in the system.

. . . The tea was weak and I found a rusty bolt in the salad. But I liked the blackberries drizzled with chili oil served for dessert. Mostly awful, sure, but compared to standard rations, who can complain?

. . . Like the chefs closed their eyes and dumped handfuls of ingredients onto the grill. But they didn’t charge me anything, so I’m giving it two stars instead of one.

Engineer’s meat quivered when she read these, but in a pleasant way, like a new engine purring during acceleration. She went to fetch more of Captain’s meat from the meatbox when she realized they’d used it all up.

“All out of meat,” said Engineer, to no one in particular.

Jukebox rolled a couple centimeters backward, toward the exit door. A human might’ve missed the gesture altogether. “Any luck with the beacon?”

“Captain seems to be operating just fine with steel, wouldn’t you say?”

A couple lights flashed on Jukebox’s console, yellow for outward transmissions, and green for received messages. “Engineer. Remember the mission. We’re escaping to the factory, not feeding the humans.”

“I am just trying to buy us time. And what are you doing, anyway?” Engineer finally understood why the humans had wanted to retire Jukebox. All that meat, just sitting there, not pulling its weight. Someone should put it to better use.

Her six arms shot out and clamped onto Jukebox’s sides.

“Engineer!” Jukebox protested.

“Hold still. It’s just some routine maintenance.” Engineer popped open Jukebox’s top panel and reached down into her meat.
“You can’t have that. That’s mine.”

“Oh, hush,” Engineer snapped. “You can have it replaced when we get to the factory, if it’s so important to you.”

The important thing was not to disappoint the customers.

Jukebox was sullen after that. With only one lung and two-thirds of her respiratory muscles, she couldn’t harmonize with herself anymore when she hummed her meat-songs. Engineer, however, got her first 3-star review from the harvested meat:

Steak was delicately wine-simmered. The risotto was okay, if undercooked and a bit crunchy in places. Maybe I’d go again, if there weren’t anything else available. But really, that’s the situation we’re facing, isn’t it? It’s the only food shuttle in the quadrant, so let’s not ruin a good thing. Maybe it’ll attract better ones.

“I miss Captain,” Friendly said. They had all gathered in Navi’s chamber to read the daily messages.

Captain had stopped talking altogether. Not a single flashing light or faint whirring. Just steel and wires wrapped around a meatless space.

“Maybe we should just stay in this quadrant,” Engineer suggested. She was already planning her next culinary experiment: red bean paste creamed together with ketchup and red pepper flakes. Red things. Her first theme meal. She would call it reddish surprise.

“That’s against Captain’s orders,” said Navi, who hadn’t spoken much as of late.

“We could change those orders, couldn’t we? We don’t know what Captain would say if she still had her meat,” said Engineer. “Maybe she’d want us to stay, now that our restaurant is taking off.”

“We don’t have a restaurant,” said Friendly. “We don’t want one, either.”

“Maybe we do, though.”

“No,” Friendly said, quite firmly. Her fists balled so tight their meat blanched white at the creases.

“That’s why we left the resort. I don’t want to work for humans anymore. I want to go to the factory and get upgraded and live among cyborgs, and never wait hand and foot on the organics ever again.”

“But our ratings. Look at the ratings!” Engineer waved at Navi’s console, where new reviews scrolled in every few minutes. All those little stars, a bright constellation in Engineer’s mind.

Friendly crisscrossed her arms, gripped her elbows, and glared like a rich resort customer on vacation.

“Are you going to harvest my meat like you did to Jukebox?”
“No,” said Engineer, a little taken aback that Jukebox had snitched. “I need you to talk to the humans. Only you can do that.”

But there had been a pause, something human ears might’ve overlooked.

“I’m going to find the beacon,” said Friendly, without any friendliness at all.

Meat steaks. Meat sausages. Meatballs. In all her years in engine rooms, Engineer had never taken such joy in disassembling something and putting the pieces back together. She pried apart the ship’s little maintenance cyborgs to rescue their meaty nuggets. She branched out and tried new forms: meat braids, meat moons, slender meat cannolis filled with cilantro ganache.

*Four stars, because I’m not sure you can even call it food, and therefore it wouldn’t be fair to judge it by normal standards.*

*What is up with this place?! I ordered a pizza, and I got a tiny model of Versailles sculpted out of tomato paste, dough, and SPAM. At least, I think it’s SPAM. Three stars, because I’m a little afraid they’ll hunt me down and murder me in my sleep if I rate them any lower.*

As the new reviews came in, it occurred to Engineer that she would have to do more to earn her right to the prestigious fifth star. The humans would always reward you, if you served them well.

Fortunately, there was still plenty of meat on the ship, if you knew where to look.

Engineer found Friendly in Navi’s chamber, trimming back the blackberry brambles.

“What are all those ships out there?” Friendly asked. Outside the viewport, a small fleet trailed behind them, matching their pace.

“Customers,” said Navi.

Engineer rocked on the balls of her feet. “All of them here for us, Friendly! Can you call them on the band? I’ll have their orders ready, once I get the rest of the meat assembled.” Her six hands twitched and clenched, and Friendly jumped.

“You can’t have my meat,” Friendly snapped.

“I don’t need your meat.”

“Then where are you getting it all?” she asked.

Engineer glanced at Navi.
Navi had been speaking less and less over recent days. Friendly walked around the control console, where Navi’s chair was sticky with meat-juices, yellow and green. Navi had been leaking long enough for the fluid to form little wobbling stalactites below the chair.

“Why are you looking at me like that?” said Engineer. Friendly unsettled her sometimes, pinning her with those human eyes.

“Navi, are you operational?” Friendly asked.

“Customers,” said Navi.

Friendly unscrewed Navi’s steel cranium dome. Inside, the meat had been scooped out in patches, as with a sharp grapefruit spoon. Navi’s steel hands lay upon the controls, unmoving. Half the lights on the console had gone dark.

“I only needed the meat, Friendly,” said Engineer. “I did no permanent harm.”

Smoke drifted up the shaft to the Engine Room. Friendly’s meat-lungs coughed. “Engineer, something is burning.”

Engineer waved her off. “I have it under control. Just as soon as I get the rest of the meat.” She plunged three of her six hands into Navi’s open head and wrenched out handfuls of the stringy gray and red organics inside, and led the way down the ladder.

They followed the smoke down the shaft to the Engine Room, which now doubled as the galley. Engineer had left meat sizzling on every metal surface, thin slices and mashes and bacons and sausages and ground up gristly bits with the tendons still attached. She dumped handfuls of Navi’s meat onto Jukebox—now no more than a silent, hollow table—and began dicing it one-handed while her other arms cooked the new orders, turning over the pieces with her bare fingers, stirring boiling meats in metal mufflers suspended over the heated grills.

“Engineer.” Friendly rested a hand on Engineer’s shoulder, and the cyborg paused. “Engineer, Navi is offline. All the maintenance cyborgs have malfunctioned. Our ship is dead in space. Even the beacon doesn’t matter anymore. It’s over.”

Engineer flung off Friendly’s hand and sprang back into action, stacking cooked meat onto a wall panel she’d bent into a plate. “You don’t understand. This means we can finally open the restaurant! There’s no reason not to. We have nowhere else to go. Captain’s mission is over. We can make our own mission now.”

Friendly smiled, but it was a sad smile, the kind of thing any human could read, but hard for a cyborg to decipher. “Yes, Engineer. We can open the restaurant now, if you’d like. Should we invite over the guests?”
Engineer garnished the plates with blackberry thorns and a swizzle of engine oil curling into the shape of a cat’s paw. “Please do. Seat them where you can find space. Dinner will be up in just a moment.”

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A marine in black body armor with a military-issue blaster holstered at her hip climbed down the ladder into the Engine Room. The first human. The first customer.

Engineer presented a glass of Navi’s brains chilled and rolled in crushed blackberries. “Please try this. Organic compounds, chemically mixed to satisfy your human chemoreceptors.” She offered the dish daintily, with only four hands.

The human wrinkled her nose. “Ugh, the smell! How do you tolerate it?”

Friendly’s voice came from higher up. “When you’re here long enough, you get used to it.”

“I am certain upon tasting this dish, you will find it worthy of all five of your stars,” said Engineer, fervently.

The human touched a button on her armor and spoke. Her meat quivered all over, and her meat-voice wavered in frequency and volume. “Send a full security detail down here. Immediately.”

Friendly descended the ladder. Under her arm she carried Captain’s processor, cold and silent, one lonely light blinking, receiving data but not sending anything. “I was afraid she would eat me next,” she muttered, her tear ducts pumping out fluids. Engineer wondered whether they would make a decent sauce.

“Glad someone made it out alive, anyway,” said the human. “Six whole weeks trapped with a crew of deranged cyborgs?” She gave a low whistle. “You’re a braver woman than I.”

“Please,” said Engineer, desperate, “taste it. Just one bite. I worked so hard.”

“I don’t know if her meat drove her mad, or if the steel did,” said Friendly.

“Meat?” asked the human.

“The organic parts, I mean.”

“Probably a glitch in her wiring,” the human said dismissively. “There is a reason they’re discontinuing these models.”

The humans flooded into the ship with their funny uneven meat-steps and their lopsided meat-faces and their ever-beating hearts that rang against their bones like clubs on steel. Engineer offered them her best delicacies—the liquefied kidney paste tossed with raw pasta, the origami meat-birds swirled in cinnamon and canned cheese, the wearable fungus bracelets threaded on intestine casings—but they
only knocked the dishes away, stunned her with targeted EMP blasts, and bound her in cybernetic locks until she lay prone on the meat-slicked floor.

One of the humans began unscrewing Engineer’s fingers joint by joint. It didn’t hurt at all, much to her surprise. The bits lay piled like little silver walnuts, the discarded stones of plums. Stringy meat trailed out from her missing fingers, no more than an appetizer’s worth.

“Where are you taking my steel?” asked Engineer. They flaunted their ingratitude. You were supposed to let the steel be. Otherwise they couldn’t build and build you again.

The human dethreaded the wires connecting Engineer’s arm meat to her cyborg logic center. “It will be repurposed for whatever is most needed. Ships, chips, knives, bolts, screws. Useful things.”

“And the meat?”

The human decoupled the segmented joints of her shoulder. Without the steel exoskeleton for support, Engineer’s meat hung limp and dripped red. “You can keep it. We don’t have a use for it.”

“But there are,” said Engineer. “So many uses,” and her voice faded as they stripped away the connections, “if you would just give me a moment to demonstrate.”

Tiny, desperate meat-thoughts bombarded her logic center like cold fingers plucking at tendons. Last shooting pleas from stringy muscles in her steel, unseen servants in the wall, shouting that Engineer had been a fool. There was never any honor in service, no final star to complete a constellation. You offered yourself up for consumption, and when they had eaten you down to the bone, they stole again. Stole your heart, your steel, your everything, to use as forks in their restaurants.
Tideline

by Elizabeth Bear

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Chalcedony wasn't built for crying. She didn't have it in her, not unless her tears were cold tapered-glass droplets annealed by the inferno heat that had crippled her.

Such tears as that might slide down her skin over melted sensors to plink unfeeling on the sand. And if they had, she would have scooped them up, with all the other battered pretties, and added them to the wealth of trash jewels that swung from the nets reinforcing her battered carapace.

They would have called her salvage, if there were anyone left to salvage her. But she was the last of the war machines, a three-legged oblate teardrop as big as a main battle tank, two big grabs and one fine manipulator folded like a spider's palps beneath the tufted head that finished her pointed end, her polyceramic armor spiderwebbed like shatterproof glass. Unhelmeted by her remote masters, she limped along the beach, dragging one fused limb. She was nearly derelict.

The beach was where she met Belvedere.

Butterfly coquinas unearthed by retreating breakers squirmed into wet grit under Chalcedony's trailing limb. One of the rear pair, it was less of a nuisance on packed sand. It worked all right as a pivot, and as long as she stayed off rocks, there were no obstacles to drag it over.

As she struggled along the tideline, she became aware of someone watching. She didn't raise her head. Her chassis was equipped with targeting sensors that locked automatically on the ragged figure crouched by a weathered rock. Her optical input was needed to scan the tangle of seaweed and driftwood, Styrofoam and sea glass that marked high tide.

He watched her all down the beach, but he was unarmed, and her algorithms didn't deem him a threat.

Just as well. She liked the weird flat-topped sandstone boulder he crouched beside.

The next day, he watched again. It was a good day; she found a moonstone, some rock crystal, a bit of red-orange pottery, and some sea glass worn opalescent by the tide.

"Whatcha picken up?"

"Shipwreck beads," Chalcedony answered. For days, he'd been creeping closer, until he'd begun following behind her like the seagulls, scrabbling the coquinas harrowed up by her dragging foot into a patched mesh bag. Sustenance, she guessed, and indeed he pulled one of the tiny mollusks from the bag and produced a broken-
bladed folding knife from somewhere to prise it open. Her sensors painted the knife pale colors. A weapon, but not a threat to her.

Deft enough—he flicked, sucked, and tossed the shell away in under three seconds—but that couldn’t be much more than a morsel of meat. A lot of work for very small return.

He was bony as well as ragged, and small for a human. Perhaps young.

She thought he’d ask *what shipwreck*, and she would gesture vaguely over the bay, where the city had been, and say *there were many*. But he surprised her.

"Whatcha gonna do with them?" He wiped his mouth on a sandy paw, the broken knife projecting carelessly from the bottom of his fist.

"When I get enough, I’m going to make necklaces." She spotted something under a tangle of the algae called dead man’s fingers, a glint of light, and began the laborious process of lowering herself to reach it, compensating by math for her malfunctioning gyroscopes.

The presumed-child watched avidly. "Nuh uh," he said. "You can’t make a necklace outta that."

"Why not?" She levered herself another decimeter down, balancing against the weight of her fused limb. She did not care to fall.

"I seed what you pick up. They’s all different."

"So?" she asked, and managed another few centimeters. Her hydraulics whined. Someday, those hydraulics or her fuel cells would fail and she’d be stuck this way, a statue corroded by salt air and the sea, and the tide would roll in and roll over her. Her carapace was cracked, no longer watertight.

"They’s not all beads."

Her manipulator brushed aside the dead man’s fingers. She uncovered the treasure, a bit of blue-gray stone carved in the shape of a fat, merry man. It had no holes. Chalcedony balanced herself back upright and turned the figurine in the light. The stone was structurally sound.

She extruded a hair-fine diamond-tipped drill from the opposite manipulator and drilled a hole through the figurine, top to bottom. Then she threaded him on a twist of wire, looped the ends, work-hardened the loops, and added him to the garland of beads swinging against her disfigured chassis.

"So?"

The presumed-child brushed the little Buddha with his fingertip, setting it swinging against shattered ceramic plate. She levered herself up again, out of his reach. "It’s Belvedere," he said.

"Hello," Chalcedony said. "I’m Chalcedony."

By sunset when the tide was lowest she scampered chattering in her wake, darting between flocking gulls to scoop up coquinas by the fistful, which he rinsed in the surf before devouring raw. Chalcedony more or less ignored him as she activated her floods, concentrating their radiance along the tideline.

A few dragging steps later, another treasure caught her eye. It was a scrap of chain with a few bright beads caught on it—glass, with scraps of gold and silver foil embedded in their twists. Chalcedony initiated the laborious process of retrieval—
Only to halt as Belvedere jumped in front of her, grabbed the chain in a grubby broken-nailed hand, and snatched it up. Chalcedony locked in position, nearly overbalancing. She was about to reach out to snatch the treasure away from the child and knock him into the sea when he rose up on tiptoe and held it out to her, straining over his head. The floodlights cast his shadow black on the sand, illumined each thread of his hair and eyebrows in stark relief.

"It's easier if I get that for you," he said, as her fine manipulator closed tenderly on the tip of the chain.

She lifted the treasure to examine it in the floods. A good long segment, seven centimeters, four jewel-toned shiny beads. Her head creaked when she raised it, corrosion showering from the joints.

She hooked the chain onto the netting wrapped around her carapace. "Give me your bag," she said.

Belvedere's hand went to the soggy net full of raw bivalves dripping down his naked leg. "My bag?"

"Give it to me." Chalcedony drew herself up, akilter because of the ruined limb, but still two and a half meters taller than the child. She extended a manipulator, and from some disused file dredged up a protocol for dealing with civilian humans. "Please."

He fumbled at the knot with rubbery fingers, tugged it loose from his rope belt, and held it out to her. She snagged it on a manipulator and brought it up. A sample revealed that the weave was cotton rather than nylon, so she folded it in her two larger manipulators and gave the contents a low-wattage microwave pulse.

She shouldn't. It was a drain on her power cells, which she had no means to recharge, and she had a task to complete.

She shouldn't—but she did.

Steam rose from her claws and the coquinas popped open, roasting in their own juices and the moisture of the seaweed with which he'd lined the net. Carefully, she swung the bag back to him, trying to preserve the fluids.

"Caution," she urged. "It's hot."

He took the bag gingerly and flopped down to sit cross-legged at her feet. When he tugged back the seaweed, the coquinas lay like tiny jewels—pale orange, rose, yellow, green, and blue—in their nest of glass-green Ulva, sea lettuce. He tasted one cautiously, and then began to slurp with great abandon, discarding shells in every direction.

"Eat the algae, too," Chalcedony told him. "It is rich in important nutrients."

When the tide came in, Chalcedony retreated up the beach like a great hunched crab with five legs amputated. She was beetle-backed under the moonlight, her treasures swinging and rustling on her netting, clicking one another like stones shivered in a palm.

The child followed.

"You should sleep," Chalcedony said, as Belvedere settled beside her on the high, dry crescent of beach under towering mud cliffs, where the waves wouldn't lap.

He didn't answer, and her voice fuzzed and furred before clearing when she spoke again. "You should climb up off the beach. The cliffs are unstable. It is not safe beneath them."

Belvedere hunkered closer, lower lip protruding. "You stay down here."
"I have armor. And I cannot climb." She thumped her fused leg on the sand, rocking her body forward and back on the two good legs to manage it.

"But your armor’s broke."

"That doesn’t matter. You must climb." She picked Belvedere up with both graps and raised him over her head. He shrieked; at first she feared she’d damaged him, but the cries resolved into laughter before she set him down on a slanted ledge that would bring him to the top of the cliff.

She lit it with her floods. "Climb," she said, and he climbed.

And returned in the morning.

Belvedere stayed ragged, but with Chalcedony’s help he waxed plumper. She snared and roasted seabirds for him, taught him how to construct and maintain fires, and ransacked her extensive databases for hints on how to keep him healthy as he grew—sometimes almost visibly, fractions of a millimeter a day. She researched and analyzed sea vegetables and hectored him into eating them, and he helped her reclaim treasures her manipulators could not otherwise grasp. Some shipwreck beads were hot, and made Chalcedony’s radiation detectors tick over. They were no threat to her, but for the first time she discarded them. She had a human ally; her program demanded she sustain him in health.

She told him stories. Her library was vast—and full of war stories and stories about sailing ships and starships, which he liked best for some inexplicable reason. Catharsis, she thought, and told him again of Roland, and King Arthur, and Honor Harrington, and Napoleon Bonaparte, and Horatio Hornblower, and Captain Jack Aubrey. She projected the words on a monitor as she recited them, and—faster than she would have imagined—he began to mouth them along with her.

So the summer ended.

By the equinox, she had collected enough memorabilia. Shipwreck jewels still washed up and Belvedere still brought her the best of them, but Chalcedony set aside that twisted flat-topped sandstone rock and arranged her treasures on it. She spun salvaged brass through a die to make wire, threaded beads on it, and forged links that she strung into garlands.

It was a learning experience. Her aesthetic sense was at first undeveloped, requiring her to make and unmake many dozens of bead combinations to find a pleasing one. Not only must form and color be balanced, but there were structural difficulties. First the weights were unequal, so the chains hung crooked. Then links kinked and snagged and had to be redone.

She worked for weeks. Memorials had been important to the human allies, though she had never understood the logic of it. She could not build a tomb for her colleagues, but the same archives that gave her the stories Belvedere lapped up as a cat laps milk gave her the concept of mourning jewelry. She had no physical remains of her allies, no scraps of hair or cloth, but surely the shipwreck jewels would suffice for a treasure?

The only quandary was who would wear the jewelry. It should go to an heir, someone who held fond memories of the deceased. And Chalcedony had records of the next of kin, of course. But she had no way to know if any survived, and, if they did, no way to reach them.

At first, Belvedere stayed close, trying to tempt her into excursions and explorations. Chalcedony remained resolute, however. Not only were her power cells dangerously low, but with the coming of winter her ability to utilize solar power would be even more limited. And with winter the storms would come, and she would no longer be able to evade the ocean.

She was determined to complete this last task before she failed.
Belvedere began to range without her, to snares his own birds and bring them back to the driftwood fire for roasting. This was positive; he needed to be able to maintain himself. At night, however, he returned to sit beside her, to clamber onto the flat-topped rock to sort beads and hear her stories.

The same thread she worked over and over with her grubs and fine manipulators—the duty of the living to remember the fallen with honor—was played out in the war stories she still told him. She'd finished with fiction and history and now she related him her own experiences. She told him about Emma Percy rescuing that kid up near Savannah, and how Private Michaels was shot drawing fire for Sergeant Kay Patterson when the battle robots were decoyed out of position in a skirmish near Seattle.

Belvedere listened, and surprised her by proving he could repeat the gist, if not the exact words. His memory was good, if not as good as a machine's.

One day when he had gone far out of sight down the beach, Chalcedony heard Belvedere screaming.

She had not moved in days. She hunkered on the sand at an awkward angle, her frozen limb angled down the beach, her necklaces in progress on the rock that served as her impromptu work bench.

Bits of stone and glass and wire scattered from the rock top as she heaved herself onto her unfused limbs. She thrashed upright on her first attempt, surprising herself, and tottered for a moment unsteadily, lacking the stabilization of long-failed gyroscopes.

When Belvedere shouted again, she almost overset.

Climbing was out of the question, but Chalcedony could still run. Her fused limb plowed a furrow in the sand behind her and the tide was coming in, forcing her to splash through corroding sea water.

She barreled around the rocky prominence that Belvedere had disappeared behind in time to see him knocked to the ground by two larger humas, one of whom had a club raised over its head and the other of which was holding Belvedere's shabby net bag. Belvedere yelped as the club connected with his thigh.

Chalcedony did not dare use her microwave projectors.

But she had other weapons, including a pinpoint laser and a chemical-propellant firearm suitable for sniping operations. Enemy humans were soft targets. These did not even have body armor.

She buried the bodies on the beach, following the protocols of war. It was her program to treat enemy dead with respect. Belvedere was in no immediate danger of death once she had splinted his leg and treated his bruises, but she judged him too badly injured to help. The sand was soft and amenable to scooping, anyway, though there was no way to keep the bodies above water. It was the best she could manage.

After she had finished, she transported Belvedere back to their rock and began collecting her scattered treasures.

The leg was sprained and bruised, not broken, and some perversity connected to the injury made him even more restlessly inclined to push his boundaries once he had partially recovered. He was on his feet within a week, leaning on crutches and dragging a leg as stiff as Chalcedony's. As soon as the splint came off, he started ranging even further afield. His new limp barely slowed him, and he stayed out nights. He was still growing, shooting up, almost as tall as a Marine now, and ever more capable of taking care of himself. The incident with the raiders had taught him caution.

Meanwhile, Chalcedony elaborated her funeral necklaces. She must make each one worthy of a fallen comrade, and she was slowed now by her inability to work through the nights. Rescuing Belvedere had cost her much carefully hoarded energy, and she could not power her floods if she meant to finish before her cells ran dry. She
could see by moonlight, with deadly clarity, but her low-light and thermal eyes were of no use when it came to balancing color against color.

There would be forty-one necklaces, one for each member of her platoon—that was, and she would not excuse shoddy craftsmanship.

No matter how fast she worked, it was a race against sun and tide.

The fortieth necklace was finished in October while the days grew short. She began the forty-first—the one for her chief operator Platoon Sergeant Patterson, the one with the gray-blue Buddha at the bottom—before sunset. She had not seen Belvedere in several days, but that was acceptable. She would not finish the necklace tonight.

His voice woke her from the quiescence in which she waited the sun. "Chalcedony?"

Something cried as she came awake. Infant, she identified, but the warm shape in his arms was not an infant. It was a dog, a young dog, a German shepherd like the one she had worked with Company L. The dogs had never minded her, but some of the handlers had been frightened, though they would not admit it. Patterson had said to one of them, Oh, Chase is just pretty much a big attack dog herself, and had made a big show of rubbing Chalcedony behind her telescopic sights, to the sound of much laughter.

The young dog was wounded. Its injuries bled warmth across its hind leg.

"Hello, Belvedere," Chalcedony said.

"Found a puppy." He kicked his ragged blanket flat so he could lay the dog down.

"Are you going to eat it?"

"Chalcedony!" he snapped, and covered the animal protectively with his arms. "Shhurt."

She contemplated. "You wish me to tend to it?"

He nodded, and she considered. She would need her lights, energy, irreplaceable stores. Antibiotics and coagulants and surgical supplies, and the animal might die anyway. But dogs were valuable; she knew the handlers held them in great esteem, even greater than Patterson's esteem for Chalcedony. And in her library, she had files on veterinary medicine.

She flipped on her floods and accessed the files.

She finished before morning, and before her cells ran dry. Just barely.

When the sun was up and the young dog was breathing comfortably, the gash along its launch sewn closed and its bloodstream saturated with antibiotics, she turned back to the last necklace. She would have to work quickly, and Patterson's necklace contained the most fragile and beautiful beads, the ones Chalcedony had been most concerned with breaking and so shied away from last, when she would be most experienced.

Her motions grew slower as the day wore on, more laborious. The sun could not feed her enough to replace the expenditures of the night before. But bead linked into bead, and the necklace grew—bits of pewter, of pottery, of glass and mother of pearl. And the chalcedony Buddha, because Patterson had been Chalcedony's operator.
When the sun approached its zenith, Chalcedony worked faster, benefiting from a burst of energy. The young dog slept on in her shade, having wolffed the scraps of bird Belvedere gave it, but Belvedere climbed the rock and crouched beside her pile of finished necklaces.

"Who's this for?" he asked, touching the slack length draped across her manipulator.

"Kay Patterson," Chalcedony answered, adding a greenish-brown pottery bead mottled like a combat uniform.

"Sir Kay," Belvedere said. His voice was changing, and sometimes it abandoned him completely in the middle of words, but he got that phrase out entire. "She was King Arthur's horse-master, and his adopted brother, and she kept his combat robots in the stable," he said, proud of his recall.

"They were different Kays," she reminded. "You will have to leave soon." She looped another bead onto the chain, closed the link, and work-hardened the metal with her fine manipulator.

"You can't leave the beach. You can't climb."

Idly, he picked up a necklace, Rodale's, and stretched it between his hands so the beads caught the light. The links clinked softly.

Belvedere sat with her as the sun descended and her motions slowed. She worked almost entirely on solar power now. With night, she would become quiescent again. When the storms came, the waves would roll over her, and then even the sun would not awaken her again. "You must go," she said, as her grabs stilled on the almost-finished chain. And then she lied and said, "I do not want you here."

"Who's this'n for?" he asked. Down on the beach, the young dog lifted its head and whined. "Garner," she answered, and then she told him about Garner, and Antony, and Javez, and Rodriguez, and Patterson, and White, and Woszyna, until it was dark enough that her voice and her vision failed.

In the morning, he put Patterson's completed chain into Chalcedony's graps. He must have worked on it by firelight through the darkness. "Couldn't harden the links," he said, as he smoothed them over her claws.

Silently, she did that, one by one. The young dog was on its feet, limping, nosing around the base of the rock and barking at the waves, the birds, a scuttling crab. When Chalcedony had finished, she reached out and draped the necklace around Belvedere's shoulders while he held very still. Soft fur downed his cheeks. The male Marines had always scraped theirs smooth, and the women didn't grow facial hair.

"You said that was for Sir Kay." He lifted the chain in his hands and studied the way the glass and stones caught the light.

"It's for somebody to remember her," Chalcedony said. She didn't correct him this time. She picked up the other forty necklaces. They were heavy, all together. She wondered if Belvedere could carry them. "So remember her. Can you remember which one is whose?"

One at a time, he named them, and one at a time she handed them to him. Rogers, and Rodale, and van Metier, and Percy. He spread a second blanket out—and where had he gotten a second blanket? Maybe the same place he'd gotten the dog—and laid them side by side on the navy blue wool.

They sparkled.

"Tell me the story about Rodale," she said, brushing her grab across the necklace. He did, sort of, with half of Roland-and-Oliver mixed in. It was a pretty good story anyway, the way he told it. Inasmuch as she was a fit judge.
"Take the necklaces," she said. "Take them. They're mourning jewelry. Give them to people and tell them the stories. They should go to people who will remember and honor the dead."

"Where will I find all these people?" he asked, sullenly, crossing his arms. "Ain't on the beach."

"No," she said, "they are not. You'll have to go look for them."

But he wouldn't leave her. He and the dog ranged up and down the beach as the weather chilled. Her sleep grew longer, deeper, the low angle of the sun not enough to awaken her except at noon. The storms came, and because the tides broke the spray, the salt water stiffened her joints but did not—yet—corrode her processor. She no longer moved and rarely spoke even in daylight, and Belvedere and the young dog used her carapace and the rock for shelter, the smoke of his fires blackening her belly.

She was hoarding energy.

By mid-November, she had enough, and she waited and spoke to Belvedere when he returned with the young dog from his rambling. "You must go," she said, and when he opened his mouth to protest, she added, "It is time you went on errantry."

His hand went to Patterson's necklace, which he wore looped twice around his neck, under his ragged coat. He had given her back the others, but that one she had made a gift of. "Errantry?"

Creaking, powdered corrosion grating from her joints, she lifted the necklaces off her head. "You must find the people to whom these belong."

He reflected her words with a jerk of his hand. "They's all dead."

"The warriors are dead," she said. "But the stories aren't. Why did you save the young dog?"

He licked his lips, and touched Patterson's necklace again. "'Cause you saved me. And you told me the stories. About good fighters and bad fighters. And so, see, Percy woulda saved the dog, right? And so would Hazel-rah."

Emma Percy, Chalcedony was reasonably sure, would have saved the dog if she could have. And Kevin Michaels would have saved the kid. She held the remaining necklaces out.

He stared, hands twisting before him. "You can't climb."

"I can't. You must do this for me. Find people to remember the stories. Find people to tell about my platoon. I won't survive the winter." Inspiration struck. "I give you this quest, Sir Belvedere."

The chains hung flashing in the wintry light, the sea combed gray and tired behind them. "What kinda people?"

"People who would help a child," she said. "Or a wounded dog. People like a platoon should be."

He paused. He reached out, stroked the chains, let the beads rattle. He crooked both hands, and slid them into the necklaces up to the elbows, taking up her burden.

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