



A top system developed
over time creates a com-
plex structure. Right now
concentrating on the major
things going down on the
ground floor is important
because everything else is
being done. It's not until
you've got the ground floor
done that you can start
working on the second
floor.

Characteristics of the major
components of the
overall system are described
with the main system
being described. It's just
the beginning — it
doesn't do anything else
different. There's a
lot of work to do on the
ground floor and on

Caltech's Vogt

Vogt,...overseer, bailiff, steward, warden; prefect, magistrate, governor, administrator; provost, constable, beadle...

Cassell's German & English Dictionary

AS VOYAGER 1, its planetary missions completed, heads out toward the edge of the solar system, it grows more and more exciting to the cosmic ray scientists, whose project's major phase is yet to come. When the spacecraft crosses the heliopause sometime in the 1990s, its cosmic ray experiment will send back the first scientific data on the low-energy galactic rays that inhabit interstellar space. Rochus (Robbie) Vogt, however, who has been involved with the Voyager mission since its beginning and who was principal investigator on the cosmic ray experiment, will be denied participation in the excitement of the new discoveries. Vogt resigned from the Voyager team July 1; being Caltech's provost left him no time for honest participation in the Voyager work.

"Voyager was a very personal thing for me," says Vogt. "For a long time it was what I lived and bled for." Although perhaps the most painful, this was only the latest in a series of renunciations. After being named vice president and provost in January 1983, he resigned as chairman of the Division of Physics, Mathematics and Astronomy, and as principal investigator of Caltech's high energy astrophysics program. "In the last year all remaining connections with the research program I've developed have been severed," he says. "I am now a person without any roots."

Rootlessness has been a leitmotiv of Vogt's life. But what roots he has are at Caltech now, and the passionate commitment those roots seem to demand explains his willingness to give up his research to take on the provostship, to become the president's "hired gun," as Vogt himself puts it. He doesn't like the phrase, but most of the Caltech community would agree that it's an apt description of a difficult job.

"Caltech is what I am sworn to," he says. "I clearly have a greater loyalty to Caltech than to anyone. I am uncompromising when it comes to the well-being of Caltech." He feels Caltech is his home. He rates it even higher than a country, and he feels strongly that he owes it something.

Vogt sees the provost as part of a team with the president; they work together on all issues, but "Murph's the boss." Because of their particular backgrounds, "we will have a different kind of division of responsibilities than a different president and a different provost would have." His own strength, he thinks, is in planning, solving problems, getting things done, and he feels "very comfortable in dealing with organizational systems. In fact, it's very difficult to keep me out of these things — fortunately or unfortunately for Caltech," he adds.

This provost isn't just the chief academic officer in a very narrow sense, according to Vogt's view, although, because of the absence of a layer of deans between the provost and the division heads, he does consider himself accountable to the faculty ("which is healthy though uncomfortable"). But, rather, the Vogtian provost is the chief operating officer, responsible for managing the day-to-day affairs of the Institute. And that means *all* the Institute affairs. "I will do whatever needs to be done for Caltech, no matter in what area." For example, he's deeply concerned about the well-being of the non-academic staff and considers them inextricably connected to Caltech's academic life. He considers himself ultimately responsible for students too and thinks they should have some input into the decisions he makes ("but they'll have to compete for my time like anyone else"). He doesn't want to meddle in other vice presi-

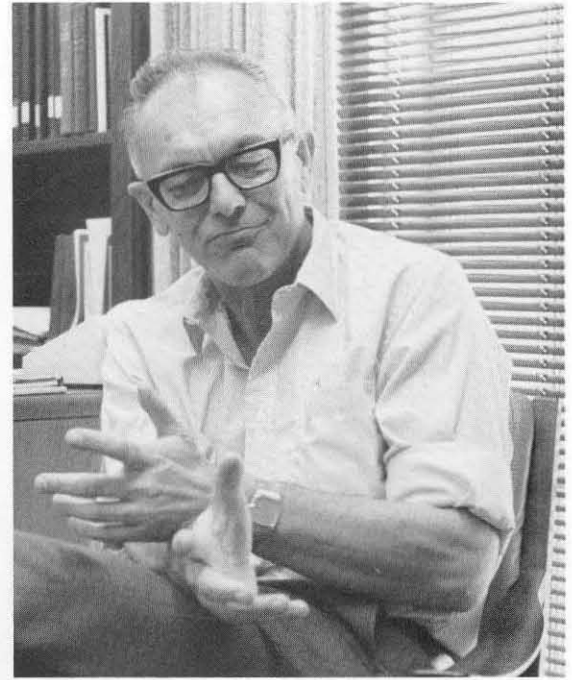
dents' tasks, but "when it comes to policy matters, basic issues, these are as much my concern as anybody else's," and he will not hesitate to step into someone else's arena. But he freely admits that this vigorous, all-encompassing concern for Caltech's affairs has often made him a headache, or at least an "inconvenience" to others.

Vogt has already had a few headaches of his own as provost, the most visible of which have involved Caltech's Jet Propulsion Laboratory — first, faculty dissatisfaction over Caltech's association with the Army's Arroyo Center, and now the still simmering controversy over the presumed "Star Wars" aspects of the Talon Gold project. But JPL is an important part of Caltech, says Vogt, and probably no one at Caltech more typifies the integral connection between the two than Vogt himself, who, in addition to his long association with Voyager and cosmic ray experiments on other NASA projects (OGO, IMP, HEAO, ISEE), was the first Chief Scientist at JPL when that post was created in 1977.

He thinks there can be no doubt that the campus and JPL mutually enhance each other. JPL has benefited intellectually from its integration with Caltech to become one of the most, if not *the* most, outstanding of the national laboratories; the campus gains the management and engineering capacity to undertake larger, more ambitious projects. "The existence of JPL forces the campus community to be less parochial, to consider larger issues," Vogt says, a situation that he considers positive, even when it causes headaches. Although some differences ("JPL is hierarchical; the campus is anarchical") may strain the relationship, he feels that adjustments on both sides are worth the effort to keep it harmonious. "It's like a marriage — you have to work hard at it. And it's perfectly normal to have to do so."

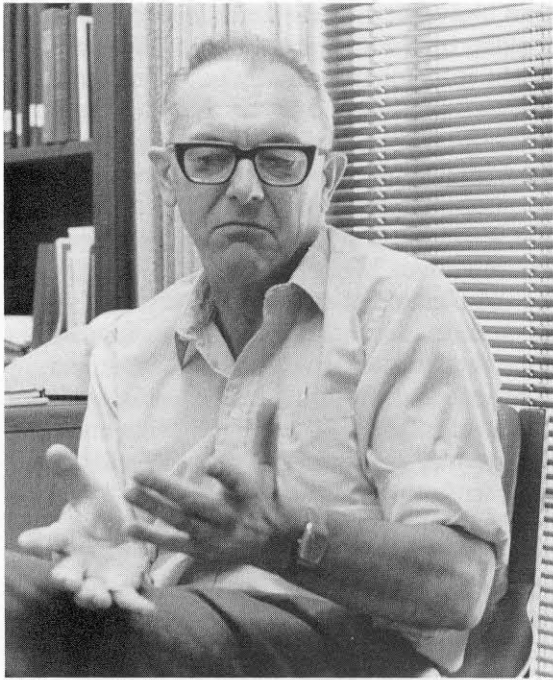
Such problems will most certainly involve making some unpopular decisions, but Vogt has the reputation of a man unafraid to make them. And although the style of a hired gun is, unavoidably, not universally regarded as positive, Vogt's candor about himself and his position can be disarming. "I am what I am," he says. "They get what they see."

What they see is a strong personality, an intense and volatile man, quick to express what he thinks, which is not always what they want to hear. This intensity has laid his health low at least once, and since 1973 he hasn't smoked and has been a regular morn-



ing runner on the Caltech track, now more for mental than for physical relaxation. "Sometimes when I run I manage the luxury not to think; sometimes I do think and decide how I'm going to handle the difficult problems of the day." He doesn't appreciate distraction during this hour for himself. Although he figures he can run away from most people who importune him on the track, "in the shower — there's the danger. Some people are very good at roping you in. They ask you an innocent question and then you are stuck." But despite a driven schedule, most of the rest of the time Vogt is extremely willing to be accessible to the Caltech community and to address problems that need to be solved — "just don't get the idea that I'm sitting up here lonely." He has always had plenty to do.

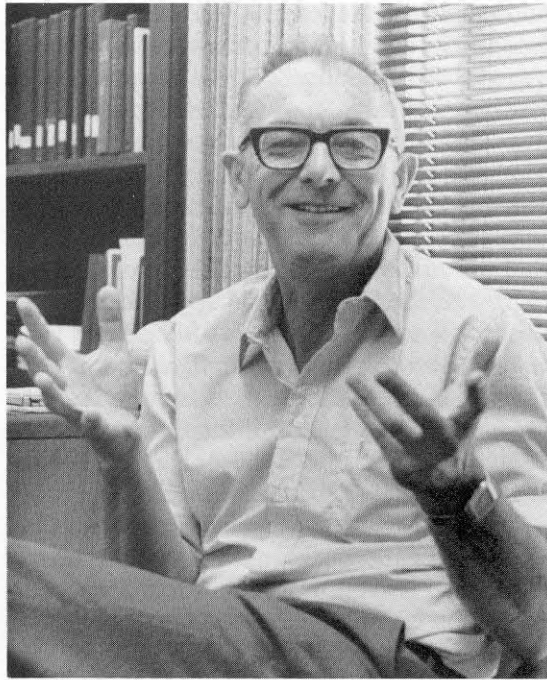
Vogt was born into a "culturally privileged environment" in southern Germany, an environment that was about to vanish completely with Hitler's rise to power. His childhood and education devastated by the Nazi regime, he spent the early postwar years working first on a farm and then as a worker in the steel mills. It was the latter experience that motivated him to attend the Technical University of Karlsruhe to become a steel industry engineer. Instead, he discovered physics there — and chess. After a profitable year of hustling chess games for money ("I was no Bobby Fischer, but I was damned good") and *not* attending physics lectures, his professor gave him the choice of going cold



turkey on chess or quitting physics. Vogt still collects chess pieces and reads chess books, but he hasn't played a serious game since.

His English name also comes from his German student days. Vogt was christened "Robbie" by an American officer in Karlsruhe, charged, among other things, with inspecting university labs "to make sure we weren't making nuclear weapons. They thought the Germans were very ingenious; they were wrong; we were not that good." As student government representative, it fell on Vogt to argue with the man and get him to "stop bugging us." Oddly enough, this turned into friendship; Vogt moved in with the American family, and the problem arose of what to call him, since no one could pronounce his given name. "It came down to Rocky or Robbie, and it was my good fortune that he chose Robbie." The name stuck. No matter where he went thereafter, there was always someone who had known him as Robbie. He seems quite comfortable with the name, though it still, decades later, puzzles his German relatives.

The University of Heidelberg followed Karlsruhe. But his American friends urged him to apply for a Fulbright fellowship, which took him to the University of Chicago in 1953, where he became involved in astrophysics and cosmic rays under Peter Meyer and John Simpson. His Fulbright was extended another two years, one of which he spent at sea and in Antarctica as the only physicist with Admiral Richard Byrd's Ex-



pedition Deepfreeze in preparation for the International Geophysical Year. Thereafter he dutifully returned to Germany because he was legally required to leave the United States (and also because he thought the Chicago PhD qualifying exams might be too hard), only to run into the derision of his German professor, who thought he must be crazy for blowing his chance to get away from Germany. Physics in Germany was a mess then, Vogt says. Laboratories were poorly equipped, students had to share basic instruments in around-the-clock shifts, and components had to be bought from the American GIs on the black market.

So he came back — with a little help from Byrd, who got him legal immigrant status under what was known as the "Basque shepherders act," which admitted without the usual obstacles anyone who had a skill that didn't exist in the United States. As the only physicist on Byrd's previous expedition, Vogt had a unique skill to train the science crew of the next Antarctic expedition. After a short stint exercising this skill at the naval school in Providence, Rhode Island, he returned to Chicago, where apparently the qualifying exams were not so hard after all, and finished his PhD.

"And then they kicked me out," Vogt states. Chicago had a rigorous law against inbreeding and forced its graduates to move on. "They were absolutely right; otherwise the apron strings would never have been cut. I wanted to stay, desperately. It was a beauti-

ful laboratory, the leading laboratory in the field in the country." But as soon as Vogt was exposed to Caltech, where he came as assistant professor in 1962, it was perfectly clear that it was right for him. "It was like coming home; I felt immediately comfortable and this has never changed. It was the right family for me to join." Vogt became associate professor of physics in 1965, professor in 1970, and the R. Stanton Avery Distinguished Service Professor in 1982. Since 1978 he had been chairman of the Division of Physics, Mathematics and Astronomy and was also acting director of the Owens Valley Radio Observatory in 1980-81. From 1975 to 1977 he was chairman of the faculty.

He credits Bob Bacher, who was then chairman of the Division of Physics, Mathematics and Astronomy, with the vision to gamble on cosmic ray research back in the early 1960s, although Bacher told him later that it wasn't really that big a risk; if it hadn't been successful, he could always have thrown Vogt out. Bacher became provost the year Vogt arrived. The following year Vogt lured Ed Stone out from Chicago to join the cosmic ray team, and this began their lifelong research association. Stone succeeded Vogt as division chairman and as head of the high energy astrophysics program in 1983.

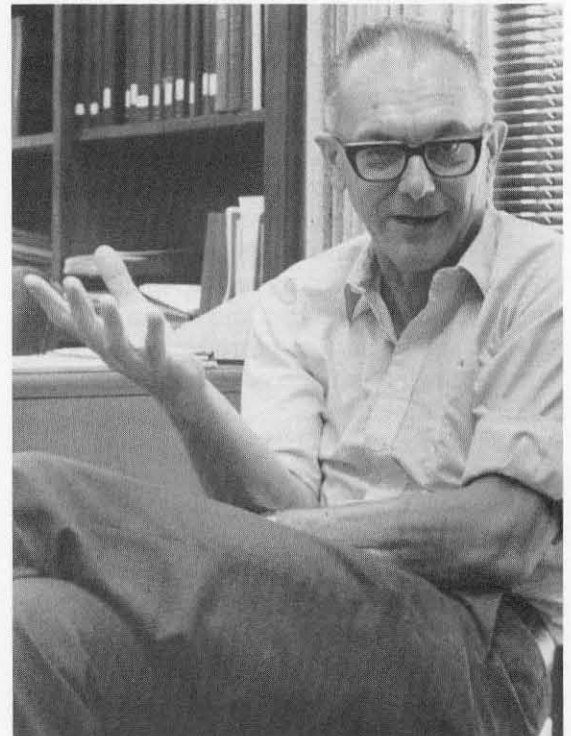
Work was being done on cosmic rays at Caltech then under Victor Neher, but the new approach to the measurement of the elemental and isotopic composition of high-energy radiation had its origins at Chicago. Under Vogt and Stone, Caltech's Space Radiation Lab evolved into a recognized leader in the field and "we have even won a few against our home laboratory when we have competed for the same space missions." The two also initiated Caltech's gamma ray research project.

Although Vogt's devotion to Caltech is unquestionable, he's still "inordinately fond of the University of Chicago. It shaped my basic outlook on life and my scientific style." Actually, when he first arrived in the U.S. with a Fulbright fellowship, he had a choice between Chicago and Caltech and elected the former out of suspicion that the cultural transition for a European would be too drastic in California. He now considers the nine years in Chicago sort of a halfway house in preparation for his ultimate destination.

Vogt's first Fulbright year and his introduction to the U.S. began with what he calls a "cultural brainwashing program" at Syra-

cuse University, where he spent three months soaking up the American way of life with Fulbright students from many other countries. "It was marvelous. My assignment was to read *The New York Times* and then show up for a discussion with professors and ask them questions about what I didn't understand about American politics, American economics, and so on." His enormous admiration for the United States began at this time — for its constitution and its protection of individual rights, in stark contrast to what he had experienced in Europe. He has a deep-felt horror of totalitarianism in all forms and sees this country as having the strength and common sense to resist it.

He remembers during his first year at Chicago watching the Army-McCarthy hearings on television and sensing the fear among his colleagues that a totalitarian system was evolving. But ultimately, of course, it did not. "I was impressed with how the country solved its problems; the system took care of itself." Vogt has never become a U.S. citizen because of frustration with the petty, bureaucratic requirements. He often refers to himself as an "undesirable alien" or a "displaced person" but doesn't really feel German any more either. "I feel like a misfit there now because I no longer belong. If I have to choose any country I belong to, it's this one." He may soon belong legitimately. Since some members of the Caltech community think it

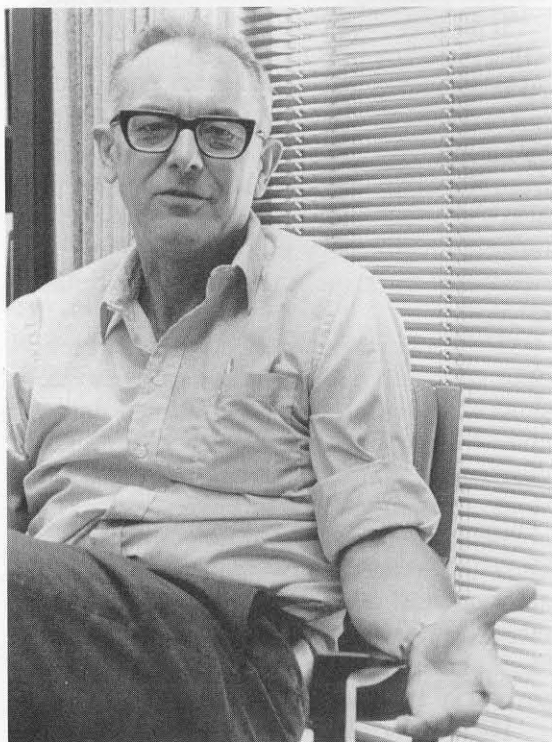


may be an advantage if their provost lost his “undesirable alien” status, efforts are being made to secure Vogt’s citizenship.

Besides the exposure to American culture at Syracuse, there was also the opportunity to encounter other cultures as well. In postwar Europe, for example, it would have been impossible for a German boy and a French girl to get acquainted, but Vogt met his wife Micheline, a Fulbright scholar from France, at Syracuse. Their wedding announcement quoted Senator Fulbright’s reason for promoting the scholarship program: “...they might be able to find a way to reconcile their countries’ differences without resorting to armed conflict.”

The Vogts have recently moved into the newly conceived and newly renovated provost’s residence near the campus. “It’s a marvelous house, but I feel like a visitor there.” Vogt feels somewhat uncomfortable being both a renter (of Caltech’s property) and a landlord (of his old house); but he and his wife have not yet decided whether to sell their house — “since I might quit or get fired” and because they identify closely with the home in which they raised their children. The Vogts’ older daughter, Michèle, is a senior at Occidental College, majoring in geology. Nicole is a freshman at Caltech.

Vogt considers the students at Caltech “the lifeblood of the research program because they keep us intellectually young and



alive. They add an element of brilliance to the enterprise, which is invaluable. They give as well as receive.” Caltech’s special distinction lies, he feels, in filling the needs of its very select student body, in providing a unique quality of education and research. This is its reason to exist, and there is no reason to try to convert it into a small copy of a traditional university. He believes in the Caltech conceived by Hale, Millikan, and the early trustees — an institution focusing on science and engineering. “I think it was a damned good idea and still has a place.

“Of course, in order to educate a good scientist or engineer, the humanities and social sciences are essential. And to have people in the humanities and social sciences as good in their fields as the rest of the Institute faculty are in theirs, you have to take them seriously. We can have good people in these disciplines, but only if they can have satisfactory professional lives here, and that includes the opportunity to do research. Even if it is not our primary goal to do research in these areas, we ought to maintain a capable, strong, and valuable faculty with the professional opportunities to pursue their scholarly goals.

“Hale had a vision; Millikan implemented it. *We* have to have a vision to create the Caltech of 50 years from now. There are two aspects to one’s job in the administration: You’ve got to take care of today’s problems, and you’ve got to assure the future. The decisions I make today should affect Caltech then; if now I make expedient, short-sighted decisions, then there will be no effect on the future except that I leave it a mediocre place.”

Vogt feels strongly that there will be a need in the future for the “unique aspects of excellence and quality which an institution like Caltech contributes to society, and we owe it to future generations to lay the groundwork so this need can be met.”

As for his own future, Vogt figures he is much too young to retire ultimately as provost. But since he has cut all his research roots, passed everything on to others, he can’t just pick up where he left off. “If I went back in, my colleagues would have to feel sorry for me, because I’m out of touch. It would be bad to embarrass people that way. So it’s clear I will have to enter a totally new area.” He admits to some idle thoughts about what that might be but plans to worry about it when the time comes. □ — JD