They are a new cold-war breed: scientists turned manufacturers, most of them in their thirties, fierce iconoclasts, indifferent to money although they are worth a million or more—at least on paper.

The Egghead Millionaires

Every few weeks during these years of technological ferment, there appears in the financial pages an announcement which indicates, to the discerning reader, that another millionaire may be in the making. The news is that several hundred thousand shares of stock are being offered in some corporation, and the reader is invited to secure the prospectus from an underwriter. The name of the corporation is likely to include such words as data, electronics, computer, instrument, control, space, systems, dynamics, research, microwave. This is the clue to what is going on. The head of the company, and its largest stockholder, before and after the offering, is very likely to be a young man in his thirties, whose prior experience has been largely in scientific research. It is he who is becoming a millionaire.

Never before have men so young, so unknown to the general public, and so insouciant about money been so eagerly embraced by Wall Street. Most of these men are authentic eggheads; their values and preoccupations are still those of the scientific, rather than the business, community. Some of them, indeed, are only foggily aware of the fact that they *are* millionaires.

They are men who generally prepared themselves in college to spend their lives teaching, or as researchers with some large corporation, and hardly could have expected, back in 1945, to earn much more than $10,000 a year. What transformed their lives, of course, was the cold war, and the tremendous new premium placed on brains. The cold war reshaped the entire job market for intellectuals, vastly enhancing the earning power of sociologists and economists, for example, but particularly expanding the financial rewards that physical scientists could expect. It's the scientists who have been able to make the most capital out of their knowledge, getting sizable government contracts, forming their own companies, and cleaning up.

The young egghead millionaire has adjusted to his unexpected wealth pretty calmly. He is not likely, for example, to celebrate by buying a white Jaguar, a yacht, or even a champagne dinner. He tends to be quite articulate about his reasons for disdaining all these marks of other *nouveaux riches*.

The breed is not numerous. There are about a hundred scientists in, or just recently out of, their thirties, who either have net worths of more than a million dollars or who seem to be on the verge of joining the millionaire class. They have all made their fortunes within the last ten years; many have done so within the last five. Of the total, perhaps thirty founded and are now proprietors of their own science-based Space Age companies. (The others, as a rule, were friends or schoolmates of the founders, helped set up the company or came aboard soon after. Today they work for the boss as cheerful, and often irreverent, vice presidents.) For this article FORTUNE interviewed more than twenty scientists who belong to the inner circle of those who made their money in companies they founded.

The old school tie

They come from all around the U.S., but most of them are living now in one of perhaps half a dozen cities. San Francisco, Los Angeles, and Boston have the largest clusters. Smaller groups can be found near Washington, D.C., and San Diego, on suburban Long Island, in New York City, and in northern Florida. This distribution is not hard to explain. The area between Los Angeles and San Diego is the heart of the U.S. missile industry, and it is the home base of several large missile companies for

which the young scientists serve as subcontractors. Northern Florida is where Cape Canaveral is, and the Washington area is where the Pentagon is. But the biggest clusters of rich young scientists are around several universities: the Boston group, many of whom work on the famous Route 128, are there because they have close ties to the Massachusetts Institute of Technology; most of the San Francisco group are bound to Stanford or the University of California at Berkeley. These new millionaires are attached to the university by several considerations. Most of them are in the business of making a sophisticated instrument or component, and need a steady supply of technical brain power. Proximity to a university gives them access to new ideas in their fields, and to bright graduate students, and allows company staffs to participate in seminars and discussions that may directly affect next year's sales. A number of the young millionaires are established authorities in their fields—and are interested in staying close to other authorities. Besides, universities provide the kind of community they like, and in which they feel at home. Of the young men interviewed by FORTUNE, eight had done undergraduate or advanced work at M.I.T. or Stanford.

The non-organization man

Most of the rich eggheads suggest that what got them where they are, principally, was a strong yen to be "independent"—about the company they work for, where they live, what they buy, how they play. Most of them do not have the particular qualities that corporations ordinarily look for in men destined to rise within the corporation. The millionaire scientist may get along reasonably well with people, especially with people in his own company and industry. But he is not a team player; for him, the rainbow to success never did arch through the conference room. "I have been fired by the best companies in town," says thirty-nine-year-old Arnold J. Ryden, who in 1957 formed Control Data Corp., a Minneapolis computer manufacturer. Ryden did not stay long with Control Data; he left to start Midwest Technical Development Corp., an investment firm, and in the course of doing so, incidentally, he added a second million to the first million he had made in Control Data.

If big corporations do not always think so much of the departing rebel, the departing rebel often has a low opinion of the abilities required by businessmen in general. Anybody, runs the refrain, can learn about business, but how many businessmen have the brains and intellectual discipline to get an advanced degree? "Technical groups," says a Los Angeles management consultant who has helped some of the young proprietors get under way, "feel that technical proficiency is all-important. They are pretty sure that somebody in the group will develop business ability, and anyway they can always hire a businessman to manage things." On the other hand, they are all oppressed by the difficulty of finding first-rate scientific talent.

The knowledge that his scientific abilities are nearly unique is what principally explains the serene self-assurance displayed by the scientist when he walks across the street, rents a loft, and announces that he is going to compete with the big, rich company that formerly employed him. Ordinarily, he was making, say, $10,000 to $15,000 when he quit, and he may have saved $5,000. His move would appear to many young executives to be a breath-taking risk, but he knows that he is a commodity very much in demand. If he fails, he can go right back and make his $15,000 a year again, perhaps not with his old employer, but with somebody. "I always knew," says Elliott Levinthal, president of Levinthal Electronic Products, Inc. (now owned by Radiation, Inc.), "that I could make $12,000 or so as a physicist even in bad times." Levinthal is a New Yorker who got his doctorate at Stanford; his doctoral dissertation was "A Precise Measurement of the Relative Nuclear Magnetic Moments of Protons and Deuterons."

The young scientist who walks across the street also knows that if he can gather some technical and scientific talent around him, his company doesn't even have to make money; if it turns out to be a loser, he can probably sell it to a larger company eager to pick up the talent he has assembled. It is often possible to make a sizable capital gain by putting together, and then selling, a company that has no hope of earning a profit.

However, the scientist does not ordinarily start his company with any close calculations about capital gains. The groups gathering conspiratorially over coffee in the cafeterias of the big firms are well aware that the real money is outside, but that fact is not governing in their behavior. Most of them are simply prejudiced against working for, or even with, someone else. It is interesting to note that their favorite sport is not golf or tennis or sailing, but skiing—something they can do all by themselves. ("Golf," said one young scientist scornfully, "is what the sales managers do.")

The day after the first million

These new rich are probably the most inconspicuous consumers, dollar for dollar, that can be found outside of the Yankees of Boston. They don't spend their capital. They disdain keeping up with the Joneses; in fact, they do not *know* the Joneses, and don't want to. Most of those interviewed by FORTUNE still live in the houses they bought when they were salaried employees. Those who have settled down in California generally have swimming pools, but are quick to point out that "everybody in California has a pool."

Charles D. Close, president of Compudyne Corp., a Philadelphia-area manufacturer of automatic control systems, went through an interesting cycle. When he first got into the big money, he changed his way of life dramatically: he bought a large house with servants' quarters, rented a forty-foot yacht, took his two sons from the local public schools and sent them to private schools. Then after two years Close sold his house (taking a $13,000 loss), moved to a smaller establishment in his old neighborhood, and put his sons back in public school. "We realized," he says, "that we were going suburban, reaching for one brass ring after another. Furthermore, we were moving into a group that had blinders on, that judged people by its own narrow standards. I wanted the boys to understand all kinds of people and respect them as individuals, and you can't do that if you set yourself apart." Incidentally, one of the things Close took up after selling his house was skiing.

A clunk, but it still runs

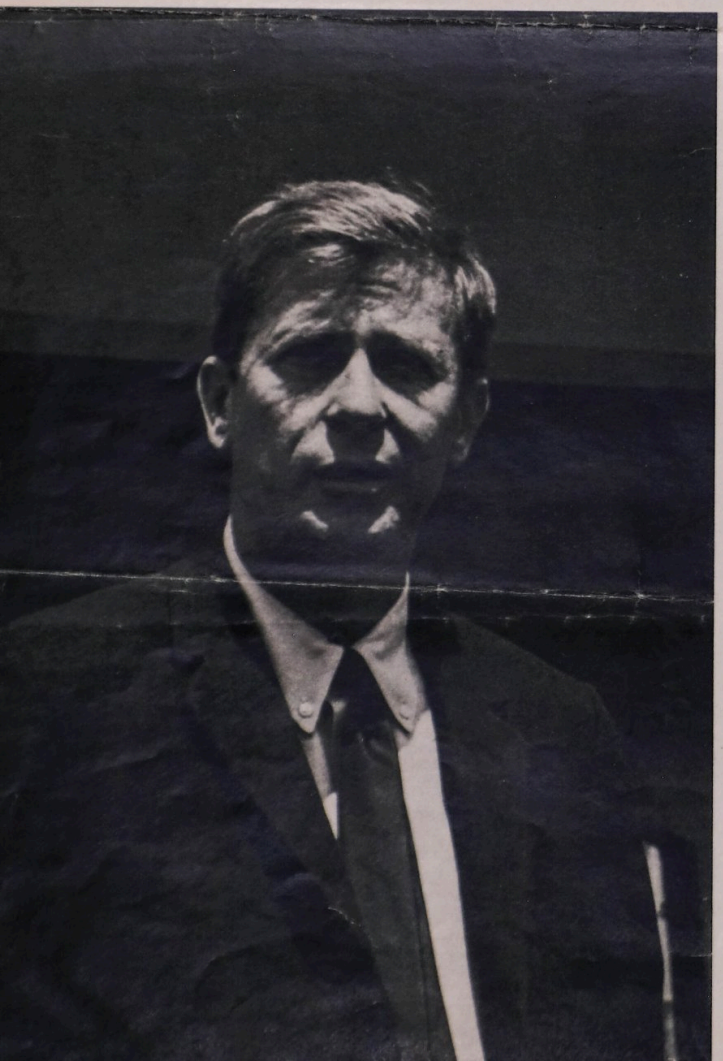
Many of the scientists shun ostentatious automobiles, and one or two of them, in fact, seem to show a strain of inverted snobbism in driving up to the plant in a real clunk that "still runs good." "I thought a lot about buying a Jaguar," says Erwin Tomash, president of Telemeter

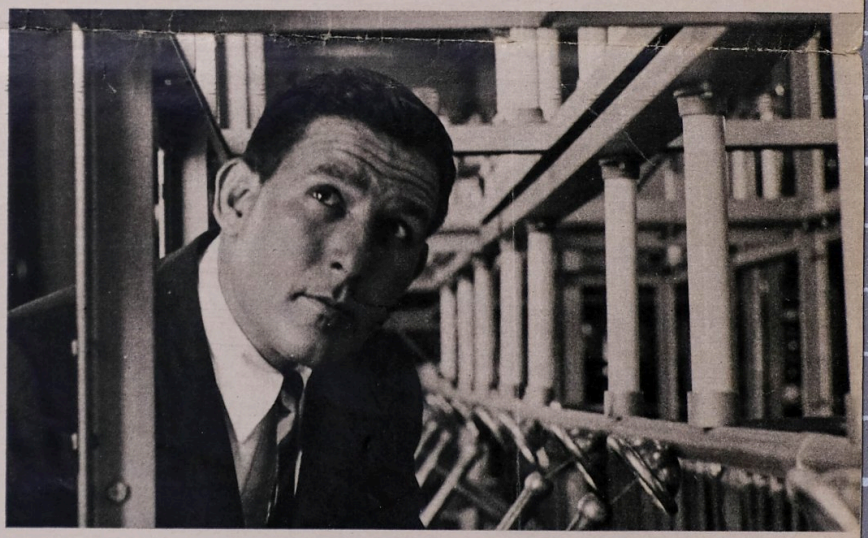


Robert Rod, 39, founded Acoustica Associates in 1954, when he had $500 in savings and an idea for an ultrasonic cleaner—tested only in his bathtub. In 1956 the company landed a million-dollar R. and D. contract in connection with the Atlas missile, despite an Air Force inspector's report that its only piece of testing equipment was a voltmeter (for which Rod had traded a tennis racket). Today Rod owns almost 85,000 shares of Acoustica (now located in Los Angeles), which sells at $40 a share.



Elliott Levinthal, 38, was one of six people who organized Varian Associates of Palo Alto in 1948 to do electronic research. Later Levinthal worked briefly as chief engineer for Century Metalcraft Corp., in Los Angeles, and then set up his own company, Levinthal Electronic Products, Inc., in Redwood City. In May, 1959, he sold out to Radiation, Inc., and collected roughly a quarter of the $2 million that company paid for it. He and his wife are still getting by with an old Plymouth station wagon.





Arch Scurlock, 40, studied physics at the University of Texas, where he was handball champion, took his doctorate at M.I.T. In 1949 he joined an older colleague in founding Atlantic Research Corp.; today he owns about $10 million worth of the company's stock. His dress and manner are highly informal—the tie shown here is a major concession to the presence of FORTUNE's photographer. He is still an enthusiastic athlete who plays squash regularly, canoes, and frequently, on the spur of the moment, swims in a lake conveniently located near the company's main plant in Alexandria, Virginia.

James J. Ling, 37, president of Ling-Temco Electronics, Inc., Dallas, is worth about $10 million. His mother died when he was a baby, and his father, an oil-field roustabout, left him in a Catholic boarding school when he was ten. He took correspondence courses to learn electrical engineering. After the war he made about $6,000 in a few fast real-estate deals in Texas, and used his profits to found Ling Electric Corp., a firm that went through a long sequence of mergers to become a large manufacturer of electronic components. Sales in 1959 were $48 million. Ling expects sales this year to be $165 million.

Magnetics Inc. in Culver City, who drives a three-year-old Chevrolet. "I even tried one out. Honestly, I'd buy one if I wanted one, but I don't want one. There's not enough room for my daughters and it really does cost a ridiculous amount of money."

They show the same attitude toward clothing, scorning the gray-flannel suit in favor of patched-up old suits, sport coats, Army chino pants, and multicolored shirts. Arch Scurlock, president of Atlantic Research, habitually wears his collar open and lets his tie slump. ("When we went up to New York to get our listing on the American Exchange," one of his associates recalls, "we made Arch button his collar button.") A Yale-bred director of a well-known transistor firm recalls that the young president of the company arrived at his Wall Street office just before the two of them were to meet some bankers on whom it was necessary to make a favorable impression. The president was wearing a shirt and tie of loudly contrasting sunset colors. "He just hadn't thought about it," says the director tolerantly; he propelled the president into the men's room and there exchanged his own Brooks Brothers shirt and rep tie for the sunset colors.

There is not much pressure from their wives on them to loosen up and spend some money. Most of these millionaires married young, having met their wives in college or graduate school, and most of their wives have worked at some point or other—sometimes to support their husbands. Now the wives seem content with the same old modest standards. "I told my wife she could have a mink," said one young millionaire. "She sat down in a chair and thought about it, and then she said she didn't want it. She said we'd been happy just like we were, and she didn't want anything to change." Last Christmas, George Henry Bruns, president of Systron-Donner Corp. of Concord, California, gave his wife a check to buy a fur jacket, and she hasn't got around to it yet.

The one purchase common to the entire group since affluence descended upon them is the common stocks of other technically oriented companies, often those of competitors or suppliers. The scientists have relatively little taste for bonds or even for blue-chip stocks, and they pick their stocks more on their own assessment of the technical abilities of the management than on any conventional notions about price-earnings ratios or dividend records. Thus the entire portfolio of one of these millionaires is likely to be selling at, say, forty times earnings. This procedure has worked out very well in the past several years. Many of the scientists have made capital gains in the stocks of other companies almost as large as they have made in their own.

They will spend money in order to increase their mobility. They like to move around. Three of FORTUNE's group have bought light planes (one Piper Tri-Pacer, one Cessna, one Beechcraft Bonanza) ; all argue that the expense is justified by the use for business, and are delighted with the idea that now they can travel whenever and wherever they want to. "What I like best about having some money," says Arch Scurlock, "is that there isn't anywhere in the world I couldn't go if I wanted to. All I have to do is pick up the phone and get a ticket and go." David Bakalar, the thirty-five-year-old president of Transitron, whose net worth of $150 million makes him the richest of the group, says that quick trips are his one indulgence. Bakalar manages four or five long weekends a winter in which he gets some Caribbean sunshine. "I feel a lot better for it," he says.

For several of the rich young scientists the disinclination to spend big is related to an idea that big spending may suggest a kind of weakness—that they got to the top by pursuing the path of virtue, and that they may fall back if they even begin relaxing with their wealth. "Their life is a briefcase, a fast shower, and a change of clothes," says one man who does a lot of business with them. "If they rest on their laurels for one minute, or ease up for a while, they'll have new competitors and be out. And it's easy to spot the guys who are easing up. Their wives get into the social pages and they join country clubs. Then they're in trouble."

"Money is 10 cents a bushel"

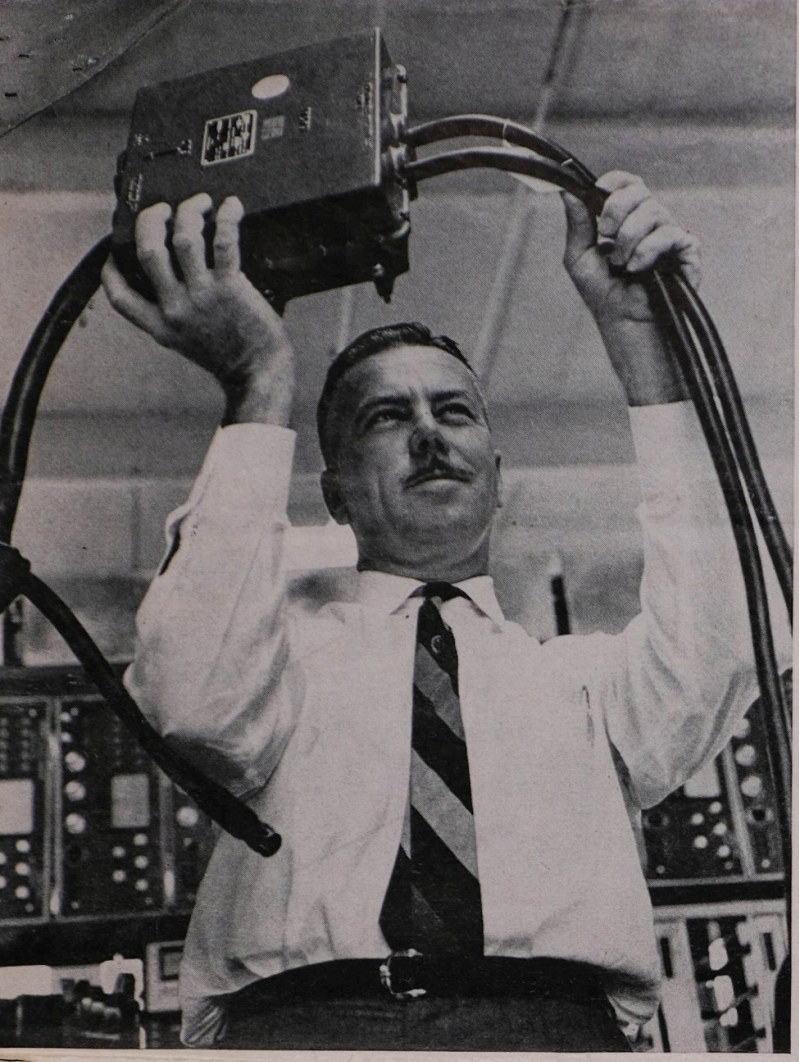
There is, indeed, a streak of puritanism in some of these young men, and several of them answered FORTUNE's questions on spending by volunteering the information that they were not like Frank Jameson, the former president of Pacific Automation Products, a Glendale producer of cable systems for missiles. Jameson, who is thirty-five. tends to be short on puritanism. "Money I throw around as fast as a person can," he says. "I think money is 10 cents a bushel. If you dropped me off naked in Miami, I'd have a million in a year and a half." Pacific Automation issued its stock at $11 a share in 1958, but Jameson sold 60,000 of his 120,000 shares at $29.50 some four months later "because either we'd brought it out too low or it was too high." (Recently the stock was down to $8.) He also gave away 30,000 shares to various charities, including his old prep school.

Jameson, whose current ventures are limited to some small companies, provides the exception to most of what one can say about the young scientists. He keeps an air-conditioned Cadillac with a uniformed chauffeur (who doubles as bodyguard), a 110-foot schooner, a plane and pilot ready to leave on ten minutes' notice, and eighty-odd suits, which are distributed between his home, a closet in his office, and another closet in his plane. At one time Pacific Automation Products, whose sales were then running at about $8 million a year, had eight company planes, which were known in the industry as "the Jameson air force." Once when he was returning from Hawaii, the Jameson air force greeted him as his ship docked by buzzing it in a V formation, after which a helicopter plucked up the homecoming boss and zipped him home. "My chief pilot got a little exuberant," Jameson says blandly.

This single incident seems to have made quite an impression on the other young millionaires, a number of whom brought it up in discussions about spending. "Things like that are bad for a young company," said James J. Ling, a thirty-seven-year-old Texan whose company, Ling-Temco Electronics, Inc., expects 1960 sales of $165 million. "You just can't afford that plane-boat-hunting-lodge reputation." Ling is an intense, soft-spoken man who once considered becoming a priest.

Other exploits of Jameson also come up in conversations. Most of the scientists, for example, entertain perhaps four people once a week for dinner. Jameson and his wife have managed a sit-down dinner for 500 in their garden, with two orchestras present. Jameson also likes to fly a planeload of people to Las Vegas "to take their minds off their troubles."

For whatever reason, it is apparent that Jameson-style spending annoys the other young men in this unique community. They tend, over and over again, to disparage money. "The worst thing anybody could call me would be





George Henry Bruns, 41, was $300 in debt when he got married in 1942, and had about $1,000 worth of war bonds when he was discharged from the Army in 1945; today he is the president of Systron-Donner Corp., of Concord, California, and is probably worth $1 million. However, he and his wife still live in a tract house he bought for $12,000 eight years ago, and they get by without a maid or cleaning woman.

Arnold John Ryden, 39, remarked cheerfully a while back, "I've been fired by some of the best companies." When he was in his mid-thirties, he organized Control Data Corp., Minneapolis. Then he had a falling out with some of his men, and left to form Midwest Technical Development Corp., Minneapolis, which invests in electronics companies. Ryden is worth close to $2 million, drives a Chevrolet, and pays about $40 for his suits.





Jonathan Edwards and Walter East, both 38, got together in 1954, when each of them was thirty-two, to form Electro Instruments Inc., in San Diego. The company began by making digital voltmeters, gradually got a wider electronic line, and in six years has made Edwards and East worth about $10 million each. Both of them are relaxed, cheerful, and profane, and having a wonderful time with their new wealth; while many of the young millionaire scientists frown on ostentation, Edwards owns two gleaming Cadillac Eldorados, and East has a Rolls-Royce, a Thunderbird, and an Eldorado. East came from a poor family in Patchogue, Long Island, which got help a couple of times from a local charity. Today he says, "I like the feeling of being a millionaire, but actually, you don't think much about it. It means that if you want something you can go first class—you can get the best, and pay cash for it."

David Bakalar, 35, the president of Transitron Electronic Corp., Wakefield, Massachusetts, is worth an imposing $150 million—more than most of the great industrial titans whose names are known to any newspaper reader. Bakalar is earnest, idealistic, a bit ingenuous; he lives modestly, and says he never even knew he was especially wealthy until a FORTUNE writer doing an article on Transitron ("The Company That Started with a Gold Whisker," August, 1959) insisted on confronting him with the figures.



a playboy," says Ling, who has a personal fortune estimated at $10 million. "You can only have one kitchen," says Bakalar. "You have to decide whether you control the money, or the money controls you. If I were away from the plant for more than a month, I'd get bored." "There isn't really much you can do with money," Scurlock confides, "except maybe buy other companies. Money doesn't make you any younger, or any happier; you can't jump any higher. Making it is sort of a game, like playing poker." That money-making is "a game" is the attitude of half a dozen. "After a certain point," says Max Palevsky of Packard-Bell Computer Corp., "nobody is really in it for the money, if you think of money as something you can buy things with. They're out to compete; it's competition that makes things interesting, and money is just the way we keep score."

"Fire that man!"

The working habits of the millionaire scientists are probably not much different from those of most big-company executives. None of them, of course, works less than forty-eight hours a week. Some counted the day they stopped going to the plant on Sunday as the turning point in their company's history. Like a lot of ordinary executives, they take work home in the evenings, to do "after the kids are in bed"; they are also likely to be found haunting their empty plants on Saturdays, sometimes with their children in tow. The ten-year-old daughter of Bernard Gordon, president of Epsco, Inc., a Massachusetts data-processing-equipment manufacturer, likes to stalk through her father's deserted plant on weekends crying, "Fire that man!" One thing nearly all the Space Age millionaires look forward to is more time to spend with their families—a refrain that is, of course, familiar among all kinds of executives.

When he is not working the new millionaire is likely to lead a fairly relaxed but not very sociable existence. He is likely to be active in a P.T.A. or Little League. He and his wife may go to the movies or theatre perhaps once a week, and see friends perhaps one other evening. He does not go in for a great deal of "business entertaining."

In politics the scientists displayed a curious lack of enthusiasm for almost all the candidates currently on the political scene. All of them, Republicans included, expressed some disenchantment with the Eisenhower Administration, particularly in its handling of space and defense. Since these men are rich because of the military budget, it is not surprising to find them concerned with it. About a dozen of them criticized the Administration because "it has elevated the budget planners to a policy-making level." (The words are those of Elston Swanson, Republican and president of Instruments for Industry, Inc.) More than half had detailed criticism of the way the Defense Department was operated. "It's not just a matter of spending money," said one company president. "If you ran the department right, you might even be able to *cut* the budget. But what has happened is that the department has abdicated the defense of the country to organizations more interested in increasing their payrolls than in security." "The one point on which most of them agree," says an electronics analyst who knows most of the young scientists, "is that it's inefficient to spend defense money in response to political pressures. Government policy, they feel, is to prop up the dinosaurs, the giant airframe companies in trouble."

The Republicans among them plan to vote for Nixon, "because things would be just as bad under the Democrats." Among the Democrats, who are hostile to Nixon, Kennedy does not generate much enthusiasm.

The present is good enough

Where do these young men go from here? What ambitions are left to a man who is already a success in his field and a millionaire at thirty-five?

A few of the scientists have in mind new projects, or new ways of life. Palevsky of Packard-Bell would like to continue the study of Greek he began as a philosophy student at the University of Chicago. Vessarios Chigas, a founder, executive vice president, and treasurer of Microwave Associates, Inc., would like to spend several months a year in Athens, his favorite city and his birthplace. Chigas recently made a trip to Greece and returned with a Salonika girl as his bride.

By and large, however, the young scientists want to keep right on doing what they now do: running successful technical companies. Some of those who have done advanced work at a university think occasionally about teaching (and some of them do teach seminars or night courses), but they have already made their choice between the academic and business worlds, and few have any real regrets that they quit the academic world. A good scientist, they point out, has a burst of creative years, generally from twenty-five to thirty-five, and most of them have spent their own "bursts" in building a company. "I don't think I have what it takes to be a great scientist," says Palevsky, "and I'd rather do what I'm doing than be merely a good one."

So these young millionaires would keep their life pretty much in the pattern it's now in. They may not be able to, of course. For one thing, their attitude toward money may change, as they get used to having money, and actually *see* some of it. Right now, after all, most of them see only their salaries; they are still "paper millionaires"—their assets are the stock certificates issued by their own companies, and they would no more think of selling them than of selling their children.

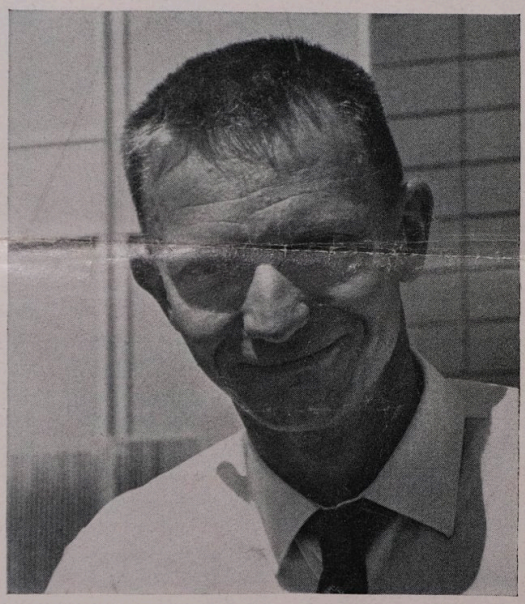
In some cases, these new millionaires may be very wise in not counting their paper worth as cash. They are not in an industry where a company can rest on its past performance. The bright stars in the electronics firmament can fall as swiftly as they rise. (See "The Coming Shakeout in Electronics," FORTUNE, August.) And if the small technical company stops growing it may be in trouble. If it has to continue growing to survive, then the informal days must come to an end and the young scientist must become more the manager, less the proprietor, and much less the scientist. Some of the young men have an uneasy sense that such a change is already upon them. "The real fun," says one producer of microwave components, "is in starting the company. Now when I walk down the hall, I see lots of faces I don't know, and it scares me."

Furthermore, the egghead millionaire knows that his company has built its success on new ideas and on the energy of youth, and he knows that his company has no real monopoly on either. Even as he sits in his office watching his sales rise, he knows that in the cafeterias of the giant companies other groups are gathering; they have some radical ideas in mind, and with a Wall Street angel and an R. and D. contract they may soon be competing with him. Come to think of it, they may even be meeting in his own cafeteria. END



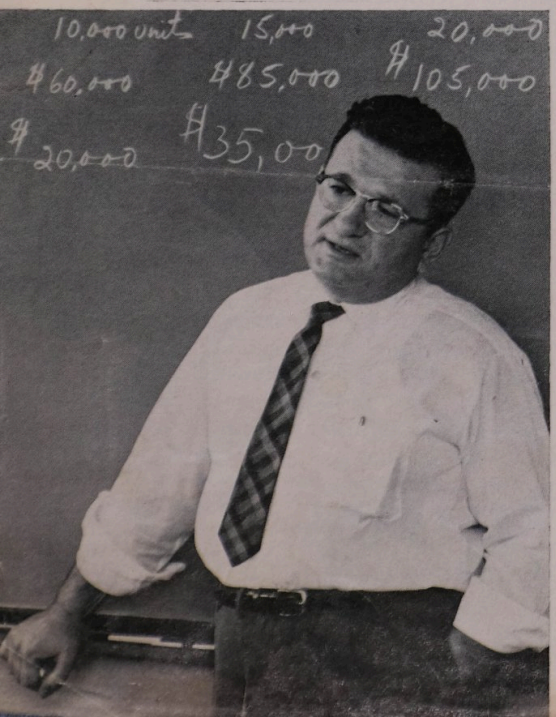
David Shepard, 35, comes from a well-to-do family, but has made some $2 million on his own by inventing a "reader machine," which can translate ordinary words into symbols that can be fed into computers. After trying to sell the machine to I.B.M., Shepard formed his own company, the Intelligent Machines Research Corp., Alexandria; later he sold out to Farrington Manufacturing Co., Needham, Massachusetts, and his assets now consist principally of Farrington stock. Shepard is reserved, unpretentious, interested in cultivating some interests that might take him away from work occasionally.





Frank Jameson, 35, is one of the few young scientists who spend their new wealth conspicuously, ostentatiously, and with a real flair; indeed, he seems more a businessman in the "science business" than a real scientist. Last year he sold half his interest in Pacific Automation Products, which he had co-founded in 1955, when he saw a chance to make a killing in the stock.

Lloyd Andrew Addleman, 33, is a tall, blond shy man who still lives with his wife in a house outside Stanford that they built several years ago. They have no servants, and insist that their children will go to public school. Addleman, who used to work for Sylvania, is one of the principal stockholders of Melabs Corp., Palo Alto, and is worth close to $1 million. He bought a sailboat recently, but his major relaxation is still reading philosophy.



Vessarios Chigas, 38, was the principal founder of Microwave Associates, of Burlington, Massachusetts, but today serves only as a vice president. "I would never want to be president," he explained recently. "I'm not an extrovert." Chigas was born in Greece, came to the U.S. when he was a small boy. He is worth about $1 million but, like many of the other young scientists, his wealth is almost all in the stock of his company, and he lives simply on his $30,000 salary.

Bernard Gordon, 33, is described by people who know him as brilliant, energetic, combative, humorless, and tough. He was one of the engineers who worked on the first Univac in 1949. Five years later he organized Electronics Production Service Corp. (Epsco) of Cambridge, which he still runs singlehanded. Gordon is a furious worker who relaxes by taking his kids to the office on weekends, and by boxing—he was a star boxer at M.I.T.

