THEORY OF ROCKETRY

C. M. KORNBLUTH

Mr. Edel taught six English classes that year atRichardM.NixonHigh School, and the classes averaged seventy-five pupils each. That was four hundred and fifty boys and girls, but Mr. Edel still tried to have the names down cold by at least the third week of the semester. As English 308 stormed into his room he was aware that he was not succeeding, and that next year he would even stop trying, for in 1978 the classes would average eighty-two pupils instead of seventy-five.

One seat was empty when the chime sounded; Mr. Edel was pleased to notice that he remembered whose it was. The absent pupil was a Miss Kahn, keyed into his memory by "Kahnsti-pated," which perhaps she was, with her small pinched features centered in a tallow acre of face. Miss Kahn slipped in some three seconds late; Edel nodded at his intern, Mrs. Giovino, and Mrs. Giovino coursed down the aisle to question, berate and possibly demerit Miss Kahn. Edel stood up, the Modern Revised Old Testament already open before him.

"You're blessed," he read, "if you're excused for your wrongdoing and your sin is forgiven. You're blessed if God knows that you're not evil and sly any more. I, King David, used to hide my sins from God while I grew old and blustered proudly all day. But all day and all night too your hand was heavy on

me, God ..."

It would be the flat, crystal-clear, crystal-blank M.R.O.T. all this week; next week he'd read (with more pleasure) from the Roman Catholic Knox translation; the week after that, from the American Rabbinical Council's crabbed version heavy with footnotes; and the week after that, back to M.R.O.T. Thrice blessed was he this semester that there were no Moslems, Buddhists, militant atheists or miscellaneous cultists to sit and glower through the reading or exercise their legal right to wait it out in the corridor. This semester the classes were All-American: Protestant, Catholic, Jewish—choice of one.

"Amen," chorused the class, and they sat down; two minutes of his fifty-minute hour were gone forever.

Soft spring was outside the windows, and they were restless. Mr. Edel "projected" a little as he told them, "This is the dreaded three-minute impromptu speech for which English Three Oh Eight is notorious, young ladies and gentlemen. The importance of being able to speak clearly on short notice should be obvious to everybody. You'll get nowhere in your military service if you can't give instructions and verbal orders. You'll get less than nowhere in business if you can't convey your ideas crisply and accurately." A happy thought struck him: great chance to implement the Spiritual-Values Directive. He added, "You may be asked to lead in prayer or say grace on short notice." (He'd add that one to his permanent repertoire; it was a natural.) "We are not asking the impossible. Anybody can talk interestingly, easily and naturally for three minutes if they try. Miss Gerber, will you begin with a little talk on your career plans?"

Miss Gerber ("Grapefruit" was the mnemonic) rose coolly and driveled about the joys of motherhood until Mrs. Giovino passed her card to Edel and called time.

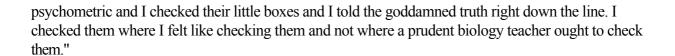
"You spoke freely, Miss Gerber, but perhaps not enough to the point," said Edel. "I'm pleased, though, that you weren't bothered by any foolish shyness. I'm sure everybody I call on will be able to talk right up like you did." (He liked that "like" the way you like biting on a tooth that aches; he'd give them Artificial-Grammar De-emphasis . . .) "Foster, may we hear from you on the subject of your coming summer vacation?" He jotted down a C for the Grapefruit.

Foster ("Fireball") rose and paused an expert moment. Then in

a firm and manly voice he started with a little joke ("If I survive English Three Oh Eight . . ."), stated his theme ("A vacation is not a time for idling and wasted opportunity"), developed it ("harvest crew during the day for physical—my Science Search Project during the evenings for mental"), elevated it ("no excuse for neglecting one's regular attendance at one's place of worship") and concluded with a little joke ("should be darned glad to get back to school!").

The speech clocked2:59. It was masterly; none of the other impromptus heard that morning came close to it.
"And," said Mr. Edel at lunch to his semi-crony Dr. Fugua, biology, "between classes I riffled through the grade cards again and found I'd marked him F. Of course I changed it to A. The question is, why?"
"Because you'd made a mistake," said Fuqua absently. Something was on his mind, thought Edel.
"No, no. Why did I make the mistake?"
"Well, Fured, in The Psychology of Everyday—"
"Roland, please, I know all that. Assume I do. Why do I unconsciously dislike Foster? I should get down on my knees and thank God for Foster."
Fugua shook his head and began to pay attention. "Foster?" he said. "You don't know the half of it. I'm his faculty adviser. Quite a boy, Foster."
"To me just a name, a face, a good recitation every time. You know: seventy-five to a class. What's he up to here at dear old Tricky Dicky?"
"Watch the funny jokes, Edel," said Fuqua, alarmed.
"Sorry. It slipped out. But Foster?"
"Well, he's taking an inhuman pre-engineering schedule. Carrying it with ease. Going out for all the extracurricular stuff the law allows. R.O.T.C. Drill Team, Boxing Squad, Math Club, and there I had to draw the line. He wanted on the Debating Team too. I've seen him upset just once. He came to me last





"You're dead," Mr. Edel said after a pause.

"I thought I could get a bunch of the teachers to say they lie their way through the psychometrics. Start a real stink."

"I'd make a poor ditch digger, Roland, but—if you can get nine others, I'll speak up. No, make that six others. I don't think they could ignore eight of us."

"You're a good man," Dr. Fuqua said. "I'll let you know. There's old McGivern—near retirement. I want to try him." He gulped his coffee and headed across the cafeteria.

Edel sat there, mildly thunderstruck at Fuqua's folly and his

own daring. Fuqua had told them the kind of bird he was by checking "Yes" or "No" on the silly-clever statements. He had told them that he liked a drink, that he thought most people were stupider than he, that he talked without thinking first, that he ate too much, that he was lazy, that he had an eye for a pretty ankle —that he was a human being not much better or worse than any other human being. But that wasn't the way to do it, and damned well Fuqua had known it. You simply told yourself firmly, for the duration of the test, "/ am a yuk. I have never had an independent thought in my life; independent thinking scares me. I am utterly monogamous and heterosexual. I go bowling with the boys. Television is the greatest of the art forms. I believe in installment purchasing. I am a yuk."

That these parlor games were taken seriously by some people was an inexplicable but inexorable fact of life in the twentieth century. Edel had yukked his way through scholarships, college admissions, faculty appointment and promotions and had never thought the examination worse than a bad cold. Before maturity set in, in the frat house, they had eased his qualms about psychometric testing with the ancient gag "You ain't a man until you've had it three times."

Brave of him, pretty brave at that, to back up Fuqua—if Roland could find six others.

Roland came to him at four o'clock to say he had not even found one other. "I don't suppose— No. I'm not asking you to, Dave. Two—it wouldn't be any good."

He went into the principal's office.

The next day a bright young substitute was teaching biology in his place and his student advisees had been parceled out among other teachers. Mr. Edel found that young Foster had now become his charge.

The seventy-two pupils in his English 114 class sat fascinated and watched the television screen. Dr. Henley Ragen was teaching them Macbeth, was teaching about nine hundred English 114 classes throughout the state Macbeth, and making them like it. The classroom rapport was thick enough to cut and spread with a shingle. The man's good, Edel thought, but that good? How

much is feedback from their knowing he's famous for his rapport, how much is awe of his stupendous salary, still nowhere equal to nine hundred teachers' salaries?

Dr. Henley Ragen, el magnifico, portentously turned a page; there was grim poetry in the gesture. He transfixed the classroom (nine hundred classrooms) with Those Eyes. Abruptly he became Macbeth at the Banquet prepar'd. With nervous hilarity he shouted at his guests, "You know your own degrees; sit down! At first and last, the hearty welcome!" Stockstill at a lectern he darted around the table, bluffly rallying the company, slipped off to chat, grimly merry, with the First Murtherer at the door, returned to the banquet, stood in chilled horror at the Ghost in the chair, croaked, "The table's full."

Mr. Edel studied the faces of his seventy-two English i i4ers. They were in hypnotic states of varying depths, except Foster. The Fireball was listening and learning, his good mind giving as well as taking. The intelligent face was alive, the jaw firm, and around him eyes were dull and jaws went slack. Foster could speak and write an English sentence, which perhaps was the great distinguishing mark between him and the rest of English 114. Blurted fragments of thought came from them, and the thoughts were cliches a hundred times out of a hundred.

Dr. Henley Ragen growled at them, "We are yet but young in deed . . ." and his eyes said the rest, promising horrors to come. He snapped the book shut like a pistol's bang; the i i4ers popped out of their trances into dazed attentiveness. "Notebooks!" said Ragen (qua Ragen) and, seventy-two gunfighters quick on the draw, they snapped out books and poised their pens. Ragen spoke for ten minutes about the scene; every so often Those Eyes and an intensification of That Voice cued them to write a word or a phrase, almost without glancing at the paper. (Later each would look at his notes and not be surprised to

find them lucid, orderly, even masterful summations of the brief lecture.)

As Dr. Henley Ragen bluffly delivered a sort of benediction from the altar of learning, Mr. Edel thought, Well, they've got the Banquet Scene now; they'll own it forever. The way they own the Prologue to The Canterbury Tales, the "Ode to the West Wind," Arroiusmith. A good deal better than nothing; pauca sed matura. Or so he supposed.

That afternoon from three to five Mr. Edel was available to his advisees. It was a period usually devoted to catching up on his paperwork; beyond making out the students' assignment schedule, a task traditionally considered beyond the capacity of the young, he had done no advising in years. And Foster appeared.

His handshake was manly, his grin was modest but compelling. He got to the point. "Mr. Edel, do you think I could swing an Enrichment Project in English?"

The teacher hardly knew what he meant. "Enrichment? Well, we haven't been doing that lately, Foster. I suppose it's still in the optional curriculum—"

"Yes, sir, Form Sixty-eight, English, Paragraph Forty-five, Section Seven. 'Opportunities shall be afforded to students believed qualified by advisers to undertake projects equivalent to College Freshman English term papers, and the grades therefor shall be entered on the students' records and weighed as evidence in assigning students' positions in the graduating class."

Mr. Edel had found Foster's card by then and was studying it. The boy's schedule was brutal, but his grade average was somewhere between B-plus and A. "Foster," he told him, "there's such a thing as a breaking point. I—I understand you want very much to go to Colorado Springs." (Poor Fuqua! What had become of . . . ?)

"Very much, sir. They expect the best—they have a right to expect the best. I'm not complaining, Mr. Edel, but there are girls with straight-A averages who aren't working as hard as I am. Well, I've just got to beat them at their own game."

Mr. Edel understood. It wasn't just girls, though mostly it was. There was a type of student who was no trouble, who did the work, every smidgen of it, who read every word of every assigned page, who turned in accurate, curiously dead, echoless, unresonant papers which you could not in decency fault

though you wanted to tear them up and throw them in their authors' bland faces. You had a curious certainty that the adeptly memorized data they reeled back on demand vanished forever once the need for a grade was gone, that it never by any chance became bone of their bone to strengthen them against future trials. Often enough when you asked them what they hoped to be they smilingly said, "I am going to teach."

Foster, now. A boy who fought with the material and whipped it. He said, "Why so strong, Foster? What's it about?"

The boy said, "Space, partly. And my father. Two big challenges, Mr. Edel. I think I'm a very lucky fellow. Here I am with a new frontier opening up, but there are lot's of fellows my age who don't see it. I see it because of my father. It's wonderful to have a challenge like that: Can I be the man he is? Can I learn even more, be a better leader, a better engineer?"

Mr. Edel was moved deeply. "Your father just missed space flight, is that it?"

"By a whisker," Foster said regretfully. "Nothing can be done about it except what I'm doing."

"He's an aeroengineer?"

"He can do anything," Foster said positively. "And he has!"

A picture of the elder Foster was forming in Mr. Edel's mind-young Fireball grown taller, solider and grizzled, the jaw firmed and controlled, the voice more powerful and sure. And, unquestionably, leather puttees.

Foster's card said he had no mother, which made it more understandable. This fine boy was hard material honed to an edge, single-purposed. Did he have a young Hap Arnold here in his office? A Curtis LeMay? They had to come from somewhere, those driving, wide-ranging leaders and directors of millions. The slow-rolling conquest of space needed such men, first to navigate and pilot so no navigator or pilot would ever be able to snow them, then to move up step by step through research to command, then to great command.

"I'll bet on you, Foster," he said abruptly. "We can't let the—the future English teachers outpoint you with their snap courses. You'll do me a term paper on ... on Henry V. First, read it. Read hell out of it and take notes. Get in touch with me when you think you're ready to talk it over. I happen to be a bachelor; I have time in the evenings. And talk it over with your father, if you can persuade him to read along with you."

Foster laughed. "I'm afraid Dad's much too busy for Shakespeare, but I'll try. Thanks, Mr. Edel." He left.

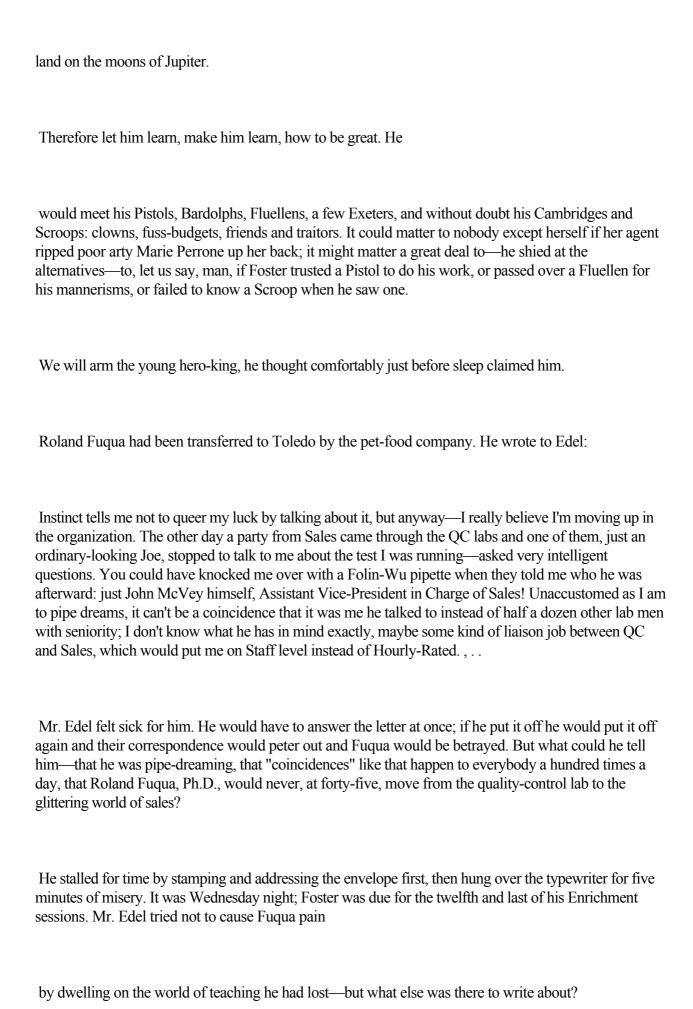
Mr. Edel, with considerable trouble, found a pad of forms in his desk which covered Enrichment Projects, English, Adviser's Permission for. He filled one out for Foster, looked it over and

said, surprised, "Again, damn it!" He had checked the box for "Permission denied." He tore up the form—it was discolored anyway from being so long on the top of the pad—and meticulously made out another, checking the various boxes with exquisite care.

That night after dinner he tried to telephone Roland Fuqua, but service to his number had been discontinued. Alarmed, he buzzed over on his scooter to Fuqua's apartment, one of a quarter million in the Dearborn Village Development of Metropolitan Life and Medical. Roland's hulking, spoiled and sullen boy Edward (who had unilaterally changed his name last year to Rocky) was the only person there, and he was on his way out—"to an orgy with some pigs," if you believed him. He said "Little Rollo" was now a night-shift lab assistant in a pet-food company's quality-control department and this was his mother's Bingo night. "You want I should give a message?" he asked satirically, overplaying the role of intolerably burdened youth.

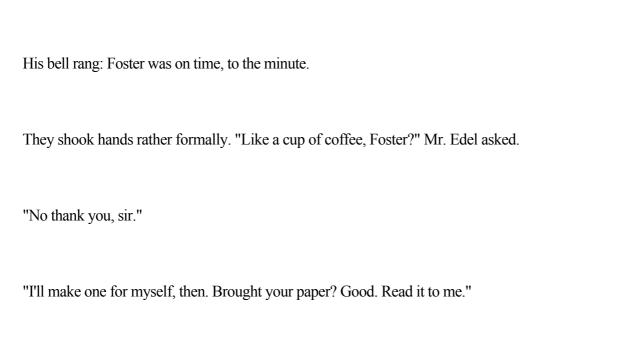
"If it won't break your back," Mr. Edel said, "please ask your father to give me a ring sometime."

Again in his own small apartment, Mr. Edel thought of many things. Of the ancient papyrus which, when decoded, moaned: "Children are not now as respectful and diligent as they were in the old days." Of Henry V. Of Dr. Fuqua drudging away on petfood protein determinations and lucky to be doing that. Of his own selfish, miserable, lonely comfort in his castle. Of Foster, the hero-king to be, and of himself, Aristotle to the young Alexander. Had there been a dozen such in his twenty years? There had not. Marie Perrone still sent him her novels, and they were almost popular and very bad. Jim Folwell had gone to Princeton and into the foreign service and that was that. Janice Reeves and Ward Drei-man were married and both teaching at Cornell. What had happened to the hundred thousand others he had taught only God and themselves knew. If they all dropped dead at this instant, tomorrow morning some trucks would not roll for an hour or two, some advertising agencies would come near to missing a few deadlines, some milk would sour and some housewives would bang, perplexed, on the doors of shops that should be open, a few sales would languish unclosed, a few machines would growl for lack of oil. But Foster might



I'm sure you remember Foster—the fly boy? I've been taking him, on one of those Enrichment things, through Henry V. This is supposed to win him .001 of a place higher on the graduating-class list and get him into the Academy, and I suppose it will. Things are very simple for Foster, enviably so. He has a titan of engineering for a father who appears to commute between the Minas Gerais power station in Brazil, his consulting service in the city and trouble spots in the I. T. and T. network—maybe I should say commutate. I honestly do not believe that Foster has to lie his way through the personality profiles like the rest of us mortals—

Now, there was a hell of a thing to put down. He was going to rip the page out and start again, then angrily changed his mind. Fuqua wasn't a cripple; it wasn't Bad Form to mention his folly; it would be merely stupid to pretend that nothing had happened. He finished out the page with a gush of trivia. Sexy little Mrs. Dickman who taught Spanish was very visibly expecting. New dietician in the cafeteria, food cheaper but worse than ever. Rumored retirement of Old Man Thelusson again and one step up for history teachers if true. Best wishes good luck regards to Beth and the youngster, Dave. He whipped the page into folds, slipped it into the envelope and sealed the flap fast, before he could change his mind again. It was time to stop treating Fuqua like a basket case; if convalescence had not begun by now it never would.



While he compounded coffee Foster began to read. After much discussion they had settled on "Propaganda and Reality in Henry V" as his topic. The boy had read Holinshed where relevant, articles in The Dictionary of National Biography and appropriate history texts. Beyond suggesting these, Mr. Edel had left him alone

in the actual treatment of his paper. He did not quite know what to expect from Foster beyond careful organization and an absence of gross blunders; he waited with interest.

The paper was a short one—fifteen hundred words, by request. Nevertheless it gave Mr. Edel a few painful shocks. There were two sneers at "deluded groundlings," much reveling in the irony of the fictional Henry's affection for his Welsh captain as against the real Henry who had helped to crush Glendower and extinguish the Welsh as a nation, and fun with the Irishman Macmorris who came loyally from Shakespeare's pen in 1599 while "the general of our gracious empress" was doing his best to extinguish the Irish as a nation. Henry's "we have now no thoughts in us but France (save those to God)" was evaluated as "the poet's afterthought." The massacre of the French prisoners at Agincourt, Henry's brutal practical joke with the pretended glove of a French nobleman, his impossibly compressed and eloquent courtship of Katharine, were all somehow made to testify to a cynical Shakespeare manipulating his audience's passions.

The great shock was that Foster approved of all this. "It was a time of troubles and England was besieged from without and threatened from within. The need of the time was a call to unity, and this Shakespeare provided in good measure. The London mob and the brotherhood of apprentices, always a potential danger to the Peace, no doubt were inspired and pacified for a time by the Shakespearean version of a successful aggressor's early career."

Modestly Foster folded his typescript.

It was ground into Mr. Edel that you start by saying whatever words of praise are possible and then go on to criticize. Mechanically he said warm things about the paper's organization, its style, its scholarly apparatus. "But—aren't you taking a rather too utilitarian view of the play? It is propaganda to some extent, but should you stop short with the propaganda function of the play? I'm aware that you're limited by your topic and length, but I wish there had been some recognition of the play's existence as a work of art."

Foster said, smiling, "Well, I'm new at this, Mr. Edel. I didn't know I was supposed to stray. Should I revise it?"

"Oh, no," Mr. Edel said quickly. "I didn't mean to imply that

you're unarguably mistaken in anything you said. I don't know why I'm fussing at you about it at all. I suppose you've taken a sort of engineering approach to literature, which is natural enough. Did you ever succeed in engaging your father in the project?"

"I'm afraid not, Mr. Edel. You can imagine."

"He's been away?"

"Why, no." Foster was surprised. But didn't his father go away now and then? He thought Foster had said—or almost said-He took the paper from him and leafed through it. "This is quite good enough for a pass, Foster. It'll be read by somebody in the English chairman's office, but that's a formality. Let's say you've completed your Enrichment Option." He stuck out his hand and Foster took it warmly. "That, then, is that. Do you have to run now?"

"With all rods out," Foster said. "I've got to prepare for the Math Team meet, a hundred things. Can I mail that for you?"

It was the letter to Fuqua on his desk. "Why, thanks."

"Thank you, Mr. Edel, for the time you've taken with me."

Well worth it, son, Mr. Edel thought after the door closed. There aren't many like you. The paper was a little cold and cynical, but you'll learn. Criticism's heady stuff. Speaking quite objectively, you've done a piece thoroughly consistent with College Freshman English work, and that's what you were supposed to do. If it helps get you into Colorado Springs, I've done my job.

He turned in the paper the next day to the English chairman's office and the assistant chairman read it while he waited, mumbled "Seems quite competent" and entered a "Completed" on Foster's grade card. He let his eyes run over the other grades and whistled. "A beaver," he said.

"All rods out," Mr. Edel smugly corrected him, and went to the door. A freshman girl who knew him, on messenger duty with the principal's office, intercepted him in the corridor. The message: he would please report at once to the principal; Mrs. Giovino would be advised to take such classes as he might be obliged to miss.

"Classes?" he asked the girl, unbelievingly.



"Better not. If you're not happy here . . . "

Mr. Edel and Foster met that afternoon in the soda shop two blocks from the school. Mr. Edel had been waiting for him, and Foster saw the teacher staring at him from a booth. He excused himself politely from the Math Team crowd around him and joined Mr. Edel.

"I feel I owe you an explanation, sir," Foster said.

"I agree. How could you—why—?"

Foster said apologetically, "They like you to be a little ruthless at the Academy. This will stand out on my record as a sign of moral fiber. No, Mr. Edel, don't try to hit me. It'll make things look that much worse at the hearing. Goodbye, sir."

He rejoined his handsome, quiet crowd at the counter; in a moment they were talking busily about elliptic functions and Fourier series. Mr. Edel slunk from the place knowing that there was only one court of appeal.

3379 Seneca Avenue turned out to be a shocking slum tenement back of a municipal bus garage. The apartment, Mr. Edel thought,

after his initial surprise, would be one of those "hideaways"—probably a whole floor run together, equipped with its own heating and air-conditioning, plumbing replaced . . . after all, would Foster Senior give a damn about a fancy address? Not that engineer.

But the Foster apartment, or so said a card tacked to a rust-stiffened bell-pull, was only one of a dozen like it on the cabbage-reeking fifth floor. And the paunchy, unshaven, undershirted man who came to the door and stood reeling in the doorway said: "Yah, I'm Ole Foster. Yah, I got a boy in Nixon High. What the crazy kid do now? He's crazy, that kid. Maybe I get a little drunk sometime, I got a little pension from I hurt my back driving the buses, people don't appreciate, don't realize. You wanna drink? What you say you come for?"

"About your son"
"So I beat him up!" the man yelled, suddenly belligerent. "Ain't I his father? He talks smart to me, I got a right to beat him some, ain't I? People don't appreciate"
Old Foster lost interest and, mumbling, closed the door.
Mr. Edel walked slowly down the stairs, not able to forgive, but feeling at least the beginnings of eventual ease from the knowledge of why he was being destroyed.