

Edward Hutchings, Jr.

EDWARD HUTCHINGS, JR.
(1912 – 2003)

INTERVIEWED BY
RACHEL PRUD'HOMME

May 3, 8 and 17, 1984

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Subject area

Humanities, *Engineering & Science*.

Abstract

A wide-ranging interview in three sessions, May 1984, with Edward Hutchings, Jr., longtime director of Caltech publications and editor of *Engineering & Science* (now *Caltech Magazine*) from 1948 to 1979. He recalls his early years working for several magazines in New York City, including *The Literary Digest*, *The New Yorker*, *Collier's*, *Business Week*, and *Look*.

He was recruited in 1948 by Charles Newton, assistant to President Lee A. DuBridge, to edit *Engineering & Science*, then primarily an alumni magazine; and he recalls the many improvements he initiated, such as running articles on the latest research in the various divisions, encouraging faculty and students to write for the magazine, and ensuring that the scientific material would be accessible to laymen. He comments on such leading contributors as DuBridge, Robert Sharp, Arie Haagen-Smit, Arthur Galston, Earnest Watson, and Elting Morison.

He joined the Division of the Humanities as lecturer in journalism in 1952 and taught this course until his retirement in 1987, focusing it on *The California Tech*, the student newspaper. Wide-ranging discussion of campus doings throughout his career, including the trials of Sidney Weinbaum and H. S. Tsien; the controversy surrounding Linus Pauling; the relative apathy of the student body (except for smog protests organized by student leader Joe Rhodes); the admission of women; the incursion of the social sciences into the humanities division. Contrasts the presidencies of DuBridge, Harold Brown, and Marvin (Murph) Goldberger. Various influential articles in E&S are discussed.

Administrative information

Access

The interview is unrestricted.

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CALIFORNIA INSTITUTE OF TECHNOLOGY ARCHIVES

ORAL HISTORY PROJECT

INTERVIEW WITH EDWARD HUTCHINGS, JR

BY RACHEL PRUD'HOMME

PASADENA, CALIFORNIA

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Interview with Edward Hutchings, Jr.
Pasadena, California

by Rachel Prud'homme

Session 1	May 3, 1984
Session 2	May 8, 1984
Session 3	May 17, 1984

Session 1

Begin Tape 1, Side 1

PRUD'HOMME: I am talking to Edward Hutchings, former editor of *Engineering & Science* magazine, which we will refer to as *E&S* from now on, and now a lecturer in journalism, is that right?

HUTCHINGS: Yes. I've done that for *years*—since 1952. George MacMinn, an old-timer, had been teaching journalism up until then, and I took it on in '52. It mostly involved working with the students on *The California Tech*, and I pretty much based the course on *The California Tech*. I made them write an article a week, and then we commented on that.

PRUD'HOMME: Would you tell me about your background and your family?

HUTCHINGS: I was born in Brooklyn in 1912. My mother and father were Brooklynites. My father was from a big family, a well-to-do family. His father and mother and younger sister, one of five children, were killed in a grade-crossing accident when the other kids were in their teens. One of the brothers broke the will and the kids got their money right away, as very young people, and they all lost it. But for a while, although I was not conscious of it, I was a rich kid. But I never knew any of that. We lived in Brooklyn until I was about fourteen and then moved to Chappaqua, New York.

PRUD'HOMME: Why did you move?

HUTCHINGS: To get out into the country. By that time, we'd absorbed a lot more family—a grandmother, a great aunt. We were all piled in together. I had a lot of parenting.

PRUD'HOMME: It sounds nice.

HUTCHINGS: It turns out to be, yes. I'd been in a city school, and it was confusing to me. Chappaqua was a very small town—I even went to school in the next town, Pleasantville—and that was so small and peaceful that I got to be a hotshot. I learned a little more, too.

PRUD'HOMME: Did you go to high school there?

HUTCHINGS: Yes, my last two years of high school. When I finished, we didn't have the money to send me to college, but then an uncle came up with the tuition. It wasn't very much in those days—that was 1929. So, he had the \$400, and somebody else got me into Dartmouth, all in a rush. So that's where I went to college, and I graduated in 1933.

PRUD'HOMME: Then what happened? How did you get into journalism?

HUTCHINGS: What happened was that there weren't any jobs. So, I answered an ad for a college-type man, well-dressed and personable and a lot of things like that. I accepted it, of course, for \$15 a week, without knowing much about what I'd be doing. I got there at eight o'clock the next morning, and I was packed into a truck and taken down to the Battery, the bottom of New York City, and told that the point of hiring college-type young men was that they were going to go out every day with a briefcase filled with booklets advertising the virtues of Kellogg's All-Bran. And we were to get these booklets into the hands of everybody who had an office desk in the city of New York. The reason for wanting college-type young men was that their appearance would fool the

elevator starters into letting them go upstairs. It was hell. I finally had to quit, because I strained both of my Achilles tendons from so many walk-ups. And it was a great relief.

Then I worked in the Chappaqua bank and for the telephone company. Anyway, I finally got a job on *The Literary Digest*.

PRUD'HOMME: How did you start as a writer on *The Literary Digest*? Had you always wanted to be a writer?

HUTCHINGS: Yes. In college, I'd written for the literary magazine and the humor magazine and some for the paper. So, I got a crack at *The Literary Digest*. It was being revived at the time, changing over from the days I had known it as a school kid, when everybody used *The Literary Digest* for their research. It still had the quotes from every paper in the country—the *Nebraska Bee* says this, whereas the *Indianapolis Journal* says that. There were a lot of fresh people; they were trying to compete, in a way.

PRUD'HOMME: It must have been a wonderful place to work, because you got so much information from all over.

HUTCHINGS: Yes, that's true, and some of the old-timers were still there, and they were very knowledgeable people—the foreign editor and people like that. I got to run a department called "Slips that Pass in the Type."

PRUD'HOMME: Did you invent that title?

HUTCHINGS: No, it was there. It made a proofreader out of me immediately. I spent the day opening envelopes with "slips" from all over the country. Most of them said things like, "The bridge looked lovely all dressed in white"—things like that. So that kept me occupied. I did feature stories as well. And at about that time, I sold a couple of things to *The New Yorker*, too.

PRUD'HOMME: You wrote for *Collier's*, too, didn't you?

HUTCHINGS: That came later, yes.

PRUD'HOMME: But then you became an editor.

HUTCHINGS: I left the *Digest* just before it folded because of the Landon poll that they had done wrong: They only took telephone subscribers, and in those days all telephone subscribers were very well-to-do. I went to work for a magazine called *Tide*, which had been started by *Time* and was backed by a man in the advertising business, Raymond Rubicam, even though its purpose was to tell the truth about advertising. It had a small, very liberal staff, and they were really determined to tell the truth about advertising, and so it was great. I wrote a humor column for them as well as covering the regular advertising stuff. I was there for a couple of years and then went to *Business Week*.

PRUD'HOMME: You were an editor at *Business Week*.

HUTCHINGS: Yes.

PRUD'HOMME: Were you *the* editor?

HUTCHINGS: No, no. I think at *Business Week* I was the news editor. There were editors in marketing and finance and so on, and I had the general news area. And again, I wrote a humor column. I was there for three or four years and I loved it, but I thought I really wanted to work for a general magazine, and I got a chance to go to *Look* as an associate editor.

PRUD'HOMME: Did you like that better?

HUTCHINGS: It was a lot more pressure and working on a general magazine wasn't as satisfying as I had expected.

PRUD'HOMME: In what sense?

HUTCHINGS: I did a lot of reworking of other peoples' stuff—stuff that came in from the West Coast correspondent. It just wasn't as stimulating.

PRUD'HOMME: It wasn't particularly creative.

HUTCHINGS: Not particularly, not for me. Then I got a chance to be an editor at *Liberty*, which, again, was trying to revive itself. It had been an old, old copy of *The Saturday Evening Post*, you know. It used to cost a nickel; this was just before the war. A *Reader's Digest* editor had just taken over there, and he interviewed me. We got along fine, and I went to work for him as, I think, managing editor. Well, we had a good time for a little while, and then he went to work for *Collier's*. We got in a very practical new publisher and editor, and they were a little harder to work for. But *Liberty* was still quite a lot of fun. I did a lot of my own writing as well as buying articles—somebody else bought the fiction.

PRUD'HOMME: And you ran the whole show, in a sense.

HUTCHINGS: Yes. Then I went to *Science Illustrated*, because a friend of mine was editor of it and offered me a lot of money. I never had a lot of money, so it sounded good, and I thought I would do that. This was late in the war; the bomb had gone off. *Scientific American* was just getting started in its present form, and McGraw-Hill thought they'd jump on the science bandwagon with *Science Illustrated*. So, they hired a staff of people who had a demonstrated knowledge of the sciences, as well as a complete staff of the *Popular Mechanics* type. So, these two staffs were competing. This magazine hadn't even come out yet—but both these groups were trying to come up with acceptable dummies. And it was hell. What happened was that the *Popular Mechanics* staff lost out for the most part, but the people knowledgeable about science didn't really succeed. It got to be a mixture and a mess, and it failed. I was still there when Chuck [Charles] Newton [special assistant to Caltech president Lee A. DuBridge] asked me to come and work for *Engineering & Science*. I had a terrible time deciding to do that.

PRUD'HOMME: What made you decide to come out here?

HUTCHINGS: I wasn't happy at *Science Illustrated*. I wasn't at all sure the magazine business that I knew was going to carry me along very far. I had a couple of offers of magazine jobs that I didn't really want. I could have been editor of *Cue*, an entertainment weekly, but I didn't want that kind of life. I didn't like commuting—I worked in New York, but we lived in Old Greenwich, Connecticut, and had little kids. I thought, “Gee, I'd like to shake it all up and see my kids again.” So, I took a cut of half my salary. I must admit it was very rough on my wife

PRUD'HOMME: And it was a tremendous gamble. You were an editor of top magazines in the country, and then you turned it all over.

HUTCHINGS: Yes. I thought I was going to do it for two or three years. I also thought I was going to do a lot of free-lance work. I thought that editing a magazine like this would not take a great deal of time—*should not* take a great deal of time—and that I would do a lot of articles and keep my hand in, and all that nonsense. I found out then, I guess, for the first time—and it's been true over and over—that there isn't any “part-time” job.

PRUD'HOMME: Has science always been an interest of yours? Or did that sort of come up with *Science Illustrated*?

HUTCHINGS: It came with *Science Illustrated*, when I was forced to pay attention to it, and it was really very interesting. But I certainly came to it late—I was about thirty-six, thirty-seven. So, I had to keep learning it there, and, my God, here!

PRUD'HOMME: What did you think of this place when you came here?

HUTCHINGS: Well, we sold our house and crossed the country, and it took about three weeks to do that. That was marvelous. We got into Pasadena in early September 1948, on an extremely hot afternoon. And Pasadena seemed *so* peaceful. [Laughter] Pasadena on a hot summer afternoon, oh my God! So that was kind of a shock, and we had a hard time finding a place to live.

PRUD'HOMME: Had you come out here to be interviewed?

HUTCHINGS: No, we did all that by mail. So, we came out, and got them to rent us a house, which was *terrible*—we stayed in it a month. So that's what we thought of Pasadena! We missed the East for about three years, actually.

The campus also was peaceful, but it wasn't somnolent, the way the neighborhood was; it was really kind of stimulating. It seemed to be so small, and everybody seemed to be so accessible. The Athenaeum was dazzling in those days—just about everybody went there to lunch, which doesn't happen at all anymore. They had a chemistry table, an engineering table—I didn't recognize this at first, and I made some bad mistakes, because I was taking up a space that they really wanted an engineer at. I think there were two humanities tables; two because there were always people who liked to talk humanities, like aeronautics professor] Clark Millikan, [astrophysicist] Fritz Zwicky—who was a great disrupter—and [physicist] Carl Anderson. Anyway, that was something I would not have missed—going to lunch at the Athenaeum every day. [Caltech president Lee A.] DuBridg was often at the Athenaeum, too. R. A. Millikan [chairman of Caltech's Executive Council 1921-1945] was still in residence, still came to his office, still shuffled across the campus. He *did* shuffle, too; something had happened to his arches.

PRUD'HOMME: Was there a sense of postwar boom in Los Angeles and Pasadena, or did you retain your impression of total calm?

HUTCHINGS: Total calm, yes. I didn't get to see much of Los Angeles, which must have been a little more lively.

PRUD'HOMME: What was *E&S* like when you first came?

HUTCHINGS: Well, I'd looked at the issues they'd sent me, and I didn't want to put out a magazine like that. It was an alumni magazine, with all kinds of alumni affairs in the back. It was small, and I think the articles were volunteered mostly, not sought out.

PRUD'HOMME: It was physically small or had a small circulation?

HUTCHINGS: It was a small number of pages. It was an oversized format, actually. And you could see that nobody had gone out after the articles. They had just been submitted, mostly by alumni about their affairs, and they were apparently printed just the way they came in. That's what it seemed like to me.

PRUD'HOMME: What was the circulation? To whom did it go?

HUTCHINGS: I think it went to dues-paying alumni at that time, and that would have been about 5,000, I think.

PRUD'HOMME: What did you want it to be?

HUTCHINGS: Well, I'd looked at other alumni magazines. I was, after all, an alumnus, too. I thought the magazine that came to me from Dartmouth was really pretty good. I was interested in a magazine that told me what was happening intellectually as well as physically at the place I had been and had articles of broader interest than I saw in most alumni magazines at that time. Other alumni magazines I looked at had their failures, too, with all the administrative guff that seemed to be printed because it had to be, and the sports stuff. So I decided that this place ought to have a magazine that talked about the work that was going on—one that could be read not only by alumni but by the people on campus, and even more generally by all those interested in science.

PRUD'HOMME: So, you hoped to increase the circulation so that it would become extra-institutional, as it were.

HUTCHINGS: Yes, I did, to a certain degree. For many years, though, I retained all the alumni stuff—new directors and personals—but I kept it in the back.

PRUD'HOMME: There were wonderful changes when you came in, as far as I can see as a layperson: opening up the layout, using larger type, wonderful cover photographs all of a sudden—all sorts of things that made it a more accessible magazine to anybody.

HUTCHINGS: Yes, we did do that, by degrees. We had to develop a statement of purpose when we entered the magazine in competition for prizes from alumni magazine groups. So I worked this up: [Reading] “*Engineering & Science* is a magazine about the California Institute of Technology, about the people who teach and study here, their research and ideas. The articles in the magazine are written by Caltech faculty, students, alumni, and distinguished visitors to the campus; and they are intended to give a sample of some of the current life, work, and thought at Caltech.” So, I tried to do that.

PRUD’HOMME: Are scientists good writers?

HUTCHINGS: They were a lot better than I had expected. Of course, many of their articles I rewrote. Usually, I discovered they were going to give a talk somewhere or write a paper. Then I knew I could put on the extra leverage and ask if I couldn’t see it and maybe edit it some and use it. And I would edit it and try to make it accessible to more people than to just their peers. They would often resist that, because it was their peers they wanted to address. I would always propose that this was now a magazine that went to alumni, faculty, trustees, [Caltech] Associates, people who gave us money, high school science students who might want to come here, science teachers who would use it in some way, and counselors who would send us students. And so, the material really had to be a little broader than that just for their peers. Most of them accepted that, and we would work back and forth. I would try to make it simple; they would resist. If they didn’t like it one way, I’d try to simplify it another way. And we’d go back and forth quite a lot.

PRUD’HOMME: But this would have changed, presumably, over the years as they got more used to the impact of the magazine.

HUTCHINGS: It certainly did!

PRUD’HOMME: My impression is that they would be delighted to be asked to submit an article.

HUTCHINGS: Well, they were, it turned out. They were quite surprised and usually quite pleased at the response they got from having been in print in this way. We got a lot of pretty good mail, and often from people who impressed them.

PRUD'HOMME: Who have been some of your favorite contributors?

HUTCHINGS: They got to offering me things regularly. I had a whole stack of people. Well, for example, Peter Kyropoulos was one. Peter was a mechanical engineer. He was a very popular teacher, and his interest was in autos and automobile motors. He finally went to work for either Ford or General Motors. So once a year he'd write something, always fascinating.

Lee DuBridge. DuBridge was, I think, the most prominent spokesman for science I knew in those days. Thank God! He gave a great many talks, and he always wrote them himself. And they were never the same. DuBridge wasn't always a speaker. I think maybe by the time I got here he was beginning to try to become a speaker, though he was quite shy, and he had a lot of trouble speaking.

PRUD'HOMME: That surprises me. I didn't know that.

HUTCHINGS: You bet. He really had to force himself into it, but then he got to love it. So, I used him all the time.

[Chemist Arie Jan] Haagen-Smit: I think I must have given him his first platform. He delivered a long article about once a year—just great. And I got a couple of things started in *E&S*: One was smog and the other was earthquakes.

PRUD'HOMME: The subjects that came from within, such as the smog and earthquakes—how did you get that started? You thought of this and then you would go to the department, or to the head of the department, and say, "I'm interested in more information about earthquakes"? Or did you write the articles, in general?

HUTCHINGS: No, not in either of those cases. Haagen-Smit was just so full of this material, and he was so easy to work with, so agreeable. It began when I found out he

was doing studies in flavor, working with pineapples; I think he had a grant. So, I talked to him for a long time, and he wrote about that research. He used some of the techniques he had learned in his flavor studies for his work on smog. When he started that, I think maybe he told me he wanted to write about it.

And the seismologists were, again, so accessible. They were [Hugo] Benioff, [Beno] Gutenberg, [Charles] Richter, later Frank Press and some others. With them, I just got so interested in what they were doing, and what they knew, that I think I got them started.

PRUD'HOMME: There were also some things on the 200-inch [Hale] telescope [at Palomar] and astronomy at that time, and the power of atomic energy. These seemed to be the early concerns when you first came in.

HUTCHINGS: Yes. The 200-inch was just going into use—it had been dedicated, but it hadn't been working. So, yes, soon after I got here, it began to produce. And I think that was probably the most impressive thing about the whole Institute at that time. Everybody was interested in the 200-inch. Reporters kept wanting to go down there and look through it. The people in control of the 200-inch were extremely cautious, and it was very hard to get the press anywhere near it. So, I got to talk about it a little more.

PRUD'HOMME: Did you become a funnel for the press? Were you a spokesperson for the Institute to the press?

HUTCHINGS: Well, there was a Public Relations Office, and that was their job; so, I tried not to do that. Eventually, of course, Publications and Public Relations were combined.

PRUD'HOMME: Could you tell me more about DuBridge, what he was like as a human being?

HUTCHINGS: Well, he was very accessible, that's the first thing I can say about him. And that hasn't been true of any president here since. They've gotten kind of removed, in all ways—I mean, even physically their office is shut off. All you had to do to see DuBridge

was to make sure his secretary, Edith Baker, would let you in. He was always busy, of course, but he would put down his pen and respond to anything. Working with DuBridge and Chuck Newton, his assistant, was just ideal.

PRUD'HOMME: Do you think that Chuck Newton influenced his accessibility?

HUTCHINGS: No, I don't think DuBridge would bend to any influence like that. He was his own man.

PRUD'HOMME: Who were the leading personae when you first came here? Who were the famous people?

HUTCHINGS: Richard Tolman [professor of physical chemistry and mathematical physics] was here, but he died days after I came. Humanities was a teaching division in those days, and there were many good teachers, or at least you could see that they had some effect on their students. The students responded to them. There was a particularly colorful English professor named Harvey Eagleson whom the kids were very fond of. Clinton Judy was still here as chairman [of Humanities division]. I didn't know him very well. I remember Chester Stock [professor of paleontology] in Geology—he was the division chairman—and two younger men, Dick Jahns [associate professor of geology] and Bob Sharp [professor of geomorphology]. [George] Beadle in Biology, [Linus] Pauling in Chemistry, Clark Millikan in aeronautics, and [Frederick C.] Lindvall in Engineering—but he was a less colorful character than most of the others.

Begin Tape 1, Side 2

HUTCHINGS: [Chester Stock], Dick Jahns, and Bob Sharp. I guess the first thing I'd say about all three of them—and about a lot of geologists, in those days anyway—was that they had an enormous amount of enthusiasm and vigor. You could see what great teachers they must be. That was true also of Beadle and of Pauling. Clark Millikan was a little starchier.

PRUD'HOMME: Was there any resentment of your curiosity about their fields?

HUTCHINGS: Not that I was aware of. I think Clark Millikan didn't like me—I don't know exactly why. I may not have had enough class; Clark liked class. But I didn't get any of that from most of the others. I really felt that I won a lot of people over more easily than I expected, and I don't know why that was.

PRUD'HOMME: I do—because you're interesting and smart. I have here a little list of things I picked up in looking through the magazines. I'd like to go through them during the course of this interview, and if you want to comment on them, please do.

The first cover photograph of your reign was of the students playing volleyball, which was something entirely different—it was the kids—and it was a wonderful photograph.

HUTCHINGS: Yes, it was nice. That was taken by a student [Ralph Lovberg, '50], because in those days I used student photographers. And it was an indication that I was going to pay attention to students, too. For a long time, I had students writing a column. I look back on them, and it really wasn't very good; they got too philosophical and thoughtful instead of telling me what was going on.

PRUD'HOMME: That was the Beaver series.

HUTCHINGS: Yes, sometimes called "The Beaver."

PRUD'HOMME: You also had the E. C. Watson Series on science in art.

HUTCHINGS: Yes. I discovered that [faculty dean Earnest C.] Watson had this enormous collection of old scientific prints and that for years he had been furnishing articles, like the ones I used, to some technical publication. So, I asked if I could cream them off, and he said, "Sure!" He loved that. Watson collected this stuff from all over the world. People knew he was such an easy mark for this kind of thing that they would send it to

him from anywhere, knowing that he would be unable to say no, and that's why he got so much of it.

PRUD'HOMME: You also had some profiles of professors.

HUTCHINGS: Yes, they were fun.

PRUD'HOMME: Did you write all of those?

HUTCHINGS: Yes.

PRUD'HOMME: What a wonderful way to introduce yourself, in a sense, to the individuals on campus.

HUTCHINGS: Oh, yes. And I think they liked it—to be humanized. And I think it was great for the Institute to make their high-toned professors so human.

PRUD'HOMME: What was the first alumni reaction to these changes?

HUTCHINGS: I think Chuck Newton kind of leaned on the alumni, telling them that it would be better for them if he got somebody like me. But they were jealous and wary of losing control. I know that lasted for a while. Though I went to a lot of alumni functions and got along with them fine, I felt a wariness of this stranger who might take something away from them. And I did, to a great degree, take it away from them. This wariness surfaced every once in a while through the years, depending on who would be on the Alumni Board. It came up again when there was some pressure to start *Caltech News* for the alumni, since I had thrown them out of *E&S*. I think I had done something about stopping the personals or something, that I thought we'd do in some other way. So, it came back through the years. But it depended on who was being officious.

PRUD'HOMME: Hallett Smith was made chairman of the Division of Humanities in 1949. Did you know him well?

HUTCHINGS: Oh, yes, I did and still do. He got Chuck Newton to teach English, and Chuck did that—worked hard at it, too, for several years. At one point he asked me to take on an English class. I'm glad I didn't, because I didn't really have time, though it would have been a lot of fun. And I'm proud of myself for saying no. I didn't think it would be fair to the kids—I knew I'd be there every night before class, trying to bone up on *Moby Dick* ahead of them.

PRUD'HOMME: Also, you were busy changing the entire [publications] department.

HUTCHINGS: Yes, I really was.

PRUD'HOMME: You had to get to know the Institute and all of its members and so on. Then there was a photo essay: "The Big Snow."

HUTCHINGS: I'm glad I did that, because it did indeed snow quite a lot [January 1949].

PRUD'HOMME: And photo essays were new, too.

HUTCHINGS: Yes.

PRUD'HOMME: [Theodore] von Kármán [director, Caltech's Guggenheim Aeronautical Laboratory, 1930-1949] to help plan for long-range programs for the Air Force.

HUTCHINGS: I just don't remember. Von Kármán was not around very much in those days.

PRUD'HOMME: The phytotron [the Earhart Plant Research Laboratory]—that is, the weather factory.

HUTCHINGS: Oh, yes, that was just spectacular! It was a greenhouse, now gone, with units that could be controlled in different ways, so you could have cold weather here and warm weather there, and wet weather here and foggy there. It was just a spectacular

thing, run by Frits Went [professor of plant physiology], with James Bonner [professor of biology] working in there a lot and with a lot of financing from Campbell's Soup. They were interested in tomatoes. I think they did a lot of studies of tomatoes and the ideal climate for tomatoes—which is, of course, New Jersey and not California. [Laughter]

PRUD'HOMME: And then Robert Bacher became the chairman of the Division of Physics, Mathematics, and Astronomy [1949].

HUTCHINGS: Yes, coming from the Atomic Energy Commission.

PRUD'HOMME: Was that a popular move?

HUTCHINGS: I think so, yes.

PRUD'HOMME: In the first half of the fifties, there seemed to be two kind of dialogues going on: There were those who were interested in the development of atomic energy, and then there were those who were worried about its uses for defense. And there were some who petitioned the U.S. government in the fifties not to use the hydrogen bomb. Bacher wrote about whether it could be made, and would it add to national security, and could the Russians make it, and so on. Was this a controversy that affected the students?

HUTCHINGS: No, I don't think it did; I think it was mostly among the physicists. Of course, [Linus] Pauling got into all of these things. But I can't remember it going as far as the students. In the early fifties, I guess, we still had older students because of the war. They were coming back, and they were more mature in many ways, so they may have been more concerned about that than I remember. But I really don't remember that.

PRUD'HOMME: But the faculty was concerned and was willing to sign petitions.

HUTCHINGS: Yes. And one thing I do remember is that DuBridge was extremely supportive of many of his rebellious faculty. He stood up to trustees and to letter-writers and other people like that, in support of Pauling or this or that kind of petition, again and

again. There's probably some evidence over in the Archives of that. He really was remarkable. And you weren't aware that he was doing this, either. I guess he was very tough on some of the trustees who demanded that this be done and that be done. I'm sure they wanted to throw Pauling out once a week.

PRUD'HOMME: What's Pauling like?

HUTCHINGS: What's Pauling like? [Laughter] It's hard to start. Pauling, again, has all this vitality and ego. It's all that Vitamin C! He's got a tremendous ego and enthusiasm, and you get swept up in it. And I think he was probably a great teacher. Of course, you can't always be sure he's right. [Laughter] You know, the stands he took over the years—he'd picket—

PRUD'HOMME: He wasn't afraid to be outrageous.

HUTCHINGS: Not at all! No. But I think you stick me when you ask me what he was like. I find I can't tell you. Give me a little practice.

PRUD'HOMME: We're in the early fifties. Of course, the things you've mentioned from Haagen-Smit and the Institute research in smog started coming into the magazine. And then there were articles on chemically induced gene mutations, which started way back then.

HUTCHINGS: I didn't remember that. You know one thing I haven't mentioned? The first or second issue that I put out after I got here—that would be in '48—there was an article from an alumnus, sort of a carry-over from past practices, but I thought it was really quite interesting and so I ran it. It was by a man named Chester Carlson about a new printing process he had called xerography. [Laughter]

PRUD'HOMME: I hope you bought some stock in that company. [Laughter]

HUTCHINGS: I was just thinking about that. I didn't.

PRUD'HOMME: There was also a shift at JPL [Jet Propulsion Laboratory], a change in emphasis from applied research and development to basic engineering.

HUTCHINGS: I really can't remember the campus paying much attention to JPL until much later. The first time I had somebody write about JPL must have been even later in the fifties.

PRUD'HOMME: They got quite a lot of money for construction at that point, and I was just curious. Did the campus try to do anything about smog after that? Did it try to educate the students or the community about not driving on smoggy days or any of this?

HUTCHINGS: No. That finally came about much later, when the personnel office would do things like that.

PRUD'HOMME: How did students feel about the draft then? The Korean War was on.

HUTCHINGS: Well, students, as I remember, were mostly opposed.

PRUD'HOMME: Was there any reaction in the community to Project Vista [April-December 1951 study on ground and tactical warfare—ed.]?

HUTCHINGS: No, it was even hard to find out much about Vista right here. It was extremely secret, very closed. As I remember, I didn't even know who was and who wasn't involved until much later. I can't even remember the years that they worked on it. What I would do if I were in that position is sit [professor of physics and Project Vista scientific director] Willy [William A.] Fowler down and ask him, "What can you tell me now? Where is it?"

PRUD'HOMME: In March of 1953, you had a woman scientist [Marjorie Hand] on the cover.

HUTCHINGS: Yes. She was a researcher in biology. Yes, an attractive woman. The picture was taken by a photographer named Ross Madden, who did a lot of stuff for *Life*, but I guess was actually a freelance photographer. And he was hired by Chuck Newton in '48 or '49, when Chuck found that there were no photographs anywhere of anything around. There just was no photo file. Maybe Public Relations had some mug shots, but there was no photo file. So, he hired Ross Madden and got a girl to help him set up photographic assignments in the laboratories in every division. And this guy worked here for several weeks, and we got all of his negatives. And he gave us the best damn collection of pictures I've ever seen. We used them for years; it really set us up. So, he was really the first photographer on campus. After that, I used some students, and then I used the guy from graphic arts. And, finally, I hired a photographer to work for me; now he works for Public Relations. But I kept the photo file for years.

PRUD'HOMME: There was an Air Force plane that was hijacked. Tell me about that.

HUTCHINGS: There sure was. It was a new kind of a plane—I no longer remember what kind—and it was brought here by the Air Force and put on display for several days out where Winnett Student Center is now. There was a ramp up to it so you could go through. The students decided it would be a lot of fun to take it up Allen Avenue and leave it on the street outside the house of the ROTC colonel. So, they did that.

PRUD'HOMME: How?

HUTCHINGS: They got a forklift from Buildings and Grounds, and they got the plane on it. This was about three in the morning. And they got it over to Allen and up Allen. They took off an awful lot of tree limbs! And they parked it in front of the colonel's house, and he came out in the morning with his children and found it. The FBI was here the next day. And the students didn't "know anything about it." It was really a spectacular mess!

PRUD'HOMME: Did DuBridge defend his students?

HUTCHINGS: I never heard. But the FBI had a very hard time getting anything out of them; I think they gave up.

PRUD'HOMME: Roger Sperry arrived as professor of psychobiology [1954].

HUTCHINGS: He's become more of a psychologist now.

PRUD'HOMME: Yes, but that was interesting, to have that named discipline on campus.

HUTCHINGS: Yes, but I'm sure he didn't stick with that title. And we still don't have that much psychology.

PRUD'HOMME: And then the synchrotron was very big.

HUTCHINGS: Yes.

PRUD'HOMME: What was the place of the humanities at Caltech during this period?

HUTCHINGS: We prided ourselves for years, you know, on really getting some humanities into our scientists, mostly our engineers. And it was a requirement for a very long time that the students take at least 25 percent of their courses in the humanities. That's been whittled away, and I don't really know where it stands now. But we did, at least technically, get them humanized when we were a teaching division, we really did. It was mostly English that we were teaching, but there was history, philosophy—I can't remember what else. But for years, we thought we were very good in doing this.

PRUD'HOMME: Do you think it's a good idea?

HUTCHINGS: Twenty-five percent? Yes, I do. But I think it's all been watered down. I don't think the social sciences are humanities. I think they ought to be two separate divisions, although it might be administratively awkward. But I wish they hadn't met, mostly because I think the social scientists have swamped the humanities. And I'm not

so sure that the kind of social sciences we offer are so broad. The little I know of econometrics and that, they're awfully special. And I think they appeal to very few people.

PRUD'HOMME: Whose decision was it to do that?

HUTCHINGS: Harold Brown, maybe. And the man who was head of the Division of the Humanities at the time, [Robert A.] Huttenback. I think it would be very hard for anybody to find out how it came about. I think it just happened, and one day everybody found out they had been committed to something they weren't so sure they should have done.

PRUD'HOMME: Can you tell me about the loyalty trials, and [JPL mathematician Sidney] Weinbaum and [Hsue-Shen] Tsien [Goddard Professor of Jet Propulsion]?

HUTCHINGS: I talked to [Caltech Archivist] Judy [Goodstein], who said she realized that I had been involved in those and find that I remember little about them. DuBridge asked me to go to the hearings in both of those cases.

PRUD'HOMME: Why did he ask you?

HUTCHINGS: He didn't have time to go. His administrative staff was small, nothing like there would be now—now they would have a lawyer from JPL go down. But I was there, and I could go and take notes and tell DuBridge what I thought he ought to know. So, I did. I think they were both held down in Los Angeles. First was the Weinbaum case, and as I remember, he was up for perjury. I think he had wanted to do something at JPL and had filled out a form and didn't say he had once been a member of the Communist Party where it asked that. So, by not saying that, he was up for this. All I remember is that it went on for days. It mostly revolved around handwriting. It went on and on and on about his handwriting. And they got him; he went to jail. I guess I thought he might be guilty of what they were after. But it's so far back.

PRUD'HOMME: Do you remember the reaction of the community?

HUTCHINGS: To Weinbaum? No, I don't.

PRUD'HOMME: Or to Tsien?

HUTCHINGS: I think there were some people here who thought he was probably pretty radical. But if you remember that case, he was leaving the country and the immigration people stopped him because he was supposedly taking classified materials with him. It turned out that none of the stuff was classified, and they had to let him go. I think that's the way it worked out. It's hard for me to say what I think the community thought, but I think they were a little more dubious about the way they were treating him than [the way they were treating] Weinbaum. And as it turned out, you know, he went back to Red China [1955] and fixed it up with the bomb. He was a stony man all through this, I remember—the inscrutable Oriental. No emotion showing at any point. Weinbaum was miserable.

PRUD'HOMME: In 1954, Pauling received the Nobel Prize for research on the nature of the chemical bond and the structure of protein. What was his status on campus? Was he a popular teacher?

HUTCHINGS: A popular teacher, sure.

PRUD'HOMME: Was he popular with [his colleagues]?

HUTCHINGS: I'm afraid not. I'm afraid he had a lot of enemies on the faculty.

PRUD'HOMME: Why?

HUTCHINGS: I think because they're conservative, and he certainly wasn't. I even think some of the chemists thought he was just too much—too flamboyant, too unpredictable.

I think they even wondered whether his research was legitimate—not the research he got the Prize for, but a lot of the things that he tackled.

PRUD’HOMME: So, did they disapprove of the fact that he got the Nobel Prize?

HUTCHINGS: I don’t think so; I don’t think they could have. They might have disapproved later, when he got the 1962 Nobel Peace Prize. I have a feeling that, indeed, in this community he was looked on as someone who was just a little too much.

PRUD’HOMME: DuBridge in his speeches appeared to me—in this period, the mid-fifties—to be appealing more and more to the corporate and industrial communities in his effort to get money.

HUTCHINGS: DuBridge didn’t like to raise money.

PRUD’HOMME: But he was so good at it.

HUTCHINGS: He was marvelous! [Laughter] So, he may have learned to love that, too. But I just remember that he resisted having to do fund-raising, but it came so naturally to him that he must have given in. He developed, finally, a talk that he used with great success. When he wanted to tell anybody what was going on on the campus at a particular time, he would start by saying that he had walked over to [the] biology [division], for example, and then he would say what was going on in biology. He would just pick one of the most interesting pieces of research at that time in each division and make a talk out of it. And it was just great, because he found it so easy to be simple in his explanations of hardcore science that it worked with all kinds of audiences.

PRUD’HOMME: He probably would have made a wonderful teacher.

HUTCHINGS: Oh, yes.

PRUD'HOMME: In the thirties and forties, [J. Robert] Oppenheimer was a visiting professor here.

HUTCHINGS: Yes, and he was a “Leader of America” [in 1957]—the Caltech Y used to run that series, you know. He got a great big audience for his talks. I’ll tell you about when he was a “Leader of America.” We went to dinner at the home of a guy who was interested in the Y. There were a lot of students, and it was there that I first saw the kind of adoration Oppenheimer produced in students and even in faculty. He would sit there with his pipe and speak in a voice [whispering] that could hardly be heard, so the students would all gather around, literally at his feet, to hear. And you would see this, and you would think, “My God, look at that!” I was reminded of that again when [professor of physics] Paul Epstein, I think, told me this story about Oppenheimer being here and giving a talk in that same low tone of voice, and a scientist named [Paul] Ehrenfest in the front row found it harder and harder to hear and finally said [simulating a German accent], “Doctor Oppenheimer, is it a secret?”

PRUD'HOMME: [Laughter] It’s a marvelous technique to get people to come to you. And there was DNA, and research into hydrocarbons starting out, and the American Universities Field Service.

HUTCHINGS: Oh yes. We, along with a lot of other schools, put up some money to support these young men in foreign countries. And for several years, it was a very successful and popular thing here. They would come through every certain number of years and report on their countries. They would also report in print, in pamphlets that would come through the schools. I think probably it was pretty specialized stuff, but it had a great impact on people here. Whenever they came, they gave public lectures in the lecture halls and at the Athenaeum. And for one thing, they would come to talk in a humanities class, which the whole senior class had to take—Current Affairs, or whatever they called it—so that these kids, if they paid attention, got a pretty good briefing on what was going on in some parts of the world. Of course, the kids also had to subscribe to, I think, the Sunday *New York Times*. They resented that so much that when [history

professor] David Elliot, their instructor, came to his office at the end of the term, he couldn't get inside it because they'd all stuffed their *New York Times* into his room.

PRUD'HOMME: Supreme Court Justice William O. Douglas visited Caltech. Was that popular?

HUTCHINGS: Yes, it was. I know, because the faculty was asked for the use of their houses for the "Leader of America" talks, and he came to ours. I spent all the time getting benches from the back porch, and the house was filled. And they stayed forever. All those Leaders of America, or most of them, were popular. The businessmen didn't do so well. Paul Hoffman didn't do so well; the kids weren't quite sure what he had to say to them. Ralph Bunche, James Cohen; they came quite fast there for a while. All the money came from a grant left to the Caltech Y by Millikan. It was very stimulating to have this go on; I'm sorry that it stopped.

PRUD'HOMME: Was Fred Hoyle one of those? Or did he just come?

HUTCHINGS: No, Fred came in a kind of visiting professor way [1955, 1967].

PRUD'HOMME: And was he popular?

HUTCHINGS: Yes. I think as time wore on his scientific stature shrank. I think this has happened to everybody in this community who's gone a little beyond the ordinary bounds. Fred Hoyle was a little too popular; Pauling also, in a sense. Harrison Brown [professor of geochemistry] was, in a way.

PRUD'HOMME: You lose your credibility in a strange way.

HUTCHINGS: Yes, when you get to be too accessible, too easy. Hoyle was very popular. He gave a talk about Stonehenge that they couldn't get enough of; he had to keep repeating it.

PRUD'HOMME: And the Burbidges.

HUTCHINGS: Yes, she took charge of the Greenwich Observatory after they left here. She was more prominent than he was, I think.

PRUD'HOMME: Yes, I think she was. And there was building going on.

HUTCHINGS: Yes. Well, they had their first Development campaign along in there, for I think \$16 million. And it was all for buildings, which doesn't happen anymore. I don't think we'll build much anymore at all. I guess we're going to start a new Development campaign, but I don't know what they'll ask for the money for—to support the faculty? But that was the big push then, and we got a batch of buildings out of it. I can't remember which ones now.

PRUD'HOMME: Do you remember “The Next Hundred Years,” the series?

HUTCHINGS: The television thing? Yes. Harrison Brown wrote a book called *The Next Hundred Years*. And then Brown and James Bonner and John Weir, a psychologist, sort of went on the road, and each talked, I think, about what was going to happen in the next hundred years in each of their fields. Finally, out of that, came this series on public television. DuBridge was connected with it then, and a woman in the Public Relations Office named Rose Blyth set it up. And I think about ten, twelve guys went on once a week in what would now seem like very primitive television, because it was just a guy

PRUD'HOMME: And the International Geophysical Year [1957-58], did that have any great impact?

HUTCHINGS: No, it didn't. I made a big fuss about it in the magazine. And I had each of the guys who was involved write about what they were going to get out of it. And then I don't remember that anything came of it. Surely each of the guys involved got out a great big report. I don't know why I didn't, a year or so later, try to follow it up.

PRUD'HOMME: The Physics, Mathematics, and Astronomy Division seems to have been the most popular, the most prestigious, in the late fifties.

HUTCHINGS: Yes, it probably was. That was probably also when all the students wanted to be physicists, too.

PRUD'HOMME: As a result of the atomic bomb.

HUTCHINGS: Sure. And the fact that it was both physics and astronomy made it bigger.

EDWARD HUTCHINGS, JR.

SESSION 2

May 8, 1984

Begin Tape 2, Side 1

PRUD'HOMME: We were discussing your book.

HUTCHINGS: The book, called *Frontiers in Science*, came out in 1961; that's about a dozen years after I started to work on *E&S*. And when I look at it now, I'm amazed at how much we stacked up in those years, because it's got a lot of great names in it. It was put together by Basic Books; they had a science book club at the time. And the book did quite well. The money went to the Alumni Association, who gave it to the faculty salary fund. I didn't get a nickel! [Laughter]

PRUD'HOMME: Even though you'd done the whole thing? I don't believe it!

HUTCHINGS: Well, I was stupid for not asking for it. It made about \$25,000 for faculty salaries, so maybe I got a little back that way.

PRUD'HOMME: You must have gotten something back in prestige, though.

HUTCHINGS: Yes, there was a lot of that, I think. The book included a lot of the best stuff we had run in those years, including an article that I guess was the most popular article *E&S* ever ran and a great surprise. We ran it in 1950. It was a talk given at the Athenaeum. The Athenaeum used to do that a lot; people would come and give talks there rather than on other parts of the campus. It was given by a man named Elting Morison, one of the single-"r" Morison family from New England. At the time, he was working on the letters of Theodore Roosevelt. So, he put together a little talk for the Athenaeum called "A Case Study in Innovation." It was actually about the introduction into the navy of continuous-aim firing. Of all things! You wouldn't think anyone'd give a damn, would you! But what it really was about was the enormous resistance to change

in any organization. And so as soon as we ran it, companies, mostly great big companies, kept asking for 50,000 reprints.¹ And every time I'd have to ask Elting if it was all right. Finally, he wrote back and said, "Oh, if only I had a penny for every one of these!" But there were hundreds of thousands of reprints of that thing. The armed services used it in their teaching, and, as I said, a lot of organizations. But we never had an article that was as popular as that. It's quite good still.

PRUD'HOMME: Your popular articles, did you ever try to sell them? When you gave people reprints, did you charge them?

HUTCHINGS: No. No, we thought of it as Caltech public relations, basically.

Another article in the book was by a biologist named Arthur Galston. We got him to write about chlorophyll.² At the time, chlorophyll was being misused by everybody in the advertising business. Arthur said he'd do it if we would guarantee to send him *E&S* for the rest of his life. And we sent it. But there came a time, years after he'd left here and gone, I think, to Yale, when I said, "Oh, for God's sake, cut Arthur off the list." And in a month, he'd written a letter saying, "A deal is a deal." [Laughter]

PRUD'HOMME: In the material that you gave me to read, you described the techniques you used in editing to make science more interesting for the layperson. Can you describe some of those more fully? You started out by saying that you never underestimated the intelligence of the reader, and you never overestimated their knowledge of any particular subject.

HUTCHINGS: Yes, well, I always did go on the basis that even our alumni were laymen in some ways. They all had a basic scientific or engineering education, but I insisted that an aeronautical engineer didn't know much more biology than I did, or a chemist know much geology. So, I tried very hard to treat the alumni as laymen, too, in most ways. And I did try to keep the level of *E&S* certainly somewhere above *Popular Science* and below *Scientific American*, which was always too tough for me—I think it's gotten even

¹ <http://calteches.library.caltech.edu/1087/1/Morison.pdf>

² <http://calteches.library.caltech.edu/1339/1/Galston.pdf>

tougher. I think science has gotten tougher, though. I feel a little bit sorry for the people who have to put out *E&S* now, because they have to deal with smaller, more complex areas than I did. And their stuff is too technical a lot of the time for me, now.

PRUD'HOMME: But the responsibility that you assumed—that you initiated for yourself when you came—was to make any science concept available to the layperson through your editorial techniques.

HUTCHINGS: Yes, I did try that.

PRUD'HOMME: And it worked very well. You got all these articles out—the research-in-progress articles and the ones that you wrote or edited.

HUTCHINGS: Yes. The research-in-progress stuff was good in some ways, because we could get in and out of a subject fast. We could sometimes do it pictorially and cover a lot of stuff that way. I have an example here, a cosmic-ray article written by an undergraduate. I got this kid to write the article, and we went over it several times. And I told him he really ought to begin by telling us a little bit about what cosmic rays were, before he plunged in. We were finally both satisfied with this beginning [reading]:

Cosmic rays are invisible but powerful charged particles that constantly bombard the Earth's surface. They are so numerous that at sea level, about ten particles will pass through a person every second. Their energy is so great that they are found even at the bottom of the deepest mines, having penetrated hundreds of feet of rock. The most powerful of these rays has a thousand billion times as much energy as is released from a single uranium atom in an atom bomb explosion. Our biggest accelerators today produce particles of about five billion electron volts; but cosmic rays have energies as high as a billion-billion electron volts. In fact, the energy reaching the Earth in the form of cosmic rays is roughly equal to that reaching the Earth as starlight, excluding our own sun, of course. Geological evidence indicates that cosmic rays have continued their bombardment of the earth for at least 35,000 years, and studies of meteorites indicate that they have been bombarded by cosmic rays for hundreds of millions of years.

And so on.

Then we dug up another college engineering publication that had an article on cosmic rays, and it began: “Since 1958, the cosmic ray group of the ____ [so and so]

University Physics Department has been engaged in high-altitude investigations of cosmic-ray activity. Professor ____ [so and so] assisted by graduate students and technicians, has received the cooperation of the Geophysical Institute at the University of Alaska at Fairbanks in performing, using systems similar to the one described here. The author joined this cosmic-ray...,” and so on. I was pleased to see that there was a difference. We asked people to define technical terms. Even though they were familiar to people in one field, they certainly were not to people outside that field. We asked them not to stop at a straight description of a research project but to make some attempt to explain briefly where this work stood in relation to other work in the field. We asked them to give a man’s full name and title, or even a descriptive label, and to get some of the human side of research into an account of a research project when possible.

PRUD’HOMME: What do you mean by that?

HUTCHINGS: Well, there’s a long tradition of third-person style in scientific writing. But I found that some of the really great scientific writers were great because they were willing to admit that human beings were involved in this. It didn’t just happen; there were people doing it. And finally, we tried to present these articles in such a way that people would be encouraged to read them. We worked hard on layouts, used a lot of white space, big pictures—

PRUD’HOMME: Because the usual scientific journal is small, and the print is small, and the footnotes are enormous.

HUTCHINGS: And they want to use *all* the space.

PRUD’HOMME: And nothing attracts your eye; nothing brings you into the page.

HUTCHINGS: Yes, you really need that, even with this kind of an article.

PRUD’HOMME: Did you get students to write a lot for you?

HUTCHINGS: No. I got students to write what they thought of as “creative writing”—you know, how they felt about things. It wasn’t too satisfying, but I ran a lot of it.

PRUD’HOMME: Did you pay them?

HUTCHINGS: I paid them. And I ran a science-writing contest. I knew the editors of *Scientific American*, and they said, sure, they’d read the entries, and I advertised in the magazine, and I stirred up my classes, and time went on—and nobody entered.

PRUD’HOMME: Did you offer them anything?

HUTCHINGS: Sure, there was a prize—\$100, \$200. But I found out then that even the undergraduates, they didn’t give a damn about money. Not then, anyway; maybe now. Money just didn’t stir them up. So, I had to force three people to enter the contest. And guess what, they won! [Laughter] One was an undergraduate who wrote about cosmic rays. One was a graduate student in aeronautics who wrote about something I’ve forgotten. And the third was a graduate student in biology named Frank Salisbury, who wrote an article called “The Inhabitants of Mars” about whether there’s anything living up there. And it was great; it won, but not only that, *Scientific American* hooked on to him and he’s been writing for them ever since. And he’s so pleased. He’s in that book somewhere.

PRUD’HOMME: At the end of the fifties, George Beadle won the Nobel Prize [in Physiology or Medicine, 1958].

HUTCHINGS: Yes.

PRUD’HOMME: Is that always a big deal on campus?

HUTCHINGS: Always! Yes, the Beadle thing was very big. And at that time, Kent Clark in Humanities had a group he called the Caltech Stock Company. He would haul them

all together on occasions like this and write a musical in celebration. Everyone worked very hard on these things and presented them—usually, in those days, in Culbertson.

PRUD'HOMME: You didn't have much forewarning with Nobel Prizes, though.

HUTCHINGS: No. But Beadle would have had to have gone to Sweden to get it, thus giving us a little time. I think his wife was in this one—I get them [Clark's musicals] all mixed up, because there were eight or nine.

PRUD'HOMME: Whom were they presented to?

HUTCHINGS: They were presented to the faculty. The faculty got a dinner at the Athenaeum, and then they'd all haul over to Culbertson—and later Beckman Auditorium—and have this show. They were pretty good. I can no longer remember who they were all for. We did one for DuBridge's twentieth anniversary and DuBridge's retirement, for Beadle's Nobel, and one of the earliest ones for Earnest Watson, probably at his retirement. But they really got going when Kent had to do a show for the AAAS [American Association for the Advancement of Science] meeting here—the whole shmear was here—and we went over to PCC [Pasadena City College] and did a show that was the most elaborate of all.

PRUD'HOMME: It was music and dance and commentary?

HUTCHINGS: Yes. Kent couldn't get it all finished, so I wrote some of the songs. And I was the star, and I had to learn more names—he used all of the big names in all of the sciences, so that I had to keep coming into a different field of science and ask if this was the place where this, this, this, this, and this man worked. That was hard work!

PRUD'HOMME: But it sounds as though it was the ultimate accolade.

HUTCHINGS: A Kent Clark show? Oh, yes! He did a Beckman show at the opening of the auditorium, or something like that, and the fiftieth anniversary of the Caltech Y.

There must have been about ten. And when you get around to talking to Kent, he'll sing you the score from each one.

PRUD'HOMME: You had some color photographs when the exploration of outer space began. Do you remember those? "Color in the Universe"? Wonderful photographs!

HUTCHINGS: Yes, they were beautiful things. The people at the Mount Wilson-Palomar office, who loaned them, thought the color that I finally printed was all wrong. You know, you never get color printed quite right, especially in a magazine that's a little chintzy, like ours. But I thought they were beautiful. And we got to do that—because it's expensive—by getting some money from the Development Program, which was running at the time. They paid for the color, and then they used the issue to send to people.

PRUD'HOMME: The Development Program, by this time, must have realized how much of an impact you were making with your magazine.

HUTCHINGS: Yes, I think they did. They sent it to all the [Caltech] Associates at that time. And I had to keep doing other things for Development, too. Actually, in '58, I think, or '60, we started another publication, called *Caltech Quarterly* [California Institute of Technology Quarterly]. The Development people thought that they ought to send something that was a little simpler than *E&S* to people who were giving us money or might give us money.

PRUD'HOMME: The Associates and the like.

HUTCHINGS: Yes. I don't know where we got the time, because there weren't many of us then. It was called a quarterly, but I think it only came out three times a year, every four months. We wrote some original stuff and then adapted some *E&S* stuff and made it even prettier than *E&S*. In fact, it was just dazzling; it was a great pleasure to do it.

PRUD'HOMME: And they gave you more or less unlimited funds.

HUTCHINGS: Yes, that was really expensive stuff. That went on for about seven years.

PRUD'HOMME: So, you had charge of this as well, with the same staff.

HUTCHINGS: Yes.

PRUD'HOMME: That must have been very difficult.

HUTCHINGS: Yes, I guess it was. [Laughter]

PRUD'HOMME: You said there was a show for Watson's retirement. Can you describe Watson?

HUTCHINGS: Earnest Watson? He was a very soft-spoken man, apparently extremely shy. It took a long time to realize that he was really just waiting to see whether he could trust you or liked you. He would put on a very stern face and look at your necktie when he talked to you. But I finally broke down this extreme reserve and found how really friendly—and gossipy—he was. He'd been here a long time. He'd done half of Millikan's work for him. He'd run things, and without a great deal of credit. He did a lot of war work that I never really learned much about—I wasn't here then. He was just a really wonderful man.

PRUD'HOMME: Did he resent being second fiddle to Millikan?

HUTCHINGS: Well, sure, I think so, but he was willing to be. He was a bachelor for many years. He was in his early sixties when he took a cruise and met Jane [Werner], and they were married. He owned a beautiful house he had built in Montecito, on top of everything, but it was a bachelor house. We stayed there once when he was away, and it was indeed a bachelor house, with one little narrow bed. [Laughter] So, when he married, they built a house for Jane across the driveway—just matched Earnest's house. But they had these two houses.

PRUD'HOMME: Separate but equal.

HUTCHINGS: Yes. I don't know how they arranged things, but Jane's house was surely where they ate and lived mostly.

PRUD'HOMME: There were more and more articles on the space race during this period.

HUTCHINGS: Yes, we just stumbled onto that and asked, I think, mostly JPL people, to tell us more about that.

PRUD'HOMME: Did the decade of the sixties seem as turbulent to you here as it was on other campuses, or did you feel that Caltech was a kind of backwater in terms of the student unrest?

HUTCHINGS: The student unrest took a long time to get here. It got here in '67, and it had gotten to Berkeley in about '64, I guess. It wasn't really so general here as it was elsewhere. I think it mostly came from one strong kid, a black boy named Joe Rhodes, who, I think, became president of the student body in his sophomore year. And Joe was a politician. He is one now—I think he's in the state legislature in Pennsylvania. But he was a strong force in every way. I think he even graduated by default—I think he bullied the faculty into giving him a degree or else; he hadn't really finished what he was supposed to. But it was his leadership that caused the whole student movement here. He'd collect enough students to hold a protest meeting, and he'd demand this, that, and the other. They even wanted to be on faculty committees.

PRUD'HOMME: Did he object to the fact that there were few blacks at Caltech?

HUTCHINGS: No. No, he wasn't on that kick; he was too busy. No, I don't think I ever heard him talk about that one. It would have come. But he really steamed everybody up. And as you know, he finally got a grant and got them all working on a smog project. There were dozens of them here for the summer, all working on different aspects of the

smog project. I think very little came of it, but it was a steamy time. That would have been '67-'68.³

PRUD'HOMME: There was the giant Rose Bowl hoax that they still talk about.

HUTCHINGS: Yes, they do. It was January '61. I got a kid to write about it [Lance Taylor, 1962], and he did a marvelous job. He did it in *E&S*, and we put it on the cover of the magazine. Then I used it, of course, in *The Quarterly*, where it was decorated with a lot of drawings that *E&S* didn't have. But the cover of *E&S* was fun. I had found out that a graduate student had gotten a picture of it. I don't know how I found the kid, but we got him. And sure, he'd let us have his color slide. We printed it in black and white. My cover had a certain shape, and this picture was too narrow to fill it. I didn't know what to do. The printer said, "I'll tell you what we can do. You see, down here, you've got a lot of people in the stands. I can just repeat them; I can repeat about five rows of people about four times, and I'll fill it out." And I said, "Fine." It looked great to me. But you know the people who get this magazine—pick, pick, pick. Letters—oh my God—mostly from the faculty: "Talk about the Rose Bowl hoax, how about the *E&S* cover hoax? What is that?" So, I got caught. But the article went on and on and on. That, too, got reprinted everywhere. The kid did a good job.

PRUD'HOMME: Bob Bacher was in *E&S* a lot. Then he was made provost [1962].

HUTCHINGS: Yes. He wrote about nuclear detection and that kind of thing. Yes, he was in quite a lot.

PRUD'HOMME: Was he popular on campus?

HUTCHINGS: Yes. He was chairman of the physics division for a while, and then provost. Yes, I think he was. One thing about him—I don't know whether I'll leave this on the tape or not—but you could never get to see him, he was always so busy. But if you ever did get to see him, you found out why he was so busy: He wouldn't stop talking. When

³ <http://calteches.library.caltech.edu/2671/1/research.pdf>

you'd get in and start to talk to him, he'd just have such a good time talking to *you* that you knew they were stacking up six other people outside. But as far as I know, he was quite popular, and he seemed like a good provost to me. He was extremely helpful any time I needed any help. In fact, everybody in the DuBridge days was more helpful than they seem to have been since.

PRUD'HOMME: Why is that?

HUTCHINGS: I said before that DuBridge was his own man, and he really was. He was *the* president. He represented the place as Caltech president on all occasions. He was the one you went to on all occasions. And that changed with Harold Brown, who didn't feel like being presidential in any way. He'd march in academic costume with his hat tipped on the side. And he'd sleep a little during the dull parts. He just wasn't—

PRUD'HOMME: He didn't care? Is that it?

HUTCHINGS: No, and he was a very impatient man, for one thing, and showed his boredom all the time. But anyway, when he got here, he surrounded himself with other people to deal with things. So, you didn't go to *the* president anymore; you went to Number Two, Number Three. Hardy Martel [professor of electrical engineering and executive assistant to the president 1969-1983] did this, and David Morrisroe [finance director, treasurer, 1969-1995] did that.

PRUD'HOMME: So, he [President Brown] was inaccessible.

HUTCHINGS: Oh, yes, I think so. When he'd been here a while, I missed the old DuBridge speech business that I counted on so heavily, and I thought people were kind of losing track of Harold Brown, so I asked him if we could have an interview with him in *E&S*. I said I'd have somebody from two or three divisions and a graduate student and an employee, and stuff like that. And he said that would be all right. So, we got all these

people in there, and they all asked him questions. We ran it in *E&S*.⁴ He was very skillful at that kind of function—better at that than anything else, really. He knew how to thrust and parry and handle questioners.

PRUD'HOMME: He wasn't the philosopher king, like DuBridge. He was more the debater.

HUTCHINGS: Yes. So, we did that every six months or so; but I wouldn't call them very sparkling interviews.

PRUD'HOMME: DuBridge was, as you say, such a tremendous part of *E&S*, and obviously enjoyed having his things reprinted and rewritten.

HUTCHINGS: Yes. Anyway, I think that distancing came along with Harold Brown and continues.

PRUD'HOMME: [William] Pickering [JPL director 1954-1976] was on a *Time* magazine cover in March of 1963. Did this have an impact on the campus?

HUTCHINGS: Oh, sure—whenever you get on *Time*. DuBridge was on *Time* several years before that. And it's a big deal. [Laughter]

PRUD'HOMME: In June of 1955, a woman received a PhD at Caltech. She was the first.

HUTCHINGS: The first girl graduate student. She came here with Jack [John D.] Roberts [Institute Professor of Chemistry, emeritus; d. 2016], from MIT. She was a grad student of his, and when they asked him to come here, he suggested that she come, too, and that's how we got a girl graduate student. Her name was Dorothy Ann Semenov. She had a hard time.

PRUD'HOMME: From the alums or from the professors?

⁴ <http://calteches.library.caltech.edu/2954/1/brown.pdf>

HUTCHINGS: No, she had a hard time within herself, as a competitive woman and the only woman, and I think there were a lot of pressures on her.

PRUD'HOMME: Yes. It must have been extremely difficult, because the scientific establishment has been, or was traditionally, closed to women.

HUTCHINGS: Yes, I think she even left chemistry and became a psychologist, which, the last I knew, she still was. Then there were several girls after that, but they were pretty sparse. For a few years after her, there would just be one or two [female graduate students]. There was one in geology. And it was rough on all of them.

PRUD'HOMME: You had Ray Bradbury writing. He wrote an article on “Creativity in the Space Age.”⁵ Did the scientists resent it?

HUTCHINGS: They didn't say so. The kids loved it.

PRUD'HOMME: Did he lecture on campus?

HUTCHINGS: Yes, he must have come here and given that as a lecture, and I must have taped it, or fixed it up with him that I could tape it, and then checked it out with him.

PRUD'HOMME: This was a technique you often used—of taping and then editing?

HUTCHINGS: Yes. First, I'd find out they were going to do it, then I'd ask them if I could tape it, and usually they'd say, “Sure!” Then I'd transcribe it and edit it and then let them see it, typed fresh. [Laughter] So, I did that with Bradbury several times—until either he became a little boring or I'd decided I'd heard enough. The kids still loved it, though.

PRUD'HOMME: You did a beautiful photo essay on the new [Willis H. Booth] Computing Center. That was something new for *E&S*.

⁵ <http://calteches.library.caltech.edu/2236/1/bradbury.pdf>

HUTCHINGS: Yes. Well, I once hired a real professional photographer to do a book called *The Range of Research* [1965] for Development. I had him come and take portraits of people after I had gone through all the material I had and gotten good quotes from them—this book had a quote-and-portrait format. And I was able, with the administration in those days, to just choose the good quotes, no matter whose they were—big shots, little shots, anything. It was wonderful. I only had one clinker. Somebody said, “You’ve *got* to get George Hammond in there, he’s the head of chemistry.” So, we had to use a bad quote. [Laughter]

Anyway, the photographer just loved this job. His name was Leigh Wiener. And when the Computing Center opened, IBM wanted photo coverage, and they got Leigh to spend a week shooting the thing. And I got the pictures, and they were *nice*.

Begin Tape 2, Side 2

HUTCHINGS: You asked me about Bobby Kennedy. I can’t remember what brought him here. But at any rate, he got everybody out—we were all there. He gave a short talk, and they were stacked all over the roof of the Winnett Student Center.

PRUD’HOMME: That was June of ’64. Did they like him?

HUTCHINGS: Oh, yes, sure. He seemed their age, even. And it was in ’65 that [physicist Richard P.] Feynman got his Nobel Prize, and the kids were very much excited about that. They decorated Throop Hall. They had a big streamer across the front of Throop, saying “Win big, R. F.”

PRUD’HOMME: Was he very popular?

HUTCHINGS: Oh, yes, very popular.

PRUD’HOMME: Why?



Ed Hutchings with Richard Feynman

HUTCHINGS: Because he was so smart and quick, and they wanted to be like that. They used to have coffee hours in those days in Winnett Center. And he would go to those, and as soon as he'd get there, kids would form around him. He would start talking, usually physics, and they were just entranced. He was teaching physics then, too, and even that was popular because of him. They taped all those lectures of his, you know.

PRUD'HOMME: Yes. That was how you got his articles, wasn't it? Again, you used the tape recorder.

HUTCHINGS: Oh, yes. Sure, I couldn't get his stuff any other way. And he was always quite pleased to see what he had said, after I showed him.

PRUD'HOMME: Did he always speak extemporaneously?

HUTCHINGS: Always.

PRUD'HOMME: Really? How did it come out?

HUTCHINGS: Well, it came out nicely. I think he must have thought about it a lot. He gave a commencement speech one time [1974]; it was called "Cargo Cult Science." He went through it, and it was all very well organized. And in the end he said he had only one piece of advice to add, which was: If they ask you to talk anytime, try to know what you're going to say before you say it"—as though he had just made all this up. So, I never really knew. I had an idea that he probably got it pretty well set, but I don't think he had notes.

PRUD'HOMME: Some people can do that, but they are extraordinary.

HUTCHINGS: So, when he got the Prize and came back, there was a big dinner for him. I don't think Kent Clark had a show for Feynman; Feynman *was* the show, and he talked about what he had done in Sweden, which was outrageous mostly.

PRUD'HOMME: What had he done in Sweden? What did he wear in Sweden?

HUTCHINGS: Well, he had to wear tails. He asked [Caltech physicist] Carl Anderson [Nobel Prize in Physics, 1936] all about it, and Carl told him where to get them. Feynman hated all the formality. He'd been brought up, as he kept saying, to ignore all that stuff and to be democratic, and he just wasn't up to kings and queens and royalty. And so, he got into a lot of trouble over there, said the wrong thing to princesses, and was quite uncomfortable. I've been working with him, you know, on some memoirs, and he's got a chapter on that. He still hasn't gotten over it. In fact, we had to think very hard about whether it would be wise to cut out the paragraph where he says, "Winning the Nobel Prize is a lot of baloney. Just because somebody invented gunpowder and wants to clean up his name"—I think we got all that out, but he still harbors this.

PRUD'HOMME: Still rebelling. From the sublime to the ridiculous: When Princess Margaret came to the campus [1965], that was fun.

HUTCHINGS: That was lots of fun.

PRUD'HOMME: Did she have a good time?

HUTCHINGS: Yes, she did. She had lunch at the Athenaeum. Everybody's wife wanted to know what they had to eat—I forget now. Tony [the Earl of Snowdon], her husband at the time, was with her. They had all kinds of security, and they left the Athenaeum with DuBridge and came down the Olive Walk. One of the kids [freshman Kenneth Kamm] was determined to photograph this occasion and hid in a manhole in the middle of the Olive Walk with some kind of periscope device, and as they approached he lifted the

manhole, and it was like John the Baptist with Salome. He was practically pushed back down in by all the security guards, but he got a very shaky picture, which I ran.⁶

[Laughter]

PRUD’HOMME: Was she amused?

HUTCHINGS: Oh, yes. You can see her amusement in the shaky picture, along with her surprise.

PRUD’HOMME: Vietnam.

HUTCHINGS: Oh, yes, and the draft. The students really were opposed to that.

PRUD’HOMME: There were some articles in the mid-sixties on choices in Vietnam. There was a program put on by the Y and the American Friends Service Committee on choices in Vietnam. And then you also had McGeorge Bundy talking on national security [1965]. And I was curious to know as to what, first of all, the Caltech community response was to this, and, secondly, did it differ from the response of the alumni? Did the Caltech community tend to be more liberal in their response to Vietnam than the alumni, and was that a problem for you?

HUTCHINGS: No, it wasn’t for me. The Y was *the* liberal organization on this campus. It was more liberal than the community, certainly the engineering community. So that the Y always, thank God, brought all the liberal viewpoints—and went pretty far, to the point where, when they had Angela Davis here [1970], it was really a hell of a mess in many ways. Angela brought a lot of what I called “goons.” They were very threatening people, and they were menacing while she was talking. So, there were all kinds of conflicts with that. And the alumni hated that she was allowed here, as did many of the faculty. But the Y still persevered in this “We’ve-got-to-hear-everybody” viewpoint. And it was marvelous. The Y did, in those days, a lot of things that you would have

⁶ <http://calteches.library.caltech.edu/2400/1/Princess.pdf>

thought the Humanities Division would have been doing; but, of course, the division was more scholarly.

PRUD'HOMME: Caltech celebrated its seventy-fifth anniversary in October '67.

HUTCHINGS: Yes, it did. It was a big deal. Everybody came from everywhere, with their academic robes. It was nice, a real splashy affair. And then there was a symposium with a lot of big names, which resulted in a book, called *Scientific Progress in Human Values* [Elsevier, 1967]. My wife [Elizabeth Hutchings] and I edited it, and it was hard work.

PRUD'HOMME: It's a wonderfully pompous title. [Laughter]

HUTCHINGS: Well, it reminds me of a humanities professor who told me that if I was ever stuck with a title, and I wanted to class it up, just add the words "in a free society." Well, I thought of it a lot. I'm not sorry to say that I went to the Caltech bookstore sale out on the Winnett mall last week, and there were twenty copies of *Scientific Progress*, and I could have gotten them at 99¢, and I didn't want them. It was impressive and boring.

PRUD'HOMME: What kinds of people would have bought the book?

HUTCHINGS: I don't know. I felt so sorry for the publisher, because we didn't buy it. You know, a publisher will put something like that out, figuring that the Development Office or the President's Office or the Associates will buy 2,000 copies at least. No. But it was a big affair. We did a picture book, too.

PRUD'HOMME: In 1970 it was announced that women would be admitted as undergraduates. Who decided that and why? And what was the reaction?

HUTCHINGS: "Oh, boy, how *did* that come about?"

PRUD'HOMME: Or more, what was the reaction to that from the alums?

HUTCHINGS: I don't remember. I can guess, though. I guess they thought it was terrible and also thought maybe it was time.

PRUD'HOMME: No way out. And on campus, was the reaction the same?

HUTCHINGS: Yes, as far as I remember. Obviously, I have no clear recollection. But they arrived in the fall—there must have been, what, ten of them? They had a hard time, too. You had to be a tough girl to try it, it would seem to me. And from looking at the pictures of the girls that entered that fall, I realized that many of them wouldn't last; they went on to other schools where it was not so rough and not so hard to get along. When [the four who had entered as sophomores] graduated, three years later, some of the girls who were left wrote about their experiences, and it had been tough.

PRUD'HOMME: There was a wonderful picture on the cover at some point of a girl getting a degree; it was a charming photograph.

In May and November of '68, you had wonderful issues. The May one was the "The Far Reach of Science," a series of articles. And then the one in November was "Biology: The Central Science," a series of articles. How did that idea come about?

HUTCHINGS: I think it must have begun back a little further, in November '67, with a special issue in geology. I think that the geology division must have asked if we would consider doing that. And I got along so nicely with all the geologists that I thought that would be fine. And it worked. They were all understandable, pretty much. Then we went on to "The Far Reach of Science," and that indeed was understandable. Biology was a little tougher. And then in June '69 Willy Fowler begged us to do a special issue on the Kellogg Lab and we did, and I didn't understand a single word. I really felt bad about that, as it had gotten out of my hands. There were certain people who had to write about certain things. It was out of my control, and I really was sorry I had to do it. It was probably very special for the people who'd been in Kellogg, but that's about it.

PRUD'HOMME: It became too much of an in-group sort of thing.

HUTCHINGS: Yes, I couldn't control it. We went on to other special issues. There was a conference—this is in March 1970, now—on “The Biological Bases of Human Behavior.” And most of that was talks given by people from outside, all in the field of human behavior. There, again, I thought we had a grip on what we were printing, but we got into trouble. The printer called up about a picture we had, a *National Geographic*-type picture of some natives with fake phalluses about two yards long. The printer wouldn't print it. [Laughter] “No,” he said, “This is not decent.” I'd never had a printer censor me before. And I hadn't even noticed. [Laughter] So, we got some letters, too.

PRUD'HOMME: Harold Brown arrived in '69. Who picks the president?

HUTCHINGS: Well, there's a search committee that the faculty sets up. And this one was a good committee. It had Bob Sharp as chairman. He's a very good guy, and I don't know what their trouble was, but they got Harold Brown. I think they almost had James C. Fletcher, an alumnus and president of the University of Utah. I don't know why it didn't work out, but they got Harold. And it turned out that Harold really just wanted to wait it out out here.

PRUD'HOMME: And before that, in the spring of '68, there's a yellow rough paper insert, called “The Plain Fact Is,” by President DuBridge, saying that more money was going to have to be spent on higher education. And that was something new, to have that kind of a format stuck in?

HUTCHINGS: We did have a yellow paper insert that came from the American Alumni Council that was probably delivered to us and a lot of other alumni magazines, and it probably had a tag page of DuBridge's on it. Anyway, I only did that once. I wouldn't do it again. It wasn't mine.

Harold Brown was inaugurated in October 1969. And that made a nifty inauguration, because it was the actual day on which Max Delbrück and Murray Gell-Mann won their [Nobel] Prizes. So, Harold got to march with the two boys, and it made a pretty good occasion.

PRUD'HOMME: Can you describe Gell-Mann and Delbrück?

HUTCHINGS: Oh, I don't know. I'd known Delbrück for a long time and got to like him, I guess, when I went to a faculty dinner and he decided to toy with me because I was nothing but a journalist. And he worked away at me until finally, I guess, I got angry and talked back. Max loved it. [Laughter] So, we got along very easily. I don't always talk back, but most bullies back down when you do. Anyway, he appreciated my existence, and I worked with him a lot. I was very fond of him. He was a very warm man and had very close relationships with all his students and graduate students and people he worked with, I think. He was just a very good man. Murray was sharper and not easy to like.

PRUD'HOMME: Why?

HUTCHINGS: He's arrogant and impatient. So, I've been off and on in how I got along with Murray. You never knew what Murray you were going to have to deal with. He was very busy a lot of the time and couldn't be bothered with whatever it was you were interested in. So, I have little more than that to say about him.

PRUD'HOMME: Were the students as pleased with his Nobel as they were with Feynman's?

HUTCHINGS: Oh, I think not. But then he never did get terribly close to undergraduates, for one thing. And Murray and Feynman have had a lot of off-and-on. They're off now, I've discovered.

PRUD'HOMME: Robert Huttenback wrote a three-part article in 1969 called "Confessions of a Genial Abbot." He had been Master of Student Houses. Was he liked?

HUTCHINGS: Yes. He was nice as a Master and not too great as chairman of the humanities division [1972-1977], I think. I think he sold out to the social sciences, which anybody in the humanities resents a little. He was kind of a strong chairman and offended, I think, a lot of people. He came here, you know, from UCLA, as a part-time

soccer coach, and he really thrust onward. He was very agreeable and available and willing to write all kinds of stuff for *E&S*. And he was a lot of fun. But, as I say, he was a son-of-a-bitch as a chairman.

PRUD'HOMME: Your implication is that very strong-minded people don't make good chairmen.

HUTCHINGS: [Laughter] I'm not sure I believe that.

PRUD'HOMME: Maybe just in Humanities. Wouldn't it be difficult to be the chairman of the Humanities and Social Sciences Division at an institution such as Caltech, which is all science?

HUTCHINGS: Yes. The first chairman, Clinton Judy, was a gentleman scholar, a real scholar—he's the Judy Library, you know, and collected all those books. And he had a lot of gentlemen around him, and they were gracious, and they taught manners and all that. Huttenback came to scorn that; Huttenback was rough-and-ready. In between was Hallett Smith, who was a Shakespearean scholar. And again, he just had humanities to deal with. I think, as I've said several times, it got really messed up when they tried to encompass the social sciences. That really belongs somewhere else than in the humanities division. God knows *where* else around here, but maybe somewhere separate.

PRUD'HOMME: Was it difficult for the division when that happened?

HUTCHINGS: Well, it's still disconnected. There's literature and history and psychology over here, and then there's social sciences. They have very little to do with each other, including even the people in old-fashioned economics—they are not accepted by the new breed.

PRUD'HOMME: "Aims and Goals of the Institute," an article in May 1969.

HUTCHINGS: Well, that was the product of a committee DuBridge set up. Neal [C. J.] Pings [professor of chemical engineering and chemical physics] was the head of it. They worked hard; they put out nine pamphlets—I know, I had to print them—on different areas of concern. Several years later, Neal Pings organized them and wrote about them in *E&S*. Then, five years later, he wrote again for *E&S*, asking whatever happened to the aims and goals—because I don’t think much did. It’s like one of those things that everybody gets on their desks, and nobody does anything about.

PRUD’HOMME: It was a tremendous work; I’ve seen it.

HUTCHINGS: Oh, sure. It would be just great to ask Neal Pings, even though he’s not here anymore, what he thinks they got out of it.

PRUD’HOMME: [Physicist] Robert Christy became provost in 1970, and acting president in 1977. Was that a good choice?

HUTCHINGS: No. [Laughter] I didn’t like any of Harold Brown’s lieutenants. You know, I had had such a good time with DuBridge, the first thing I did when Harold Brown came was to send him this book I’d just read, called *Up the Organization*.⁷ I thought this would be great for him. And I sent it over, and I said, “You’re starting on a new job; you’ll love this book.” Well, it’s the last book in the world I should have sent to Harold Brown, because it’s by the man who ran Avis, and he’s a very funny man, and he believes that all organizations are moribund, and he’s so sharp about everything. Well, Harold Brown sent it back in a minute and never said anything about it. I thought, “Well, that was a bad start!” And then he called me in—I ran all the publications by that time—and said that he’d decided to put all the publications under Public Relations. And after recovering from that statement, I said that I would appreciate it if he would put them on an equal basis with Public Relations. And he said, “No, no. Let’s try it my way.”

PRUD’HOMME: He hadn’t really talked to you about it at all.

⁷ *Up the Organization: How to Stop the Corporation from Stifling People and Strangling Profits*, by Robert Townsend.

HUTCHINGS: Not at all. So that's how I found out about that. And then he hired a new head of Public Relations, a man named Ty Scoggins, who came from Getty Oil and was coming here to sort of play around. And he had a miserable time, and so did I.

PRUD'HOMME: That must have been terribly difficult, because you had gradually gotten the confidence of the Institute.

HUTCHINGS: Well, I didn't know what I had to do with him. So, I had a hell of a time with Ty Scoggins.

PRUD'HOMME: Did he think this was like Getty Oil Company?

HUTCHINGS: He thought he would show us how they did it in industry, and he kept collecting everybody and saying, "We're going over and interview the chairman of the engineering division." And we'd sit there in this little group of his people, and he'd ask questions of the chairman of engineering—questions I'd been asking for twenty years. So, it was hard. Well, he left quickly, because he couldn't get along with [William H.] Corcoran [Vice President for Institute Relations].

PRUD'HOMME: What did Harold Brown do then?

HUTCHINGS: Harold didn't get into any of these things. Everything happened down lower. Corcoran dealt with all these things. When Scoggins left, Jim Black, who wore many, many hats—I can't remember them all: alumni, government relations, and so on—took the job. And he was worse than Ty. So, I had a rotten time for a while, until I adjusted to it and worked around it or through it or beyond it. But Brown and Corcoran and Black were just too much for me. They were all rigid, authoritarian, organization men, and I wasn't used to it. So, I had to work out ways of resisting.

PRUD'HOMME: Did they keep their hands off of your publication, *E&S*?

HUTCHINGS: I had to fight quite hard. One time in 1972, I was away when the June issue was to come out. Biology was running a seminar about genetic engineering, and Lee [Leroy A.] Hood and several other people were involved, and [Senator] Jack [John V.] Tunney gave a talk [on ethics]. Before I went away, I'd fixed it up with Jackie Bonner, my assistant, who was going to finish that issue, that we'd run these things. And the Jack Tunney thing got into Ty's hands, or into Corcoran's hands. Anyway, they tried to stop it because he was a Democrat, because it wouldn't be good for the fund-raising campaign or something. And she wouldn't do it. She said she couldn't; she said I wouldn't have let her do it. And they kept insisting. She was a great girl; she went to Lee Hood, and Lee Hood called Corcoran and said that if he thought he was going to change anything about that, he would never help him raise another nickel. So, we printed it. She was very brave. And that kept happening; we kept having things like that.

I put Arnold Beckman on the cover [of the December 1974-January 1975 issue] because I'd written about him. And then in an issue a year later, I thought, "What the hell, I'll do the new chairman of the Board of Trustees." So, I did a story on Stanton Avery. He's a nice man, but kind of dull, and we had a kind of dull picture of him, so I thought I'd run it inside. And Jim Black said, "Well, you're going to have Avery on the cover." And I said, "No, I'm not." He said, "You've got to. You had Beckman; you've got to have Avery." And I said, "No, I have another picture for the cover." "What other picture?" I said, "I have a solar flare that I'm going to use." "Well, Avery is going to be on there." I didn't put it on; I ran the solar flare. And we had that kind of thing all the time. It was such a switch, after all of the ease of the other administration. So, we had a small war for a long time.

PRUD'HOMME: I keep being reminded of the mom-and-pop store that goes along so well, and then all of a sudden it expands a little bit, and it doesn't work. And this is sort of what I'm hearing you saying that Caltech got to a certain point and then hired people who were more organizational or corporate.

HUTCHINGS: I think that Harold Brown chose to. It seems to me that Harold Brown had a natural inclination to pick the kind of people he did because they were as rigid as they were. That would keep the heat off of him, and they'd deal with things.

PRUD'HOMME: So that he wouldn't have that kind of responsibility and would keep it all under control.

HUTCHINGS: Sure, yes. So that's the way it seemed to me. And it seems still to be something like that. We didn't get to be a much bigger place, but we were *acting* bigger.

PRUD'HOMME: Well, you were terribly successful as an institution, and in large part due to your journal and its tremendous national prestige, which it hadn't had before.

HUTCHINGS: Yes, that's true.

PRUD'HOMME: The end of the sixties. We're in the early seventies. "Some Second Sober Thoughts on Vice President Agnew" by Fred Friendly.⁸

HUTCHINGS: Oh, that was fun.

PRUD'HOMME: How did you get that in?

HUTCHINGS: Fred must have been a "Leader of America." He may have written that out; I don't remember taping it. Anyway, I got it in some form from him, and we worked it out. Yes, that was pretty good, to get that in print.

PRUD'HOMME: Then, of course, the April special issue on the "Biological Bases of Human Behavior" conference, has ten articles on that.

HUTCHINGS: Yes. And speaking of Agnew, it was Ronald Reagan who gave the kick-off speech for our new development campaign in November '67. We were after \$85 million.

⁸ <http://calteches.library.caltech.edu/2768/1/friendly.pdf>

We called this campaign “Science for Mankind”—they always have to put a label on every new campaign—and they develop a new case book, and all of the stuff grinds up. They’re going to have to do that again pretty soon.

PRUD’HOMME: What was Reagan like?

HUTCHINGS: He was governor then. He was like a Republican politician. I don’t remember anything about it; I don’t remember anything he said.

EDWARD HUTCHINGS, JR.**SESSION 3****May 17, 1984****Begin Tape 3, Side 1**

PRUD'HOMME: I see you have some notes that you've collected. Tell me what those are about.

HUTCHINGS: Well, I remembered that in 1967, which we've passed in our discourse, I became Director of Publications. First I was "Editor of Institute Publications," but we put the catalogue out, and at that time there were a lot of people in the Development Office and the Institute Relations Office, and when I looked over this stuff for the catalogue, everybody was a goddamn director. And then, finally, at the end of this long list of about twenty people, came "Editor of Institute Publications." And I decided I didn't want to be at the end of that list at all. So, I went either to Chuck Newton or DuBridgde and said, "I want to be a director too." And whoever it was said, "All right." [Laughter] So, that's how I became director. It was simple.

I thought of another simple thing, along these same lines. It was the time the students began to get restless about the Institute's seal, which you may never have seen—it's such an old-timer that it's been avoided for several years. It's supposed to be an older man passing the torch of knowledge on to a younger man, and it was designed for Millikan in the twenties, I guess. But it's not just an older man and a younger man; they're both kind of Greek-god types, with loincloths, and they're on a cloud. And the students began to call it "two queers on Cloud 9" and that kind of thing. So, they began to want some other kind of logo. And finally, somebody came to me and said they did not want to send out that old seal anymore. So, I said, "Well, we'll work up something fresher." I got [Caltech trustee] Henry Dreyfuss involved in this—unfortunately, because Henry was very critical of everything. And we began to spend money with an artist, Doyald Young, to design some logos. It went on forever. We had maybe fifty. Henry didn't like any of them. The guy kept doing flames, and Henry thought they looked like

tulips. I was sorry we'd started. So finally, Doyald and I decided to skip Henry and just begin using three we liked. They became the Institute's logo, until the trustees discovered it and reaffirmed the old-fashioned seal, which is still on the diplomas—though they said it would be all right to use the others. So, that's the way that came about. Except now the new Public Relations man, realizing that there were three logos, thought he would simplify the three and get down to one. So, he went back to Doyald and they got down to one, and they've been using it for the last few months. I went over to the *E&S* office the other day, and they hadn't sent their issue out this month because Stanton Avery had discovered that it had the new logo on it, and the trustees had never voted to accept the design. So that's where it is today.

Anyway, the publications. Chuck Newton had begun to absorb a few of the Institute publications into his office in the early fifties, but not many of them. They were scattered all across the campus. The catalogue was done by the Registrar, and the President's Report was done somewhere else. So, it was in '64 that I finally said I think they all ought to come from one place. And everybody said fine. So that's how we started the Publications Office. And it worked really very nicely for a long time. I handled it for about ten years. We not only got them all under one roof and got them to look alike and read alike, but we had people on the campus bring us other things that they really couldn't handle on their own. And it was a very useful office for a while. It still is to some extent.

PRUD'HOMME: But they've moved it to Public Relations.

HUTCHINGS: Yes. Jim Black took it away from me and gave it to a succession of young women. And it's reduced, naturally. But when we did it, we did a lot of books for people, for instance. Harrison Brown put out two or three books through that office, and Norman Horowitz did a biology book. So, we were doing a lot of extra work for the campus, and it was quite good.

PRUD'HOMME: So, your role had expanded.

HUTCHINGS: Yes. I got more help, too.

PRUD'HOMME: And then it was taken away.

HUTCHINGS: Yes. As I said, I had a tough time after I went under the Public Relations Office, because I had to work for people who didn't have the concern I did and who also were just terribly jealous. They were the bosses, and by God, they were going to act like the bosses.

PRUD'HOMME: They wanted that particular piece of territory for their empire.

HUTCHINGS: Yes, sure. That's natural, I suppose.

PRUD'HOMME: I know, but it's hard, if it's your turf.

HUTCHINGS: Oh, yes, it was hard, because it wasn't as good. At the same time, they cut down the number of times *E&S* came out, and started new publications: *Caltech News*, and *Around the Campus*. Actually, *Caltech News* started while I was still grappling with the publications. I had a young man working for me then named Bruce Abell. Bruce had been a student here in geology [BS 1962], and he got to be editor of *The California Tech*. I worked with him through my journalism class when he was on the *Tech*, and he was a good writer, and he also did some student news for *E&S*. He got his degree in geology, though he was really quite interested in writing and he worked with [the cultural critic] Gilbert Seldes, who came here on a visit. He had a chance to get a master's degree in communications or something like that at the University of Pennsylvania, so he did that and then he got a job as a technical writer for Martin Marietta in, I think, Baltimore. We wrote back and forth, and pretty soon he thought he wanted to come back to this coast, and I got him to work for *E&S*. He was with me for about five years, I think. He was a great help. He went on, then, to the National Science Foundation and is now assistant to the science advisor to Reagan in the White House.

PRUD'HOMME: So, he was the main assistant you had.

HUTCHINGS: Oh, yes, the best help.

PRUD'HOMME: In the early seventies, you did a couple of dialogue articles. There was one on "Mars and the Mind of Man," by Bradbury, [Bruce] Murray, [Arthur C.] Clarke, and—

HUTCHINGS: Oh, yes. I didn't do enough with that. Bruce Murray set that [panel discussion] up [November 1971], and it was taped, and I used some hunks from the tape. Bruce wanted us to make a book out of it, but I thought it was too scattered. Well, Bruce didn't, and Bruce is a strong Irishman, and he got it made into a book—a pretty good book, I must admit.

PRUD'HOMME: Was he popular on campus?

HUTCHINGS: Bruce was hard to get used to. He was such a strong man, and he had so many absolutely sure opinions, that you kind of went easy with him for a while, until, as often happened, you got used to him. We worked together very well. And I got a lot of stuff from him, because he had a lot to say.

PRUD'HOMME: Yes, he seems to have contributed a great deal to *E&S*. There's another group interview with Harold Brown, but we discussed that before.

HUTCHINGS: Yes, we used two or three with Harold Brown. They were progressively less satisfactory.

PRUD'HOMME: And then eventually he didn't seem to be in the publication at all. He'd removed himself.

HUTCHINGS: No, I guess *we* gave up. For one thing, the people we would collect to ask questions wouldn't be tough enough. They seemed to be the kind of people who *would* be tough, but when they got there, they got wimpy.

PRUD'HOMME: Did they all work for him?

HUTCHINGS: Well, they were all here at Caltech. They were graduate students, some undergraduates, and faculty. But they didn't spark much, and Harold was so careful about what he said—I guess he always would be. He would hedge it on this side and hedge it on that side, so you couldn't catch him on anything.

PRUD'HOMME: The covers were wonderful. There was a marvelous one of a graduate student [William Beranek] being a double helix, bending and twisting. Where did you get that photo?



William Beranek, *Engineering & Science*, February 1971

<http://calteches.library.caltech.edu/id/eprint/296/1/box.pdf>

HUTCHINGS: Floyd Clark was our photographer then, and he took it when Beranek was talking to a group of high school kids and explaining the double helix. We used that picture to death! We used it in everything!

PRUD'HOMME: What was the position of the humanities at Caltech in the seventies, say, under Brown?

HUTCHINGS: It must have been that Hallett Smith, a Shakespeare scholar, had retired and Huttenback had been made acting division chairman [1970]. I really don't know how that came about. He was a history professor and had been Master of Student Houses. He was a very cheerful, vital guy. I guess he was a scholar, too; he specialized in India. Anyway, his being made chairman seemed to come as kind of a surprise. Nobody had expected that to come about, but I think it was just because he had so much vigor.

PRUD'HOMME: A good chairman?

HUTCHINGS: Well, it was along in there that the social sciences were being developed. And I think he pushed that very hard, as I think Brown did. And it split the division, and it's still split, and it's run by the social scientists still. The chairmen who followed Huttenback were Roger Noll, an economist, and David Grether, another economist. It's not a humanities division anymore. There were a lot of people who didn't like Huttenback at all.

PRUD'HOMME: What was it about Huttenback that they didn't like?

HUTCHINGS: Well, all of the humanities people were disenchanted, and he was so wedded to the social science group. He had a bosom buddy who's still here, named Lance Davis [economic historian], who influenced him greatly in the social science way. And I guess almost all the humanities people didn't like him. It's hard for me to remember.

PRUD'HOMME: In June of '72, you did three articles on the impact of genetic engineering. Did these issues get more reaction from your public? And have these sorts of ethical issues about genetic engineering caused any more interest on the campus?

HUTCHINGS: As I remember, it caused less than I expected. I don't remember who was represented in that issue with the three articles on genetic engineering.⁹ But no, it didn't. It's only in looking back that you think it should have caused more people to be responsive. But I don't remember that it did a lot then.

PRUD'HOMME: And you had more special issues. You had an issue on the energy crisis, and one on behavioral biology.

HUTCHINGS: Yes. In a way, these came up because people remembered the other special issues and asked if we wouldn't please do them. And usually we did, though we knew we had had a hard time with the other special issues. They were hard to do. You had to deal with people in these issues you wouldn't naturally have gone to as writers, but they had to be represented because of the field of concern. They were harder to work with, and they were harder to understand. So that's how we kept getting into special issues. We didn't really want to do that many, but we thought we ought to do them to help the divisions. And we always got a lot out of them—extra copies. They sent them everywhere.

PRUD'HOMME: A Development project was launched in 1974 to raise \$130 million. And Thornton Bradshaw wrote an article—or maybe he gave a speech—called “The Things Which Men Can Do.”¹⁰ Was it resented that the head of an oil corporation [Atlantic Richfield] should speak for Caltech?

HUTCHINGS: I don't think I picked up any resentment, nor do I remember how that article came about. I have a strong feeling that somebody leaned on us, like Corcoran, in charge of the Development campaign. I really think so; that did happen sometimes—not a lot, and in the older days we didn't always say yes. But when you're out after \$130 million and the head of the campaign here on campus says it would be good, you bend.

⁹ Leroy E. Hood, “The Impact of Genetic Engineering on Society;” Robert L. Sinsheimer, “Genetic Engineering;” John V. Tunney, “Ethical Issues in Genetic Engineering.”

¹⁰ <http://calteches.library.caltech.edu/3019/1/ThingsWhichMen.pdf>

PRUD'HOMME: There was the earthquake in the early seventies.

HUTCHINGS: San Fernando, yes [February 9, 1971].

PRUD'HOMME: And this seemed to have built up an interest in seismology. Did the earthquake affect the campus?

HUTCHINGS: Oh, I think so.

PRUD'HOMME: I have visions of chemicals bouncing off the shelves.

HUTCHINGS: Oh, especially chemicals. This was the one that caused them to tear down Throop Hall eventually. It's the one that revealed that Throop Hall was structurally so tricky that they'd better take it down—and Gates, which they gutted and then rebuilt the inside of. I've never been sure that it was true that Throop Hall couldn't have been fixed, although earthquake people over the years had always said it was something to watch. My office for a long time was in the tower of Throop Hall.

PRUD'HOMME: Oh, how wonderful!

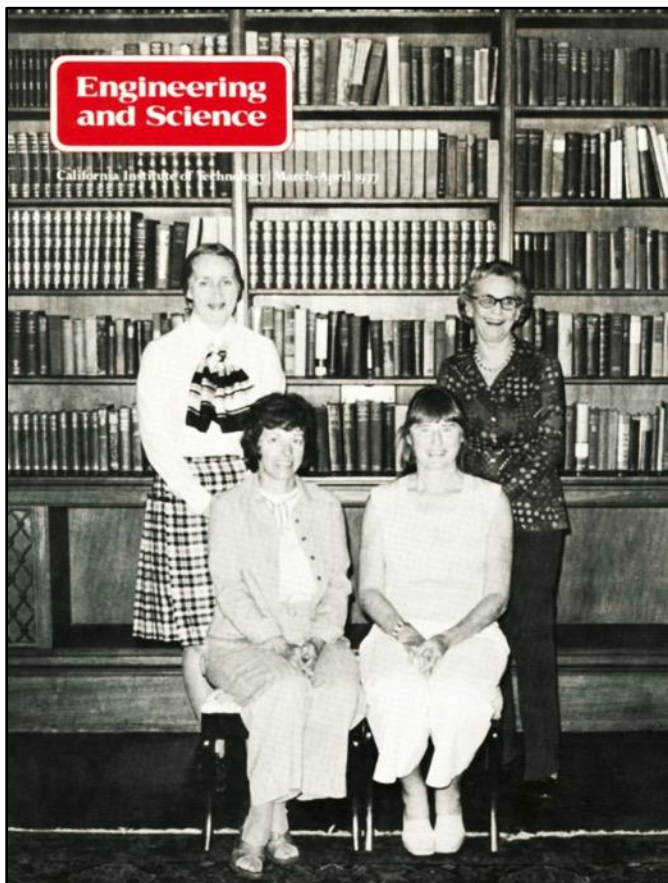
HUTCHINGS: It was. Nobody ever came up there, though. They always called and said, "The next time you're down..." So, I was up there with a secretary. And we'd open the windows in the summer, and pigeons would go through. [Laughter] Not many, but there were pigeons. Anyway, it was an old earthquake engineer named Romeo Martel, Hardy's father, who told me that it must be great to be in that tower but I should remember that if there was a strong earthquake, the first thing that would happen in Throop Hall would be that the tower would drop to the basement. [Laughter] So, there were people talking like that about Throop. But I'm not sure they couldn't have kept it.

PRUD'HOMME: There appeared to be developing a "life on Mars" versus "no life on Mars" debate.

HUTCHINGS: Oh, sure. It must have been Norman Horowitz [professor of biology] who wrote about it along about that time. Norman went up to JPL to work on the Viking Lander project and went all through the mission—and I think came out of it without any [definitive] answer.

PRUD’HOMME: I’d like to discuss the role of women at Caltech as scientists and as students. There were very few women on campus.

HUTCHINGS: Oh, very few. I can’t remember more than two women scientists. There was Olga Todd always—the mathematician. There was at one time a woman named Glennys Farrar in physics—good, really good. Didn’t keep her; I don’t know why. It was very hard, I think, to get on this faculty. There were maybe a half-dozen girl graduate students. I can’t remember in the early years how many freshman girls they took—it must have been about twenty. They didn’t all stay. So, there weren’t many of them, and there wasn’t much attempt to get more.



PRUD’HOMME: There was an interesting article on the wives of Nobel scientists, who seemed to have spent their lives caring for and cosseting their mates, all of them. They were very different women from very different backgrounds, and yet they all seemed to have dedicated their lives to helping these men.

**Manny Delbrück, Gweneth Feynman,
Margaret Gell-Mann, Lorraine Anderson**

Engineering & Science, March-April 1977
<http://calteches.library.caltech.edu/id/eprint/367/1/wives.pdf>

HUTCHINGS: Well, I think my wife and I began to notice that about Caltech in general.

PRUD'HOMME: Is that true of scientists' wives in general?

HUTCHINGS: We decided it was almost universally true of scientists' wives. He would be down here, often day and night, and she would be doing everything else.

PRUD'HOMME: And protected him.

HUTCHINGS: Yes, that too.

PRUD'HOMME: Did this cause any resentment among other women or the women's-lib element—that the wives were entirely in the nurturing role? Do you think it's necessary to have this kind of a complete support system to survive?

HUTCHINGS: Do I? No. Do you think it's still going on?

PRUD'HOMME: I don't know. Is it?

HUTCHINGS: Maybe it is with Nobel Prize winners. There've been more Nobels since the ones whose wives we wrote about, and I think the same thing is true of all of them.

PRUD'HOMME: That they had to be protected in order to produce.

HUTCHINGS: Apparently.

PRUD'HOMME: All I could think of was the queen bee when reading it. [Laughter] It was interesting.

HUTCHINGS: Yes, it was interesting. We didn't expect it to reflect that, either.

PRUD'HOMME: Was there any discussion on campus about an acceptable nuclear future?

HUTCHINGS: Oh, of course there would have been, but I didn't follow it. There must have been in physics—Bacher, Feynman—

PRUD'HOMME: But the students didn't really get involved.

HUTCHINGS: No. I can't think that many of the students here have gotten involved in anything outside of this place very strongly, except for that time they all were swept away by Joe Rhodes and worked on smog. Working with the kids on the newspaper for all those years, I found it was very rare for a kid to be concerned about the outside world.

PRUD'HOMME: Your implication is that this is still true, in a sense.

HUTCHINGS: Here? Oh, yes. The class I have in journalism this year is the worst I've ever had, absolutely the worst. I worry about it, of course, because I think, "Well, I've stayed too long at the fair—I've got to get out of this." But there are about eight, nine, ten of them, and they are universally apathetic to *everything*, the editors especially. I must say there are several [Asians], and I think they are brought up to be reticent. But I steam into this class, and I say that I really think that the paper [*The California Tech*] is hitting bottom, and I don't think they're covering the campus and accepting their responsibility. And they say, well, they run news releases—which they do. And I say, "But let me tell you what you *don't* run. Nobody went to hear Freeman Dyson talk. Nobody went to hear Jack Smith. Nobody even went to Beckman Auditorium to hear the four alumni talk about the great pranks they pulled when they were here. Nobody went to see *Much Ado About Nothing*." And I went on and on. "Nobody went to find out what Prince Andrew did when he was here." "Well, Prince Andrew," they said, "What can you say about him?" And I said, "You can tell me what he did, and what he said, and how he liked the students he had lunch with, and what he ate." And they said, "Oh, that's ridiculous!" And it's driving me up the wall!

PRUD'HOMME: No curiosity?

HUTCHINGS: None at all. Or I will bring them something to read that I have gotten from some kid who says they won't print it, and I pass it around to all of them. I ask them to read it, because he's really angry at something. And they read it, and then I say, "Well, what do you think of it?" because nobody volunteers. And someone will say, "That's not journalism." And I'll say, "It's a column; it's not supposed to be journalism." "It's not journalistic, though." I don't know what to say.

PRUD'HOMME: It's like walking in mud. How difficult for you!

HUTCHINGS: It's extremely difficult, yes. I'm going to try one more year, I think. This crowd will be in power for another six months next year. So that's what I think about students now. The other crowd I have in the television class is a little sparklier, a little livelier, but not great.

PRUD'HOMME: Maybe these guys have never read newspapers; they've only watched television. Maybe they don't know what a newspaper is.

HUTCHINGS: Maybe. Of the three editors, one is just kind of jolly and doesn't come to class, but the other two who do come to class are both trying to get transferred to other schools. [Laughter]

PRUD'HOMME: Then on the question of the acceptable nuclear future, the students were just as apathetic, I guess.

HUTCHINGS: Mostly, yes. It's just great when you get one or two who do respond.

PRUD'HOMME: Did they get excited about the proposed army think tank [the Arroyo Center] at the Jet Propulsion Laboratory?

HUTCHINGS: One kid did.

PRUD'HOMME: But on campus, was there a general interest in this or not? Because the faculty was certainly all in a tizzy.

HUTCHINGS: I don't think the students knew about it. I think the kid on the paper got them started being aware of it.

PRUD'HOMME: [Caltech president] Marvin [Murph] Goldberger was inaugurated in the fall of '78. What was the campus reaction to him then?

HUTCHINGS: Well, he came out for inspection first, as Harold Brown did—brought out by the search committee to be looked at.

PRUD'HOMME: That must be difficult.

HUTCHINGS: Oh, it must be hell! Harold Brown, for instance, was ushered into Dabney Lounge where our whole division was in a ring. They broke the ring a little to let him into the middle, and they began to ask him questions. And they were all primed to ride their own hobby horses: What would he do about this? What would he do about the social sciences? And as I've said many times, Harold Brown was superb at that kind of confrontation, just as crisp and sharp as he could be. Goldberger was gentler, and he seemed to be a nice man. That's what my impression was.

PRUD'HOMME: Which perhaps people wanted, after Harold Brown.

HUTCHINGS: Yes. And I guess he *is* a nice man, yes. He's not a very effective man as a leader—he's not much in evidence.

PRUD'HOMME: He isolates himself?

HUTCHINGS: He seems to. I don't know about physics—you know, maybe they see him all the time. The one thing I found out about Goldberger early was that he was unresponsive. If, for instance, you thought you had something he should know, or you

wanted him to tell you, you didn't really go to see him—you'd send him a note. It never came back—no "Yes," no "No," nothing. He didn't ever answer anything I asked. And I found that that was not just true of me. Nor did he deal with the things on his desk—which, indeed, Harold Brown had. Harold, I think, went through everything in about one hour in the morning. He'd scribble on the note you wrote and send it back, and you'd get it fast.

PRUD'HOMME: You'd get *some* kind of reaction.

HUTCHINGS: Yes. But I finally stopped trying to get a response from Goldberger, and that was disappointing.

PRUD'HOMME: You're still publishing oral histories.

HUTCHINGS: Yes. I don't think that many of them are that good. And I think they've run so many of them now that they've watered them down. But there are some real creamy ones, and I wish this magazine had just stuck to them. I think they must need them to fill space now. [Laughter]

Begin Tape 3, Side 2

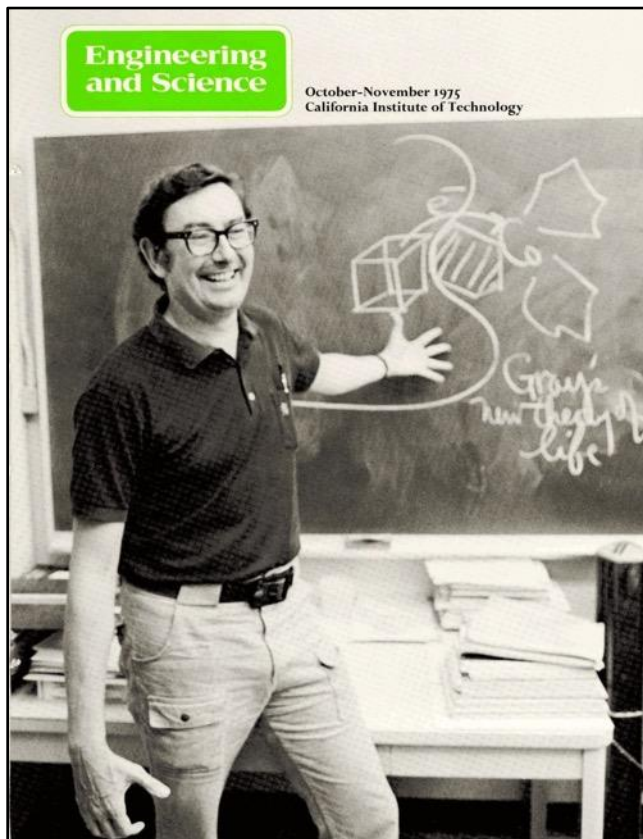
PRUD'HOMME: Did good and outrageous teachers make good departments? Or are they just good copy? I think of [Kenan Professor of chemistry] Harry Gray and Feynman. They seem to have been in *E&S* a lot.

HUTCHINGS: Yes.

PRUD'HOMME: Is that because of their dramatic manner?

HUTCHINGS: Feynman was in *E&S* because he was almost always stimulating, it seemed to me. He just bubbled with ideas. And they were very fresh, and I thought people

would want to hear them. Harry was in *E&S* for his tricks and stunts and the way he kept students interested, rather than his research—though we did cover some of that.



“The Chemistry of Caltech,” Harry Gray’s 1975 Commencement address
Engineering & Science, October-November 1975
<https://calteches.library.caltech.edu/361/3/commencement.pdf>

But he was, I guess, such a good teacher; I assume he still is. But for a while, you know, he would put on horses’ heads and that kind of thing. I think he finally, even himself, realized he’d better knock that off and be a little serious. Though he did some great things. There was something he did—I don’t know whether it was here or at Columbia—where he was trying to show, if I remember it right, a whole roomful of students that if you shook a certain fluid it would solidify. So, he had a kid go over to the other side of the room and get a beaker filled to almost overflowing and carry it over to him. And he arranged for somebody in the back row to shoot off a cap pistol just as the kid got there, which made the kid shake the thing, and it would solidify just as Harry got to that point in his talk. That’s really good teaching, I think. But he was in *E&S* because he was so colorful.

And Zwicky was in *E&S* a lot. I’m ashamed of myself for running Zwicky as often as I did, because he was full of beans [laughter] when he talked about morphology [General Morphological Analysis (GMA)] and those things that were his hobby horses. And I look back on them now, and I think, “Oh come on, you could have resisted.” But maybe not. It was hard to resist Fritz Zwicky; he had such force and enthusiasm. And he would bring you the article, all ready.

PRUD’HOMME: What were your reactions on your retiring and leaving *E&S* [1979]?

HUTCHINGS: I wasn’t ready to leave *E&S*, but I was ready to get out of the job. I think I did it because Goldberger was here, and it was clear that nothing was going to change for the better—that nothing was going to *change*, that there was still going to be a repressive group of supervisors between me and Goldberger, Corcoran, and Black, and that I might just as well stop. I was almost sixty-eight. I would have stayed, sure, but I’d had enough. And it’s still the same way. Well, actually Goldberger did do something; he did get rid of Corcoran and Black. So that changed. There’s a new PR man, Dwain Fullerton, and, indeed, he is not at all the same kind of man as Corcoran. So, all of that kind of thing has eased up. But Corcoran and Black used to run things. Corcoran was a Sunday school teacher, actually, and he was a Sunday school teacher here, too. He would have Black get from everyone on his staff every month a report of what you did that month—a report card. Black would rewrite, fix them up, and give them to Corcoran. So, there were people recording their phone calls and saying who they talked to on the *LA Times*—that kind of thing. It was unbelievable! So, on leaving *E&S*—I was ready.

PRUD’HOMME: Is this current apathy among the students something you think will go?

HUTCHINGS: Oh, I have to think it will go. I have to think it’s special with me. For another thing, though, the kids are running the paper. They can’t get any staff; people aren’t interested in writing for the paper. This may be because they don’t want to write anymore; they’re busy. Or it may be that they changed my course so that it’s now pass/fail, and it’s called a “performing art.” It used to be a literature class, and you used to get credit. I’d ask them to write an article a week, which would go into the paper,

usually. So, everything worked kind of easily. They'd have to write something, the paper would get it and print it, and then they would get credit. And it may be that this new setup is not going to work—maybe never.

PRUD'HOMME: Because they don't feel they have to work.

HUTCHINGS: They don't, they just have to get a pass. And it's hard, you know, to fail.

PRUD'HOMME: What departments have risen in prestige, and which have fallen in your time?

HUTCHINGS: My goodness, let's see.

PRUD'HOMME: All Caltech presidents have been physicists.

HUTCHINGS: Yes, everyone. When they were looking for Goldberger, I guess, there was an alumnus in biology who was, I think, assistant chancellor at the University of California at San Diego, whom I hoped they would consider. He would have been so refreshing here. His name was Paul Saltman. We ran some of his stuff. He was particularly vocal and funny about the sixties, because he had to rattle with all those kids. And he really did rattle them. [Laughter] Just about got down and took off his coat. So, I suppose he was too outspoken; I think they didn't even consider him.

PRUD'HOMME: What do you think is the most important change in the Institute over the years? Positive or negative.

HUTCHINGS: Well, I guess I don't think it's as special as it once was. It really was. As an alumnus who came back a few years ago said to me, "This place used to be Mecca." Well, people don't think that anymore, I don't think.

PRUD'HOMME: Of course, you have a lot of competition. I mean, there are a lot of Meccas now.

HUTCHINGS: That's what I mean.

PRUD'HOMME: So, there's no way out of that particular crack, in a sense.

HUTCHINGS: No.

PRUD'HOMME: What do you think it could be, the Institute? What do you think it should be?

HUTCHINGS: Oh, gee—Mecca! [Laughter] But I guess that's the first thing I think of—that it's like a lot of other places now, more like a lot of other places than it ever was before.

PRUD'HOMME: What do you think your most important contribution was? Is?

HUTCHINGS: Is? Oh, I think I was able to bring Caltech closer to more people than it had been before, by letting people have a forum to talk about what they did here, and to make it understandable to more people. I had something like that to do with making this place better understood.

PRUD'HOMME: Is there anything else you'd like to talk about?

HUTCHINGS: I have a lot of jokes here about faculty! I just looked at this talk and realized that one of the things I was able to do was to make the frosty-seeming faculty here really quite human by doing those faculty profiles. I wish I could have had the time to do more through the years. But I saw some of these things and realized that I had talked about Eric Temple Bell, a mathematician—a very crusty mathematician—who wrote science fiction under the name of John Taine. Pretty good, too. Or at least it was good then; I haven't read it for ten years. And he would get the *Pasadena Star News* to let him, Eric Temple Bell, review all the new John Taine books! But the thing I like best was about his son, first name Taine, who got to be quite a famous little kid because he was walking down the street with someone and looked up at the Catholic church and

asked his companion why in the world they put the plus sign up there. [Laughter] I collected a lot of stuff like that.

PRUD'HOMME: Can you tell me some other faculty stories?

HUTCHINGS: I could tell you about James Bonner—and this is a comment on how students used to be. Back in the forties, he worked out a question for a biology exam that he hoped was going to bring long, thoughtful replies from the students. So he asked them this question, and they were to write this long essay: “You have been sent by NASA to outer space and charged to report for each celestial body as to whether or not it is inhabited by living objects. How will you recognize objects as living?” And one kid—and this was his complete answer—said, “Ask it if it is alive. Even a negative reply should make you suspicious.” [Laughter]

PRUD'HOMME: I hope he gave him an A.

HUTCHINGS: [Laughter] I do, too.

PRUD'HOMME: Anymore?

HUTCHINGS: Well, [mathematical physicist] Paul Epstein was a man who, for relaxation, liked to read the *Encyclopedia Britannica*. He was an avid reader of scientific journals in Russian, German, French, and English as well. He could write English very nicely, but when he did, he usually asked somebody around him to check his prose for German expressions. And so, somebody asked him, “Is that because you still think in German?” And he said, “No. I think in Russian, translate into German, and write in English.” [Laughter] When he was at the Athenaeum one day, somebody began to talk at the table about cheese-making; he just had a little incidental information he wanted to give the rest of them. And Paul interrupted and gave them a whole lecture on cheese-making. And when he finished, he left the table, and the guy said, “Just my luck, he’s probably on ‘C’ in the encyclopedia.” But there was another guy there who said, “No, I happen to know he’s on ‘M.’” [Laughter]

PRUD'HOMME: Anything more?

HUTCHINGS: I worked on the Watson Lectures for years. It was fun to do, and of course it worked into *E&S* so neatly, because I would get the guy to give the lecture, which I could then print. But those things, as you know, grew from the Friday evening demonstration lectures. And I told you about the biologist, Art Galston, who wrote an article for *E&S* on chlorophyll and got a permanent subscription to *E&S*. Well, he used to give a demonstration lecture that he called "Day-Length in Plants." People liked it well enough, but then he changed the title and had a crowd every time he gave it. He called it "Day-Length and Sexual Activity in Plants." [Laughter] And that really always impressed me, because even *here* they'll come, if you just give them a little more excuse.