

## Briarcliff High School

The following June, 1951, I graduated from ninth grade at Valhalla Public School No. 1. A few kids, like Alberta Steves, went on to Catholic schools. The rest of us had two choices for public high schools: White Plains High and Briarcliff High. White Plains High lay about five miles south, Briarcliff High about seven miles north. Briarcliff Manor was a wealthy community which had a golf course, Briar Hall, where I had begun caddying because it was said that the tips were good. My mother wanted me to go Briarcliff High because the town was “exclusive”. For that reason, and because of the low esteem it was held in by the other students (rich meant it was a fairy school), I wanted to go to White Plains High, where real men went (it had a great football team). But she persisted.

One thing that made the prospect of going to Briarcliff High bearable was that I had met Pete Heim the previous summer while caddying. The scene I remember is not the one he remembers. I remember him sitting on the grass, under the trees near the caddy shack, hands around his knees, with some of his Briarcliff friends. They seemed, if not tough guys, at least guys in the know about something. There was lots of knowing laughter. Somehow or other, perhaps because he overheard a conversation I had been having, when I stood up, he said, with a smile full of curiosity and challenge, “Hey, you play jazz?” I said yes<sup>1</sup>, wondering who this inquisitive guy was. We got to talking. He played jazz, too — alto sax — also did arranging, led bands. And thus began the longest friendship of my life.

And so, in September 1951, while most of the other kids got on the orange buses at Stotz’s garage to head for White Plains High each morning at 7:45, I, with a few others, got on the one heading for Briarcliff.

We had two or three drivers in rotation. One of them always drove too slowly, so we nicknamed him “Helium-Foot”, whereas the fastest of the three we nicknamed “Lead-Foot”. Sometimes, in our boredom, we would try to get our driver to race another bus that traveled the same route at roughly the same time. “Come on, Helium-Foot, faster, faster,” and then, as we passed the other bus, a loud “Yaayyyyy!”

## The Teachers

Our English teacher was Mr. Jones, a tall, thin, bald man with a deep voice and a haunted look. To me he looked exactly like a character named Skeleton Man in one of the Lone Ranger comics. He was a subject of awe and suspicion among us students because he had previously been a *college professor*. Why had he fallen back to high school teaching? To undertake some unknown penance? He never smiled. He seemed to be harboring some great, sad secret, or perhaps it was only the burden of his learning. His definition of “adverb” has remained in my memory for more than fifty years: “An adverb is a word that denotes time, place, manner, degree, affirmation, or negation.” (I can still see the words, printed in purple ink, at the bottom of a mimeographed sheet of definitions he handed out .) It seemed a hopelessly difficult definition to all of us.

One day, Mr. Jones scared the hell out of us. We had begun studying Chaucer with, I assume, a modern English translation of the *Canterbury Tales*. He said that the original was in a more primitive form of English, and suddenly, in that deep, booming, sonorous voice, he intoned,

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1. My memory is clearly failing me here, since I didn’t start playing jazz until the fall of 1951, as will be explained below. It is possible Heim only said, “Hey, you play trumpet?”

“Whan that Aprill with his shoures sote  
The droghte of March hath perced to the rote  
And bathed every veyne in swich licour,  
Of which vertu engendred is the flour;  
Whan Zephirus eke with his swete breeth  
Inspired hath in every holt and heeth  
The tendre croppes, and the yonge sonne  
Hath in the Ram his halfe cours y-ronne...”

We nearly jumped out of our seats. Our English teacher had suddenly gone mad! He pronounced the words in all their ancient richness, so that “shoures soote” sounded as though they were spoken with a Swedish accent, and the “gh” in “droghte” was glottal, as in German, and “eke” was pronounced “ache” and “swete” again had the Swedish sound, “swaytuh”, whereas “breeth” sounded Irish, “brayth”. It was the first time I had ever heard poetry recited by a man. It was the first time I had ever heard poetry recited in a bardic fashion, as a kind of chant. It sent shivers down my spine, not merely because of the sound of the words, but because here was a grown man, a teacher, talking like that, in mad tongues, making a fool of himself and not realizing it. And yet the words cut into my flesh.

Mrs. Abel was a cheerful, plump, middle-aged woman who taught Latin. She spoke with whistled and watery *s*'s, which mannerism, along with her care to pronounce all the *a*'s in Latin as “ah”'s, made it seem to me that she pronounced Latin perfectly. (She pronounced “video” (I see), “*widayo*”, and explained that that was where the other name for television came from. And because she was pronouncing the words perfectly, and was a decent person, there could be no possible reason for you to dislike the subject. You had no argument, even though the words were like lead in your stomach. It was another case of learning to love what you hated. She wore glasses, earrings, and had big breasts, and, what with those speech mannerisms, she always seemed the kind of woman you didn't mind being around, even if she was a teacher.

She pronounced the last name of Albert Camus, the French existentialist writer, *KAYmoose*, with the watery *s* on the end, I suppose out of some idea that compromises must be made when it comes to modern words that look like Latin words: thus the first syllable received an “English” pronunciation, but the last, by God, still received the proper Latin sound.

My homeroom teacher was Mrs. French, which seemed a strange name, since there wasn't a trace of anything French about her. She was another old lady, but thin, with a sharp face. She was one of those strict teachers no one liked, but who, as long as you did what you were told, didn't make your life miserable either. Apparently she taught English, because I remember first reading Kafka's “Metamorphosis” in her class. No story since *The Land of Oz*, which had the Educated Woggle-Bug as a character, affected me like this one. I can still remember sitting in the back of the room and hearing her say words to the effect that Kafka was a little crazy, that this story would be unlike any other we had ever read. The story made me feel peculiar. It seemed to come from some dark corner of Europe, since Europe, always with the exception of France, was where I understood people *really* had to learn to love what they hated. I saw Gregor Samsa, the narrator, as having become like one of the horseshoe crabs I had seen at Cape Cod.

The biology teacher was Mr. Starr, a short guy with a friendly smile who always wore a white lab coat. He seemed to be genuinely concerned about our welfare, and got into very deep trouble for it. He apparently had decided that it wouldn't be a bad idea if we learned something about sex, in particular, about sexually transmitted diseases, and so, once a week or so he would give us a brief lecture and show slides of some of the rashes and other symptoms of the diseases. (There was nothing about sexual intercourse, naturally.) It was scientific, a little boring, and the farthest thing in the world from anything that might be called sexually stimulating. Yet, soon the class was buzzing with rumors that several of the parents had complained to the principal, and, in fact, Mr. Starr had been warned that if he gave any more of those lectures, he would be fired. We never found out whose parents they were but we took it as yet another example of adult stupidity. We liked him and we were certainly on his side in the controversy.

Another time he asked us to write down what we most wanted to do in our life. I thought this a magnificent question and without a moment's hesitation, wrote down my answer: to be the first man on the moon. (Remember that this was in 1951, when such things were still considered science fiction.) We were supposed to read our answers aloud and then say a few words about them. I remember him encouraging me and making sure the class knew that this was an admirable goal and should not be considered impossible.

### **The Students**

Mike Tuttle, who had been a participant in that photo session at Scout camp, was a student at Briarcliff. He knew he held a deadly secret over me. He was now a short, blond, muscular kid, with a husky voice, and we would run into each other once in a while. Sooner or later in the course of conversation, he would get that shit-eating grin on his face and make an oblique remark that was aimed at reminding me of how fragile my reputation was. I felt as though my days on earth were numbered, that it was only a matter of time before the kids found out and stopped wanting to have anything to do with me, which would be death.

I hung around with Phil Jacobus, a tall blond kid who lived in Mayfair Acres, near Grasslands, a community which I understood, from my mother, was where some of the better people lived. I don't know if she used the word "exclusive" but that was the gist of it. Dave Mount lived there, too, in a house in which you *stepped down* into the dark, modern, living room. I went up to his place several times when we were working on ham radio. Once, we wrote a science fiction radio play and recorded it on his wire recorder. I wasn't particularly in the mood, even though I was usually held spellbound by the science fiction dramas on commercial radio: "Dimension X" and "2000 Plus". These programs seemed so much better than anything we could do that there didn't seem much point in trying.

Jacobus (we used last names a lot at that age; it was the masculine thing to do) was not only smart but also daring with the girls. One of them, whose name was Michelle, had beautiful breasts, and always wore tight sweaters, either white or beige. Sometimes the wool had sparkles in it, and that, along with her perfume, drove me absolutely wild. I couldn't keep myself from looking at those heavenly soft, outhrusting female mounds. I wanted to pillow my head on them and just smell her perfume. (When I try to remember the first time I used the word "knockers", I immediately think of her. I can't believe I didn't know, and use, the word years earlier, but she is the first girl that the word immediately calls to mind. Perhaps the reason is simply that we boys spent so much time lusting over her breasts.) Sometimes, when, in that gently flirtatious way she had, she would stop by to talk to Jacobus — it was clear she liked him — he would say, in a pause

in the conversation, “Do you know that the Mississippi River flows between two mountains?” and then he’d run his index finger down her sweater between her breasts. We laughed, she blushed a little, and laughed with us. I thought it was an incredibly daring thing for him to do. I don’t know if they were having sex or not. If so, it would have been far more unusual than it would be today.

He did a good Irish accent. We had a ritual which I repeated far more than he wanted: “Where are you going?” He, in a kind of small, Leprechaun voice, with a little Irish accent wrapped up in it: “I’m goon down ’ere”. I: “Where?” He: “Down ’ere”. Over and over again.

There was a water tower in Mayfair Acres which he said he climbed, and which he wondered if I would have the courage to climb with him. It was the kind seen in rural towns: several stories high, painted silver, with girders supporting the round tank at the top, and a big pipe running down from the center of the tank to the ground. A ladder on the side went up to a walkway around the tank. Leading up from the walkway was another ladder, to a catwalk at the top with a tiny, low, railing. Late one afternoon, he challenged me to go all the way up to the top and walk around that catwalk. He started up and I followed him, hands clutching the cold steel railing. I constantly imagined myself falling, tried to imagine how the world would look as you fell down along the ladder, maybe bouncing off it a few times. What would your very last thought be, what *should* it be, before you hit the ground? Did it hurt to die that way? Did you feel, or *see*, if only for a second, your brains running out of your skull onto the concrete? What was that like, since the very means by which you were watching them, was itself part of the thing you were watching? Most of all, though, I wanted to know what your last thought *should* be, just before you hit, the thought that might save you from the worst of what awaited you afterward.

Up we went, he fairly bounding up the ladder, I pressed as close to it as I could, clenching the ice cold railing between the short, quick movements of my hands upward. At the catwalk he stood up, flung his arms wide, did a little careful dance. I could tell from his voice that he was scared, too, but he had more courage than I did. I looked down at the tapering ladder below me, couldn’t believe I had come that far, yet was ashamed that I had not been able to meet his challenge. I might have consoled myself with the thought that the challenger on familiar territory always has the advantage but my psychological understanding had not progressed that far.

Because Mr. Jones was odd, and didn’t seem to be of this world, Phil Jacobus and I and some of the others who sat in the front of the room did things to annoy him. In fact, Jacobus and I were a regular comedy team in the class. As the dull lecture droned on, we would catch each other’s eye and start a long drawn-out pantomime of the process of pulling the pin from a hand grenade and tossing it overhead to land on the desk of a student who had just spoken, or rolling it up the aisle so that it would land right at the teacher’s feet and explode. It would start with the performer raising his fist to his mouth then, giving it a little jerk downward to signify that he had withdrawn the pin with his teeth, in the manner of the war movies. Then the fist was lowered slowly to the floor (holding the imaginary handle so it wouldn’t fly off the grenade and start the fuse burning). Then a short backward swing, then a forward swing. (Now the imaginary handle had flown off and the fuse was started.) The performer leaned over the side of his desk to watch the missile rolling, bouncing, along the aisle. Then performer and observer looked directly at each other and waited — the point was to wait so long that the other person, knowing what was coming, would break down and laugh first — until, finally, the performer extended his fingers and slowly puffed out his cheeks in imitation of the slow-motion explosion now taking place at the teacher’s feet. Many variations suggested themselves, and were carried out: pulling the pin with teeth, then

sticking thumb up to indicate that the handle had been released and then affecting consternation and puzzlement as to what to do now, then casually tossing the grenade over the shoulder onto the desks of the kids behind. Or, following that short backward-forward movement of the lower arm to then indicate that the grenade had been let go on the *backward* movement, so that it was now going to explode in the rear of the room, killing students instead of just a teacher.

Clearly, this couldn't go on, and so one day we were sent down to Ed Moyer, the school principal, who had a reputation for being tough. The punishment, which I no longer remember, was apparently more severe than we felt was justified, and so after I told Heim about it, he told his mother, and she immediately took our case to Moyer. I remember sitting in her house, she with her long dress, hands folded in her lap, sympathising with us, agreeing that Moyer was a jerk, he had done this kind of thing before, it couldn't be tolerated, she would go down and have a talk with him.

Another Mayfair Acres kid was Peter Conte. He and another guy invented, or at least were the local experts on, three-dimensional chess. They had three clear plastic chess boards stacked one above the other. They sat on the floor, playing, two geniuses at work, while the rest of us sat around talking. I was utterly remote from the whole enterprise, feeling it utterly beyond me, especially as I didn't even know how to play orthodox chess.

Conte was one of the founders of The Rocket Club, which used to meet at his house or Jacobus's. The members were most of the school's smart kids who had an interest in science fiction. We were always trying to find new ways to make rockets, regardless how big or small the rockets might be. On the small side, we wrapped the head of a paper match in an aluminum chewing gum wrapper, leaned the match on something that would make it point upward, then we lit another match and held the flame under the foil. The match shot off, expelling heat from the burning head through the rear opening between the tinfoil and the match itself. We, or, rather, they, the other members of the Club, also made bigger rockets, though I no longer remember how, shot them off on starry nights in Conte's or Jacobus's backyard. I had the same kind of feeling about them as I did when I was trying to fly the wrapping paper kites made from my mother's Altman's boxes. Even though we could usually hear the rockets falling through the trees in the nearby woods, I still wondered seriously if maybe one, somehow, could make it all the way to the moon. It had nothing to do with engineering or science, but with the chance that the universe might look favorably on me. And yet, from the start I wondered why people made so much fuss over rockets — over using rockets to lift a spaceship into space. Why not use balloons to get the spaceship as high as possible, then just use a much smaller rocket to fire it the rest of the way into space? This question has persisted in my mind ever since. But I had no confidence in asking the question of other members of the Club. "If you don't know already why far greater minds than yours have decided against it, there's no use your spending the time to find out."

I read *Rockets, Jets, Guided Missiles and Space Ships* by Jack Coggins and Fletcher Pratt, a book I still own. (I always think of it as having been written by Willy Ley, because he wrote the Foreword.) I was stumped by the concept of escape velocity, the minimum velocity needed to escape the earth's gravitational pull. I wondered why, if you had enough rocket fuel, you couldn't just keep firing until you made it, no matter how long it took you. And why didn't anyone talk about the escape velocity of balloons?

## Lunch

For lunch we trooped up to a little lunch counter in the town (really, village) of Briarcliff. I always ordered the same thing: a balogna wedge with lots of mustard, and a Coke. (We seldom called them “submarines”.) Behind the counter, a big Italian guy in a white apron would slice the little bread loaf in two, then apply the mustard with a swipe of the knife over the bread, then lift on the slices of meat. We ate outside standing on the sidewalk, or in a little piece of grass near the corner of the street that ran to the school. The crackle of the brittle bread crust as I took the first bite, the sharp edges of the crust digging into the roof of my mouth, the butcher-shop smell of the meat, the sting in the back of the throat from the light brown, flecked mustard, the plaster smell of the white bread, then the delicious cold prickling sweetness of the Coke, almost brought tears to our eyes. I lived for lunch. It made it possible to endure the day.

## Beginning of “The Music Days”

But I hated Briarcliff. To me it was the fairy, upper-class high school my mother wanted me to attend, and therefore I could never allow myself to like it. The kids who went to White Plains High waited for their bus in the mornings at the same place we did, namely, Stotz’s garage on Columbus Ave. One of these kids was Terry Pickens, whose parents my mother knew. Both were Irish, God-fearing, and, best of all, their son had his sights set on becoming a Methodist minister. (It was clear my mother felt: Some parents have all the luck!) Terry played trombone, and as we waited in the cold for our buses to open their doors so we could troop aboard, he asked me if I ever played jazz. I said no. He began what was probably his first try at a conversion: he told me that a group of White Plains High School students had formed a band and that they were going to play Dixieland. I told him I didn’t know how to improvise. He said it didn’t matter; I could learn.

So, one Saturday afternoon his parents drove us to a wealthy part of White Plains where Ira Skalet, a tuba player, lived. It was a huge white mansion on Soundview Ave., with pillars in front, and a U-shaped gravel driveway — without question the wealthiest home I had ever been in. We went up the stairs and in through the palatial front door. There was a hall, with dark, impressive rooms on each side, and a carpeted staircase straight ahead. Everything was big, soft, rich. On the right was the living room, where the chairs had been set up for rehearsal. I was introduced around, I suppose shook hands. On a coffee table covered with thick glass, was something that looked like a miniature, silver version of Aladdin’s lamp. Mrs. Skalet was there, and used it to light her cigarets. I had never seen a lighter that fancy. I was even more amazed to see that Ira was allowed to light up, and did so, with studied indifference to how exceptional it was for a high-school kid to be allowed to smoke at home, in front of his parents. Mrs. Skalet looked sexy. She had a soft, hoarse voice from smoking, and that made her even more sexy. Someone had said earlier that Mr. Skalet was in the diamond business in New York. I remember him as a fat, bald, prosperous-looking Jew who was more proud than alarmed at what his son was getting into. Perhaps something was served to drink. I seem to remember a maid in the background. We all sat down. I was at the front, on the left-hand side of the band, the traditional place for the trumpet in a jazz group, I later learned. On our music stands was Stan Levine’s *Dixieland Hits*. We opened the book to “Ja-Da”. The music seemed easy enough to sight-read. Terry, in the back row, counted off a few times, but each time someone wasn’t ready. Then, once more: “One, two, three, four”, and, eyes burning into the page, I started to play, the whole band started to play. It sounded like such a joyful noise that, only a few bars into it, I was on the verge of tears. I couldn’t believe that we were actually making this loud, brave, rollicking, sound. When we stopped, I knew I was

blushing. We played it again, and again. Then, later, we played “China Boy”. Unlike the band music, not to mention exercises, which were the only music I had played until then, this stuff almost played itself! We took a break. Later on, we played “Runnin’ Wild”, and “Clarinet Marmalade” and “Wang Wang Blues”.

Terry was obviously proud of what they had accomplished, and clearly thought I was capable of handling the trumpet part. Then or later he asked me if I wanted to join. I probably said words to the effect that the music was great but that I’d have to ask my mother.

Jazz was my first experience of playing music in which I felt any emotion except fear or shame.

We had a later meeting, I remember, to decide on a name, and after much debate, decided on “The Rebels”. When we rode around in the car on the way to and from jobs, we would shout out the window, “Save your Confederate money folks, the South will rise again!”

So, it was really the chance to go to school with kids in the band that was the main motivation for my wanting to transfer to White Plains High. And eventually my mother agreed. And thus began the seven years of my life which I after always referred to as my “Music Days”.

## Science Fiction

In those days, I lived under the spell of science fiction. I would buy a copy of *Astounding Science Fiction* and look at the cover and the illustrations inside and my heart would start thumping with excitement. White cities floating in the air above sunny, green, silent countrysides! Vast green lawns and strange-looking, very modern buildings in the hazy distance. Clouds with space ships above them. The technology itself — rockets, space suits, guns — had little interest for me. But the idea of unimaginably advanced civilizations that could do things that were impossible for us — floating a city above the countryside, for example — that really got to me, as did the idea of people for whom telepathy and the power to perform telekinesis were natural endowments. When English teachers made us read the poetry of the previous century and earlier, and the stories of Edgar Allan Poe, I wondered how these authors could have gotten so excited about classical myths — Diana, Zeus, Orpheus. What a huge effort it required to will yourself into making these things exciting! Whereas with science fiction, it was impossible not to be excited, in fact bewitched. I sat breathless in Hilliard’s Drug Store as I gazed at the cover of the latest *Astounding*.

There were two radio programs that captured the spell of the magazines — or, I should say, of the magazine *illustrations*, since the stories in the magazines were, for me, merely a kind of narrative decoration for the illustrations. The programs were *Dimension X* (which opened with an announcer’s voice saying, sharply, *Dimension...X, X, X, X, ...*, the repeated *X*’s diminishing in volume as though to infinity) and *2000 Plus*. The stories were dramatizations of those in the magazines, but here the stories became compellingly real for me, not the least reason, I suspect, being that many of the descriptions of hardware and the manipulation of it were conveyed by sound effects, which were much better than the prose of the original.

The one book I spent the most time on was unquestionably *The Conquest of Space*, with text by Willy Ley and illustrations by Chesley Bonestell (Viking Press, N.Y., first edition 1949). I had little interest in the text — in the scientific facts: all I cared about was the beautiful illustrations. I and the other kids who were interested in science fiction admired them so much that we often called their creator “Chesley”, out of affection for his genius, and otherwise by his full name: seldom just “Bonestell”. The illustrations were spellbinding to us, like color photographs. (Far too

many in the book are printed in black and white.) I still have difficulty thinking of them as paintings. “Saturn as seen from its small but near satellite Mimas...” (p. 133 in the 1959 edition), “Saturn as seen from its satellite Titan...” (the painting looking like a perfect picture postcard) (p. 132), “Surface of Mercury...” (p. 121), “Close-up of another sun...” (p. 136), and the all-important Mars pictures — all-important for a boy who had already decided he would retire to Mars in his old age, and live in a white temple-like house along one of the canals, and be served fruits and ices by slim, graceful young maidens draped in white — the two Martian landscapes, with their orange mountains, green meadows, dark blue skies, light blue canals, the views evoking a cosmic peace and laziness (pp. 154-155); “Mars seen from Deimos...,” (the planet here not red but orange, the pale green canals looking like the shrouds of a parachute; three space men floating around a rock pinnacle; if you looked carefully, you could see tiny figures of spacemen in many of the other paintings) (p. 128), “Surface of Mars...” (with its pinnacles of lavender snow in the foreground and the water-color-green canal stretching to the horizon through the orange desert sands) (p. 125).

Somewhere I had read that Chesley was scrupulous in his research, and so I had no doubts: *This is how it will be!*

Another book that fascinated me from high school into early college was George Gamov’s *One, Two, Three...Infinity*, in particular Chapter III, “Unusual Properties of Space”, and especially the pages on topology. Gamov’s freehand artwork made me realize that technical drawings didn’t need to have the perfect straight lines — the dry perfection they had in textbooks — in order to aid in an explanation, and in fact were even more helpful if drawn freehand by the author because they made clear that behind all this intimidating technical formality, there was a human being.

Three figures in the chapter particularly affected me: one of two apples glued together by their skins (Fig. 18, p. 54 in the 1960 edition); one of an apple that had been eaten by a worm, being turned into a doughnut (Fig. 19, p. 56), and one of an inside-out universe (Fig. 20, p. 58), in which a person’s insides — stomach, intestines, heart, brain — fill the entire universe, and the entire universe — stars, planets, galaxies — fills the person’s insides. The drawings gave me the same feeling of other worlds completely different from ours that the science fiction illustrations and the science fiction radio programs did. (The drawing of the inside-out universe gave me the same kind of strange feeling as the men walking upside down had in that comic book of years earlier.)

I could hardly believe that topology was a branch of mathematics, for surely it couldn’t in any sense be the same thing as solving equations and factoring polynomials. I felt that it was a kind of witchery, a kind of surrealism (I had gotten a crude idea of this school of art from the comic books, where it was caricatured). But the idea that I might be able to study topology, to learn more about it, to understand it, never crossed my mind. This was for *them*, the physicists and mathematicians, the ones who knew from early childhood that they were exceptionally intelligent and therefore meant to understand such things.

Around this time also a kid — I can’t remember who — explained to me how the enormous distances involved in space travel could be overcome via something called a “space warp”. Suppose, he said, that there is an open book, and you are at a point at the upper left hand corner of the left hand page of a book, and you want to get to the upper right hand corner of the right hand page. Well, one way to do this is to travel along the straight line connecting the two points. But another way is to simply close the book. Then your destination is suddenly no distance at all from your starting point! He said a space warp works in the same way.

Of all the science fiction writers, I liked Ray Bradbury the most, because of the poetry of his prose. I was stopped in my tracks by the epigraph to his book *The Golden Apples of the Sun*:

“The silver apples of the moon,  
The golden apples of the sun.”

He credited them to Yeats, but without giving the name of the poem they came from. I couldn't believe that a poet — a member of the same species as the ones who produced the dull stuff we read in English classes — had written such extraordinary lines. It was many years before I found that the lines are the last two in Yeats's “The Song of Wandering Aengus”.

After Ray Bradbury, my favorite science fiction author was Leigh Kurtner<sup>1</sup>, because of the strangeness of some of his stories. Also because I read somewhere that he had been Ray Bradbury's teacher, whatever that meant. I also seem to remember liking Frederick Pohl.

Sometimes the term *non-Aristotelian logic* would appear in science fiction stories or in the occasional articles in the science fiction magazines. I never bothered to try to learn what this was — for me it was simply a term like *high-speed binary electronic computer* that was part of the brand new age we were living in and that authors of newspaper and magazine articles liked to use because the term sounded impressive.

Once I began the dreadful business of studying engineering, science fiction lost all interest for me. All the magazine stories seemed nothing but pulp fiction for technicians (and engineers): “Scott Maxwell set the warp thrusters to negative j-force as he eased the power gyros to local orbit and scanned the GM7 data screens. It was as he thought...” I also got the impression, in the late fifties and sixties, that science fiction had been deemed obsolete by critics and English professors, for the simple reason that since humans were now orbiting the earth, there was no need for it; after all, hadn't President Kennedy set it as a goal to land a man on the moon by the end of the sixties? I felt a little sad that Ray Bradbury was no longer an important author, and that Chesley Bonestell's paintings would soon be replaced by real photographs, but I was glad to know that that wretched technician literature would soon no longer be published. As it happened, this Science Fiction Winter lasted only until 1968, when Kubrick's great film, *2001*, appeared.

Once in a while, in succeeding years, I would pick up a copy of *Astounding* in a newstand and read a few lines, but it always seemed the same old stuff. In November, 1997, on the recommendation of a neighbor, I attempted to read Stanislaw Lem's *Fiasco*, but I couldn't stand it.

Yet every once in a while I think back to the poetry that science fiction had been for me in my mid-teens. One day, in the late nineties, an idea for a short film occurred to me that I thought captured that poetry. I wrote it up as “All Watched Over by ...” and added it to one of the books I was working on.

## Ham Radio Days A Crystal Set

Possibly under the inspiration of *Boys' Life*, I bought a crystal set kit. I seem to remember my father saying how clear the sound of a crystal set is — no static. That would mean I had become interested in radio, at least at this primitive level, before I was 13. And he was right about the reception, except that the sound was also extremely faint. The set needed an external antenna, so

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1. There is no record of a science fiction writer by this name, but there was a *Henry* Kurtner. Yet, for some reason, the name “Leigh” is indelibly associated in my mind with a writer of strange, spare, stories — a writer who was said to have been Bradbury's teacher.

you had to run a copper wire around the room. There were two spring clips into which you plugged the earphones. Then you put the earphones on and moved a thin wire, called a “cat’s whisker”, around on the glittering dark gray crystalline surface of the galenium, which was mounted in a shiny metal holder about the size of a bullet, until you could hear a station, usually one of the broadcast stations. Of course, you could have heard the station much more loudly and easily by turning on the radio in the living room. But still, the sound in the earphones had such a pure quality, it seemed to be music made of starlight. Reception was always better at night, we were told.

Around this time I read, probably in *Boys’ Life*, about how it was possible to build a radio out of a razor blade and a piece of graphite from a pencil. I was intrigued by this, but I never tried it. Later I heard about people hearing radio station broadcasts in their teeth — some peculiar process caused by chemical reactions with their fillings. I didn’t believe it until, years later, a dentist — a hygienist, I think — told me it was true.

### **Becoming Interested in Ham Radio**

I don’t remember what got me interested in ham radio — but “interested” is the wrong word: I should say instead, “what made me start believing that I might be saved by getting a ham radio station to work”. Soon I found that Dave Mount, who lived in Mayfair Acres, also wanted to learn more about the subject. He had recently moved there, I think from Arizona. His house seemed modern because it was always rather dark inside, and because you stepped *down* into the living room. He had a Hallicrafters SW-38 receiver. Like the parents of most other kids, his didn’t begrudge him the equipment that he needed for his hobbies. My mother would hear nothing of such expenses, of course. Dave and I soon found a third guy to work with us, namely, Tod Whitmore, the most brilliant kid in Briarcliff High School. He had freckles, a shock of reddish blond hair, wore dark-rimmed glasses, and was the most patient, content, kid — no *person* — I had ever known. I never saw him angry, much less lose his temper. In school, he simply got the right answers — always — without struggle or fanfare. He got straight A’s. He was like a little research engineer, a little scientist, in our midst. He never lorded it over any of us. He had a quiet way of speaking, sometimes punctuating an explanation with a short laugh. His hands were pale and rather delicate.

He lived in a modern ranch style house in the hills above Briarcliff High. His father was an illustrator for magazines. (I never met him.) The place was obviously a wealthy home, but it was a kind of wealth that leaned back with its arm across the back of the expensive sofa — relaxed, confident, wealth. His mother was beautiful. She always seemed perfectly willing to have us kids come over and troop through the house and down the long hallway to Tod’s room. We were amazed at how she treated her son like an adult.

Somehow or other, the *White Plains Reporter Dispatch*, the paper I had delivered only a few years earlier, heard about our activities and sent a reporter and photographer. They took a picture of Dave, Tod, and me pretending to be doing something important with our Hallicrafters, and wrote a few words about us.

We began by listening to “short wave”, as we called it before we learned to identify the different frequency bands. Since we wanted to become ham operators, we learned the Morse code by memorizing the dot-dash sequences for each letter and number and punctuation mark and listening to the ham frequencies on which code was used. We wrote down as many characters we could recognize, trying to interpolate the ones we had missed. Before I built my first receiver, this listening was done on Dave Mount’s Hallicrafters.

## The Regenerative Receiver

My first receiver was built by following (scrupulously!) the instructions on pp. 104 to 106 in *The Radio Amateur's Handbook* for 1952, which I still have:

“The receiver shown in Figs. 5-26, 5-27, 5-28 and 5-29 represents close to the minimum requirements of a useful short-wave receiver. Under suitable conditions, it is capable of receiving signals from many foreign countries. It is an excellent receiver for the beginner, because it is easy to build and components are not expensive.

“From the circuit in Fig. 5-28, it can be seen that the only tube in the receiver is a 6SN7 twin triode...” — *ibid.*, p. 104.

Young engineers were supposed to love the *process* of building something far more than the result of building it, but I was just the opposite: I loathed the process and endured it solely for the promise of the result, which would provide me with an opportunity to talk to people and would also prove that there was still a reason for me to live. I was aware of my feelings, and knew that they were further evidence that I wasn't engineering material.

I hated the continual evidence of my stupidity, my lack of engineering ability, hated the way things almost never worked the way they were supposed to in the ham magazines like *QST* and *CQ*, or in *The Radio Amateur's Handbook*. I hated the trips to the electronic stores, the all-knowing clerks.

In my desperation, I tried to make everything look exactly as it did in the book: the aluminum panels had to be cut so they looked the same as in the photos, the holes drilled in the chassis so that the parts would be placed exactly as in the photos, the exact same brand of tubes, capacitors, resistors used, above and below the chassis, and the solder joints had to look as smooth and polished. I knew I was asking for trouble if the pliers and screwdrivers I used looked different than in the pictures.

All this amounted to nothing more than working according to the rules of magic: if you did things the way it said to in the book, then the result *might* work and you would have a reason to go on living. But if they didn't, the reason could be almost anything: perhaps the scratch on your aluminum chassis, which wasn't on the chassis in the magazine or book, was the cause of your problems. Or perhaps the guy in the store was wrong, and the slightest difference in the brand of one of the capacitors would doom the entire thing not to work. Or perhaps the way the chassis was oriented on the desk: perhaps there was a subtle magnetic effect. Or perhaps — and this was always on my mind — the thing you had built *knew* about your ineptitude, and because you didn't have the talent, deliberately refused to work.

Since I never really understood what I was doing, I tried to figure out ways of learning about radio that would make sense to me. The thought occurred to me that if I were any good, I would have gone back to the beginning — back to the radios of the 1920s and earlier, and learned the subject historically. I would have experimented with that early equipment, when things were much simpler. I had read about Leyden jars, how they were primitive capacitors, and about the first batteries, which had been invented by Volta at the beginning the nineteenth century. I knew that what I should do was take a tube apart — find an engineer who knew about these things, then, with him, cut or break the glass of a tube and have him explain exactly which of the wires inside were for the filament, which ones connected to the grid and the plate, what you would need to do to convert an ordinary light bulb into a vacuum tube. Ask him all the questions that occurred to me. But I never did it. I was too afraid that if I did, the other kids, who were going to

become engineers, would meanwhile have learned far more about modern tubes and other components by the time I caught up.

Over and over again, I read about how vacuum tubes worked: the cloud of electrons streaming from the hot filament to the plate, the variation of the grid bias (whatever that was: was it voltage? or current?) interfering with this stream in a way that produced a variation in the plate voltage. It all seemed too good to be true. Who could believe that the human voice and music could be somehow passed down to a grid and then through a cloud of electrons, and then come out onto the plate, and then go through God knows what other circuitry to reach your headphones and come out sounding pretty much like it did going in?

Most of all, I wanted to know how people had invented all this, what led them to make these discoveries.

I knew that if I were *really* OK, I would break open old tubes, study the filaments or study the behavior of working tubes with an oscilloscope, vary the grid voltage, really come to an understanding of how it all worked. But I was prevented by the fear of being gobbled up, being converted into an engineer by such knowledge.

The various parts each had their own mystery. Capacitors (condensers) were either aluminum things with interlocking fins that you rotated with a knob, or they were like long, narrow tin cans, or they were round, earth-colored wafers about the size of a nickel, with two wires sticking out. These last were to drain off the extra-high frequencies which for some reason could destroy your signal. Alternating current goes through a capacitor; direct current doesn't. But I read enough to have doubts about this oft-repeated rule, because it wasn't that the current, the electrons, actually went *through* the capacitor, it was simply that the alternating current on one plate of the capacitor set up a kind of a reverse mirror image current on the other plate.

And then there were resistors, hard little cylinders about half an inch long with the diameter of thin spaghetti, brown or black, with colored rings near one end: red, silver, green, orange, black. A wire stuck out for each end, so you could solder it to other components. For those who understood the color code, these colors would tell how many ohms resistance the resistor provided. To have memorized the little saying that related colors to numbers was considered a mark of, at the very least, a promising technician, if not an engineer. I never did.

And this matter of "ground", with its funny symbol: a short vertical line in the center of a longer horizontal line, under which was a shorter horizontal line, and under that a still shorter horizontal line. How did they think up that particular symbol? It was called "ground" because it meant a connection to the earth — the dirt outside the house — which supposedly always had the voltage value of 0. But who could believe that ordinary dirt had such a precise voltage value, even if the ground wire were attached, as it was supposed to be, to a metal rod a couple of feet long that was driven down into the ground, or to a water pipe?

Normally we bought parts from electronic stores like the ones I worked in during my last two high school years. But these weren't the only places. Far more exciting, and much less certain as to what we actually were getting, were the war surplus stores on Canal Street in New York City. Supposedly, you could pick up real bargains there.

So once in a while, on a Saturday, we would take the train and the subway and go into the dingy, cluttered, electric-smelling stores on Canal Street, possibly having gotten the model number of some particularly good receiver or transmitter from a magazine.

I bought a receiver once, and, apparently, a transmitter (see log entry below). The receiver had an aluminum case that looked like a shoe box, or, rather, like the shoe used in the game of baccarat, with a big, black, circular dial on the front, a little black push-button connector for the

antenna (marked “Ant”), plus some other knobs with incomprehensible designations underneath. I tried to drag as much information about the thing as I could out of the guy in the store, a guy with a thick New York accent, a two-day growth of beard, swarthy skin, and a smelly cigar. My one concern was to be able to receive the 80-meter band, and eventually he said, yes, it would do that, so I bought it. There was no manual, of course. You had to have a converter to change the normal 60-cycle, 110-volt AC into the voltage and current that the receiver required. Eventually, I got it to work. The selectivity was worse than that of the commercial receivers, but because it was military, I was able to convince myself that the bad selectivity was in some deeper sense better. Like military insignia and uniforms and caps, it had the essence of the military about it, it was important, had been used for important things, had been near or even in battles, had been used by people who knew what they were doing and therefore there must be a deeper reason why they had deliberately constructed a radio that could barely separate the signals you wanted to hear.

Somehow, I heard — probably from Phil Jacobus or Dave Mount — about an old guy in Mayfair Acres who knew a lot about radios and who didn’t mind helping kids. I went to him several times with my questions. He had a big workshop in his attic, and always smoked a pipe: glowing fragments would sometimes bubble up, dance up, from the bowl. Like my father, he always seemed to be calm, at peace with all this equipment and with the problems I brought him. How did you get that way? I assumed that, like IQ, it was something you were born with, and, for the rest of us, the only possibility was to try to get the equipment to work so that, even if we hated doing it, we would at least earn the right to go on living. Did things never go wrong for him? If they did, how could he conceal his anxiety so well?

Regardless how inadequate a ham’s knowledge of electronics might be, he had to master the skill of soldering. First you were supposed to cut the wire and strip the insulation off for a quarter or half inch. Then you poked the wire through the hole in the terminal, then around it, then through again, then maybe around and through once more. Then, if you were a pro, you knew that you first had to heat the “material”, or “the work”, as the books put it, namely, the wires and terminal, so that, when you touched the solder to the metal (not to the soldering iron), it would melt, or “puddle”. Only a neophyte would melt the solder by touching it to the *iron*.

The smoke would curl up into your nostrils (I always liked the smell, a kind of acid, but also a resinous, electrical, you’re-doing-something-important smell) as you carefully allowed the silvery solder to flow over and wet the wires and terminal. (In fact, there was a tiny thread of resin in the center of the solder wire.) Then, just at the right time, you removed the iron. If you held the iron to the metal too long, the solder would simply run down and leave the wires hardly covered. It would splash onto the aluminum chassis and immediately cool, leaving an image of its splash.

The kids with good parents had soldering guns. You pulled a trigger to turn on the heat, and a little light in front came on to illuminate the work. I, on the other hand, had to content myself, or felt I had to content myself, with an iron that was left over from my wood burning days. Later I picked one up that was certainly of newer make, but was way too big. But the family Code said: Never take the easy way out, always save money, don’t buy the thing that will make the job easy.

The receiver I built was called “regenerative” because somehow the signal was cycled around and made stronger. Or rather, “By providing controllable r.f. feed-back (regeneration) in a triode or pentode detector circuit, the incoming signal can be magnified many times, thereby greatly increasing the sensitivity of the detector. Regeneration also increases the effective  $Q$  of the circuit and thus the selectivity. The grid-leak type of detector is most suitable for the purpose.” — *The Radio Amateur’s Handbook* for 1952., p. 80.

How come everything worked out so favorably for the engineers? How could the signal, the electrons, be that intelligent? It was impossible to understand. The receiver had a home-made capacitor — two metal plates — whose capacitance you changed by changing the angle, using a knob on the front panel.

“For c.w. [i.e., code] reception, the regeneration control is advanced until the detector breaks into a ‘hiss,’ which indicates that the detector is oscillating. Further advancing the regeneration control after the detector starts oscillating will result in a slight decrease in the strength of the hiss, indicating that the sensitivity of the detector is decreasing.

“The proper adjustment of the regeneration control for best reception of c.w. signals is where the detector just starts to oscillate. Then c.w. signals can be tuned in and out and will give a tone with each signal depending on the setting of the tuning control. As the receiver is tuned through a signal the tone first will be heard at a very high pitch, then will go down through ‘zero beat’ and rise again on the other side, finally disappearing at a very high pitch.” — *ibid.*, p. 81.

I had no idea why all this worked. Again and again I read the explanation in the *handbook* of superhetrodyne receivers, and couldn’t understand why things worked just that way and not another. I hated trying things out because I felt this would only show up my ignorance and lack of engineering ability even more. I wanted an explanation that I could understand *in my mind*. I didn’t want to have to laboriously arrive at an understanding by trial and error. I felt that, if someone had in fact done that, years ago — understood it entirely in his mind — then he should have written it up for us who came later, so that we wouldn’t have to go through the trial-and-error process all over again.

The power supply was separate, being built on two foot-long pieces of wood mounted on supporting end pieces. A gap between the two pieces permitted the terminals on the transformers and capacitors to hang down for easier wiring. I painted the wood a light brown color because that is the color it appeared to be in the black-and-white photo, and tried to make the gloss just right so that the power supply would work — or, rather, so that the careful paint job might increase my luck in getting it to work — might influence it favorably to decide to work. (Such was the state of my ignorance of basic electronics, since, of course, the color that the wood was painted had absolutely nothing to do with the operation.)

At one point I came to the conclusion that the regenerative receiver didn’t work because I needed a very expensive volume control (“potentiometer”). Somehow, I found out that Beckman Instruments manufactured one. I wrote them an imploring, desperate, letter, with, I suppose, a check from my mother enclosed (I had to pay her back) and they sent the part. I don’t remember if it worked. (Within ten years, I would be managing a department at Beckman whose product was manuals that supposedly made equipment easier to understand.)

I ran a copper antenna wire from the window in my bedroom, over the low-angle roof in the back of the house, to a tree on the other side of the fence, a distance of some 60 some feet. In fall and winter, when the wind was blowing, the wire would alternately get pulled taut, then go slack, as the tree moved. As a result I was a nervous wreck on windy days. I am fairly sure that the wire snapped more than once. If the wire snapped, then I would have to drop a new roll of it out the window, carry it across the lawn, and climb the tree to fasten it to the insulator. With this receiver, I could copy Morse code at home. What you heard when you put on the earphones and went through the rigamarole with the regeneration setting was a big, black auditory space that was full of sequences of short and long beeps, some sequences loud, some soft, some fading in and out of hearing. It was like listening to starlight. (Reception was better at night, especially on cold clear nights when white stars were twinkling.) Each signal had its own character, not only in the speed

at which the dots and dashes were sent, but in their tones. Some had a chirp at the beginning, due to faulty transmitter or oscillator design, in which each dash began with a quick lowering of frequency, which to us always sounded comical, in part because it was a sign that the operator was not very good at electronics. Some tones were raspy, some were as clear as crystal. All of them were jumbled together in a kind of glittering tangle. When many signals were present, it required a fair amount of concentration to keep track of the one signal you were trying to copy.

But every once in a while I could not help asking myself: If you want to talk to people in other states, or even other countries, why not use the telephone? But then there would be no music of the Morse code, the dancing stars heard in the inky blackness.

### **A 7-Watt Transmitter**

I built my first transmitter from a kit. I find no reference to the kit in the '51 or '52 *Radio Amateur's Handbook*, or any of the issues of *QST* I still have. All I remember is that it had a black chassis, with a shiny coil on top, some controls on the front of the chassis, and that it supposedly generated seven watts of power: very low, even for those days. I bought a standard key which looked like the ones in the telegraph offices in Western movies, with a horizontal flat black button you pressed in order to create the dots and dashes. It had to be screwed into a wooden base to keep it steady. Wires ran from the two terminals on the back to corresponding terminals on the chassis.

Both the receiver and the transmitter were built on the desk in my bedroom. Somewhere there is a photo, taken later, showing me sitting at the station with the earphones on, hand on the key. (For some reason I never understood, in the pictures in books and magazines of ham operators sitting at their stations with earphones on, the earphones never covered their ears! Could you hear anything with the 'phones pressed against your temples? I never tried it. But to this day I don't know why the operators in photos wore their earphones that way.) Needless to say, my mother required that I keep my room neat, and that included the part of the desk devoted to the station. I was boundlessly envious of other kids who were allowed to leave their pliers and soldering iron and bits of wire just as they were when they had finished using them. But not in our house.

### **Getting a License**

Before you could actually broadcast a signal, you had to get a license. There were several types, or *classes*, as they were officially called, of ham licenses. The easiest to get was a Novice Class. But it severely restricted the frequencies you could transmit on. For example, the only frequencies on which you were allowed to use a microphone were 144 to 146 megacycles. Then there was a Class B, or General Class, license, which granted most of the privileges any ham wanted, including the privilege of using a microphone on lower frequencies, in particular on seven megacycles. Finally there was Class A, or Advanced Class, which apparently was designed to give the real engineers a chance to experiment on some additional frequencies, and with more powerful stations. All of us in our group started out with Novice Class.

You could buy books that provided you with what you needed to know to pass the written part of the license exam — essentially, very elementary radio theory. Then, in addition, you had to pass a code test to prove that you could send and receive Morse code at seven words per minute. The exam was given in New York City at various times throughout the year. I went, took it, and then endured the nearly unbearable wait for the license or the notification of failure to arrive in the mail.

The rumor among hams was that the FCC (Federal Communications Commission, which regulated amateur as well as commercial broadcast radio) patrolled the streets in unmarked trucks with antennas on top, searching for illegal (“bootleg”) stations. But after several weeks of waiting for the mailman to come (once again, as when I waited for the cowboy suit to arrive, waiting for him to bring the thing that would give me a reason to go on living), my impatience got the better of me, and so, one Saturday morning I got up early, turned on receiver and transmitter, and began tapping out, in Morse code, “CQ CQ CQ ... DE W2PJS” (“dah-di-dah-dit [C], dah-dah-di-dah [Q], dah-di-dah-dit [C], dah-dah-di-dah [Q]...” (“Dit”s and “dah”s were the way we pronounced the dots and dashes of Morse code, although on the air they were merely long and short beeps.) I was sending a standard sequence of letters used by hams: “CQ” meant that you were looking for someone to talk to, “DE” was the Latin word for “from”, and the rest was supposed to be the call letters of your station. Since I didn’t have a license yet, I made up my own call letters: “W2PJS”. “W2” was the prefix for any station in New York state, and the last three letters I just made up. Heart pounding, I tapped out the call over and over, after each time slowly tuning across the frequencies near the frequency on which I was sending. For many minutes, nothing. (How could you know if your station was actually emitting a signal or not?) Then, suddenly, I heard my own call letters being sent: “di-dah-dah [W], di-di-dah-dah-dah [2], di-dah-dah-dit [P], di-dah-dah-dah [J], di-di-dit [S]...”. They were repeated several times, as was the custom, to be sure the receiving station heard them, then came the “DE”. I wrote the characters down on my notepad as I heard them — the first time anyone had contacted me on the air! — and soon saw that I was being asked where I got the call letters for my station, because they happened to be the same as those of the ham that had contacted me, and furthermore he happened to work for the FCC! My heart stopped. I immediately turned off the switches on the transmitter *and* the receiver and sat there, looking out the window at the nice sunny day that was just beginning, and wondering when the truck with the antenna on top was going to pull into our driveway. I didn’t turn on the transmitter again until the license arrived. When it did, I found that I was KN2ACH. But why the “K” and not a “W”, I asked the others in our group. They said it was because the FCC was running out of “W” sequences, and had gone to “K” now. The “N” was for “Novice”. My call letters, name, and address were published on p. 40 of the 1952 *Radio Amateur Call Book Magazine*, which contained no less than 435 pages, in small type, of these single line entries representing ham operators the world over.

Once we started transmitting and communicating with others, we became much more conscious of the different transmitting styles, or “fists”, as the even then old-fashioned term had it. Each operator had his own way of putting together dots and dashes: this one was slow and deliberate, a little ponderous, that one, who had a semi-automatic key (called a “bug”), was very fast, with long dashes and very short dots, this other one had an almost perfect rhythm, so that it was a pleasure to listen to in itself. We soon could turn on the receiver in the afternoon and recognize quickly if any familiar operator was on, without having to wait for his identifying call letters. It was a kind of music.

All hams were required to keep a log of their activities. I still have mine: two pads (one for KN2ACH, and one for K2ACH, when I got my General Class License), both red, wirebound, with a silhouette of a ham at his radio station, a microphone on the table before him even though he is tapping on a key and reading from a piece of paper (why didn’t he use his microphone?). Outside the large, modern, window, a plane flies overhead. The vertical three-story antenna, with trees along the base, is seen to be radiating signals. Completely realistic, of course. The pads are titled: *The LOG of Amateur Radio Station \_\_\_\_\_*, the blank being where you entered the call letters of

your station. Entries were written in a profusion of the abbreviations, some of them three-letter codes called “Q signals” because they each began with the letter “Q” that hams used to shorten transmissions.

I started transmitting legally at 4:00 p.m. on 5/9/52. “Other Data” for the log entry reads “First CQ with license. XMTR [transmitter] not put. [putting] out.” Then follow eleven more attempts during that and the following day, with “Other Data” containing comments like, “Too much QRM [interference from other stations] for 7 watts. Hi [laughter].” “Too much QRN [atmospheric noise], couldn’t hear a thing”. “No Dice.” “XMTR not working well, I think.” “Band clear, yet no replies.” “Nothing” “Nothing” I tried calling stations I heard. “Didn’t answer, I’m QRTing [stopping] for chow.” “No luck”

Then, for 9:00 a.m. on 5/10/52, the comment “Tod heard me in Briarcliff (589X)[a code representing the quality of the signal; in this case it indicates good quality]”.

Then more failed attempts, until, at 7:20 a.m. on 5/11/52, “First QSO [contact]!! Dick, 107 Summer St., Arlington, Mass.” The code entry indicates he received me with a good quality signal.

Thereafter follow reports of some 350 attempts and successes at making contacts with hams in the Northeast (including Frank Fetzer, down the street), and, once, in California. After each contact, you were supposed to send the other person a QSL card (i.e., a postcard with the name of your station in big letters, and below, your name and address, and then lines where you filled in the time of day, the duration of the contact, the strength of the other person’s signal, atmospheric conditions, subjects discussed, and other pertinent information).

### First Published Work

All of us hams read the ARRL (American Radio Relay League) magazine, *QST*, which was devoted exclusively to ham radio. It had a cartoon character named “Jeeves”, and there seemed to be an ongoing series of jokes about ham electronics, but I never understood them. (The kids who were clearly going to become engineers seemed to understand them immediately.) I was middle-aged before I knew that Jeeves was a character created by P. G. Wodehouse and that, apparently, this was the character depicted in those cartoons.

It was in the September, 1952 issue of *QST* that my first published work appeared. I had just turned 16. I quote it in full from p. 64:

14 Elm St.  
Valhalla, N.Y.

Editor, *QST*:

One way to lick the QRM problem on the 80 meter Novice band is with break-in. Few Novices realize what a boon to crowded frequencies it is. And for most low-power rigs it’s quite inexpensive, too.

The traffic boys have been using it effectively, so why can’t we?

— John Franklin, KN2ACH

QRM was interference from other stations. Break-in was simply the practice of leaving the receiver on while transmitting, so that the ham that you were communicating with could interrupt

you at any time, and not have to wait until you had ended your transmission (which was signified with a short sequence of characters which I have forgotten — it might have been “ARK”: *di-dah di-dah-dit, dah-di-dah*). Thus the other ham could let you know immediately when he had missed something of your transmission. One problem was that if you left your receiver on while you transmitted, you were nearly deafened by the sound of your own signal. But if you turned the volume way down, then you might not hear the break-in from the other ham.

I don't remember who the “traffic boys” were.

For several years, I was able to keep hope alive that someday I might become an important writer by the fact that something of mine had been published when I was 16, even if it was only a two-paragraph letter. And if worse came to worst, at least I would not be *completely* forgotten after I died, because somewhere, in some archive, and in various hams' basements, would be copies of the magazine.

### **A Bigger Transmitter**

Although the 7-watt transmitter made it reasonably certain I could always contact someone in the New York metropolitan area, my goal, like that of many hams, was to increase the distance (“DX”) of contacts, and for that, more power was necessary. So I somehow acquired a 30-watt transmitter. The transmitter was built on an aluminum chassis, had two 807 tubes sticking up, with plate connectors at the top of each. It was to have an output of 30 watts, far greater than the seven of my first transmitter.

By this time, I had moved the station up to the little room at the top of the stairs to the attic. I don't remember the reason why: perhaps my mother ordered it, to get all the messy soldering and cutting of wires out of the bedroom. I reconnected the antenna outside the window, so that it was now a floor higher than before, which supposedly improved transmission and reception. To reduce the possibility that the antenna would snap in strong winds, since the other end was still fastened, through an insulator and wire, to a tree just on the other side of the white fence, I put springs between the insulator near the house possibly remembering my father's idea about the bumper on the Black Streak.

The last entry in my Novice log reads:

“The above was the last QSO which I had as KN2ACH. I did not intend to make the 12th of December [1952] the end of my Novice career, but I just never got on the air again. As I write this, I am very anxiously awaiting the return of my BC-455-B from K2AQB, who is fixing it. My rebuilt BC-458A is completed except for the power supply. If all goes as planned, I will be on the air in about three weeks. Thus I close the first chapter of my Radio Amateur career. John Franklin, K2ACH 2/23/53”

The new transmitter certainly increased the percentage of replies to my CQs, but the antenna connection on the back always required a lot of adjustment, and this entailed leaning over the open chassis. One afternoon, in the usual state of frustration at not being able to get the antenna working, I became careless and allowed both elbows to touch the plate connectors simultaneously. The shock was strong enough to throw me back across the room — I think I actually landed on my backside on the floor, just missing falling down the stairs. I considered the accident yet another proof that I was not meant to have anything to do with radio.

The little attic room was hot in summer, so that I often sat there, tapping away at the key, with the sweat rolling down — *Dah-di-dah-dit, dah-dah-di-dah* [CQ] ... — thinking: if I were *really* OK, I wouldn't be bothered by this heat, I would be too absorbed in the electronics, in understanding how everything worked, and in thinking up ideas for making it work better.

On the other hand, the room afforded me a perfect view of the Beaird's back yard and, in particular, of Grace Beaird sunbathing, which I could observe not only with the naked eye but with binoculars. I stood sufficiently far back so that she wouldn't notice if she happened to open her eyes, nor would Barbara or Bobbie if they looked across from the bedroom opposite. Grace wore orange and yellow bikinis and lay on her back, toasting in the summer sun, eyes hidden behind sunglasses, and I didn't mind the heat at all.

### **The General Class License**

Every Novice wanted, sooner or later, to get a General Class license, so he could transmit on more bands, in particular, the 10-to-15 meter bands, which were best for DX. But the written test was much harder. You had to be able to identify various kinds of circuits — Class A, Class B, Class AB, Push-Pull — and also know the features of each type. It was utterly baffling. My first stumbling block was that it seemed that the notion of causal sequence was useless in a circuit, because, first of all, a given point in a circuit might have several wires, each with a different component, connected to it, and furthermore, if you followed the sequence of components from that point, it often happened that they connected to a part preceding the point at which you had begun. Everything happened all at once. How could you figure anything out in a situation like this? The language in the test preparation books all seemed as if it had been cooked up in engineers' workshops by guys who understood it all and communicated only among themselves. I could learn what the symbols stood for, certainly: this circle was a tube, these dotted horizontal lines were the grids, this heavy line with a hook at the end was the plate, this inverted-V-looking thing was the filament. I knew that the sawtooth symbol represented a resistor, that two short, heavy lines represented a capacitor, that a coil-looking thing was an inductor. But that was a long way from understanding how the circuits worked.

Eventually, I simply took the book and memorized as much of it as I could, trying to draw at least parts of each type of circuit from memory, memorizing the questions and the answers.

I took the test in spring of 1953, passed, and became K2ACH.

As I have said, the only thing I liked about ham radio was the sound — what you heard when you put on the earphones, the beeps of a dozen or more Morse code messages going back and forth through the silent black void, each with its own characteristic, some so faint you had to strain your ears to be able to copy down a character or letter once in a while, a few so loud that you had to turn down the volume control. So becoming good at Morse code was a goal that had some meaning for me. Each week, or perhaps it was each day, the ARRL station broadcast several minutes of ciphers at various speeds, so hams could practice. Then, when you felt ready, you could take the on-air test they gave, I think, each week or month. They transmitted for several minutes, you copied down the five character sequences and sent them in. If a certain percentage of them were correct, you got an ARRL Code Certificate in the mail, which you could frame and hang up in your station. The highest speed I achieved was 22 words per minute, which was considered above average. Around this time, also, because my code speed was improving, I bought a "bug", as the fast-sending keys were called. Here, instead of having a key that looked like what you see in telegraph offices in the old Westerns, the black base of the device was about four inches by eight, and the key was mounted sideways, instead of flat! By just tapping it in one direction, a leaf of metal would vibrate, sending out a succession of dots; press it in the other direction, and you got a dash. It took a certain amount of practice to learn just how long to press it in the one direction to get a given number of dots, but once you mastered this, you could send at

a much faster rate. A bug was always recognizable on the air because the dots were so short, and in such fast succession, and the dashes so much longer.

But the pleasure of the sounds was also the pleasure of having someone to talk to, and the prospect of finding someone with whom I could have a decent conversation — well, at least a ham radio operator's conversation — was sometimes the only thing that enabled me to get through a hard day at school and then the usual evening fight with my mother.

I used the station throughout high school, but as music took up more and more of my time, my interest in it gradually dropped off. I may have tried to take it to my first year of engineering school, I don't know. But as far as I can determine, not a trace of the hardware exists any more.

## How Do You Get a Self?

The one overwhelming question throughout my high school years, and for many years thereafter, was: *How do you get a self?* The question had tormented me since childhood, but its urgency increased enormously during these years. The only answer I could accept was: *By doing something extraordinary.* This became the one and only goal of my life.

Which is not to say that I wasn't constantly on the lookout for other answers, since this answer filled me with unending dread and anxiety, given my obvious lack of talent for anything. Once, sitting in the car in a parking place in White Plains, waiting for my mother to do some shopping, I was reading a book on yoga. I had already tried to get into the lotus position at home, and found I couldn't. I think at one point the book said that it was not absolutely *essential* that you be able to get into the lotus position, but it sounded to me like you were starting with two strikes against you if you couldn't. In the book were photos of men in various yoga positions. I envied the ease with which they seemed to do this, but at the same time I was convinced that a life spent sitting or moving in certain prescribed ways was not for me.

For a while I considered becoming a bush pilot in Alaska. I had read a book about this life and had always liked the look and feel of a plane with *pontoons*, the idea of landing a plane on *water*. But in Alaska, in addition, there was snow, and dangerous mountains, and snow-covered pine forests, and the possibility of your striking a submerged log as you skimmed onto the surface of the ice cold, blue-black water of a lake. In the book, the pilot always treated himself to a cup of dark tea (no cream or milk) on shore after he landed. I liked the independence of the life. I may have written to some authority or other about what was required to become a bush pilot.

Another time, when things at home had reached a new low, I tried to go to sea. On one of my trips to New York City, I went to the docks, somehow found the union hall where merchant seamen were hired. It was almost empty. A few middle-aged men (or so they seemed) sat around, leafing through magazines, or just sitting on the benches. I walked up to the counter, simply said to the guy behind the cage that I wanted to go to sea. "Oh, yeah? Well, there's 2000 ahead of you," he said, without even looking up.

But things were not *completely* hopeless, because I continued to believe that, even if Nature had played the dirty trick on me of giving me a low IQ and no talent but at the same time the boundless ambition to accomplish something great, there was still the possibility that I might save myself through suffering and determination alone. Posterity would look back on my life and say, "Anyone who tried this hard must certainly be rewarded by being remembered." In the depths of my despair, the words would go through my mind: *Someday I will be truly great.* (I am embarrassed to admit this, but it is part of the record.) So any sacrifice was justified if it led to great-

ness. Human beings came into this world not merely as blank slates but also as valueless, worthless commodities. But if they suffered enough, tried hard enough, there was a chance, however small, of their acquiring value. I accepted without the slightest compassion that those who were ignorant of this code, or who dismissed it, would one day, probably after death, realize the consequences, and spend eternity contemplating their failure, contemplate their *having been forgotten*. I knew this was the fate of virtually all those in the lower classes, the Common People who merely lived for pleasure. They were doomed to find out one day that their lives had been meaningless, and to suffer for it for the rest of eternity. And that didn't bother me a bit.

## Acne

I don't remember when my first acne pimple appeared, but I do remember that my mother made a point of letting me know about it, and when the second appeared, and the third and fourth.... She would get that strange expression which indicated she was not listening to what I said. Her eyes would be fixed on my face, her expression benign, fond, that tolerant mother's smile on her lips, which said "We mothers know how to understand our children, we know what's best for them, and we never reveal it if we have discovered another flaw in them; because we are mothers, we know how to hold that back, and not reveal our feelings; we do for them what the world doesn't." She would tell me to wash my face more often, and to stop eating candy and greasy food. (This wisdom was easy, parents' wisdom: the reason that things go wrong with children is that the children do something they like, which means something that parents don't like.) It was yet another hump on my back, in addition to having a mother problem, and no father, and not being a genius, and never having had sex with a girl.

Part of each morning's ritual was applying Clearasil to my face. (Later on, this was preceded by a thorough washing of my face with a liquid medicinal soap (light green) called Phisohex.) The Clearasil ointment came in a tube like toothpaste, and stank of sulfur. You carried that smell around with you all day, in addition to that of your Mennen's underarm deodorant, and of your Vaseline hair tonic. The ointment was supposedly flesh-colored, and "could hardly be seen", but of course, not only could it be seen, it could be smelled. It was another mask to make me hideous to women. Once you had smoothed it on, it dried into a kind of cast. You could feel it whenever you moved your cheeks. It made smiling, much less laughing, like trying to dance with a cast on.

Clearasil was to hide the pimples and, supposedly, to dry them out. How to get rid of them altogether? At first I (or I should say we, since my mother took an active part in anything that showed promise of making me better in any way) — at first we tried the sunlamp. I would lie on the bed in the den, on some kind of white plastic sheet, put on special goggles with black, all but opaque lenses, and she would wheel the sunlamp into place, plug it in and turn it on, always adding a series of admonitions about the need to turn my face so it would receive full exposure to the ultraviolet, and not to lie there too long, and to clean up my room afterward, and to stop biting my nails.

Unfortunately, the ultraviolet had little effect. My anxiety about the disease (it was not an "affliction"), and her recognizing it, and her own anxiety about having a son whose appearance was so obviously damaged, eventually led her to finding a dermatologist who provided x-ray treatments. His name was Dr. Frank and he had an office in or near White Plains Hospital, which was the most prestigious hospital in the area. I remember him as a thin, nervous man, balding, with fingernails bitten as badly as mine. He always seemed guilty about something, and wishing he were somewhere else. I sensed that he had something going with his nurse. He prescribed the

standard dietary limitations: no chocolate, no potato chips, no fried foods, no ice cream, no seafood, no nuts, the last being particularly cruel, I thought, since I loved peanuts. I was supposed to drink a lot of water. I was never to scratch the pimples. But the treatment he was selling promised hope that girls would like me, so once or twice a week I went to his office, climbed on to the padded treatment table. In those days, no one really knew the risk involved in these treatments, but because of cancer fear and my natural dread of all things medical — all things that my mother in any way thought good for me — I made sure he gave me not one but two of the thickest lead-lined aprons he had, and that they covered my chest and throat as far up as I could pull them. Then he, wearing no protective gear at all, with his nurse hovering in the background, also without protective gear, positioned the x-ray machine in front of my face and turned it on for many seconds, perhaps up to a minute. My precautions probably saved my life, because a doctor in the eighties who had Frank's records sent to him at my request, described the total dosage I received as "enough radiation to wipe out the city of Menlo Park". When I found out about this, and wrote to Dr. Frank, he denied the treatment could have any harmful effects, even though by that time the statistical data was already well established — something like 23 times greater chance of getting cancer of the thyroid among people who had had that treatment. However, as of age 61, there is still no sign of the disease in me.

Because of the acne, shaving was always a risky business. I had to carefully work around the pimples with the Gillette and resist my frequent impulses to cut into them — pull the skin taut and just slice them all off level with the skin. But it was common knowledge that if you did anything to break open the pimples, like scratching them, much less cutting them with a razor, scarring would result. And so I resisted — one self-discipline I was successful at, largely out of fear of the consequences of doing otherwise. The pimples under my chin were another matter. Here they were so small as to amount to little more than a rash. Shaving these invariably resulted in bleeding over the entire area, requiring repeated applications of toilet paper to soak up the blood. If you left the paper on for more than a few seconds, some of it would stick to the skin, and when you peeled it off, the skin would start bleeding again.

Since Dr. Frank was a dermatologist, I went to him later to have a persistent wart removed from my right first knuckle. He swabbed the skin with alcohol, then got out something that looked like my large soldering iron. He held it near the hardened growth and the next instant a blue-purple-white arc of electricity was dancing on its surface. It felt like a pin had been shoved into it. I made a big fuss, somehow got through it. Soon, the wart was back, along with a couple of others. Same treatment, same lack of success. If he merely disliked giving x-ray treatments, he clearly hated removing warts. His anger at my wincing and inability to hold still was clearly evident. How he hated his job! How I hated mine! Eventually, he or another doctor got rid of the warts once and for all by burning them off with a hot iron.

## **Girls**

There was one and only one reason why I was willing to risk my life to get rid of the acne, and that was girls. The truth is, I envied girls, though I could never have allowed myself to admit it then. For one thing, hardly any of them got acne. But they also had tits and curvy asses and girl-legs and nice long hair — and the world was at their feet. Perhaps most of all, I envied them because they were allowed to be hypocritical. In fact, it was part of their irresistible appeal. They could wear tight sweaters and walk in a way that made their titties stick out, they could toss their

hair and wiggle their asses so that it drove you mad, and yet, if they caught you looking, they could wither you with that contemptuous look that said, "Is that *all* you can ever think of?" They could use their weakness, their inability to tolerate bad language, their susceptibility, as in my mother's case, to unpredictable moods and depressions and a host of lurking, unknown illnesses, to excuse themselves from any of the responsibilities that we ugly men had to face and accept. Only the eternal female — or, rather, only the modern liberated woman — could manage to simultaneously spend equal time and money on making herself as physically, as irresistibly, attractive to men as possible, and on campaigning for an end to the treatment of females as sex objects. Then and later I asked myself: if girls were in so much danger of rape and the lust of men, why did they wear *dresses* — garments which were open underneath, and just invited looking up the inside of?

My mother, needless to say, was always ready with warnings about girls: they play tricks on men; they try to lead them astray; worst of all (if they are not of the upper class), they often have diseases which cannot be described.