

BLOOM COUNTY Gary Leal Chevron Prof

[CNB]-Dr. L. Gary Leal was recently named the Chevron Professor of Chemical Engineering Related to Energy at the California Institute of Technology, as announced by President Marvin L. Goldberger. Dr. Leal, whose research is in the area of fluid mechanics and polymer physics, succeeds Dr. Henry Weinberg, who was appointed to the chair in 1981.

The Chevron Professorship was established in 1980 by a gift of \$1 million to Caltech from Chevron Corporation. The professorship is held for a period of five years by an expert in an energy-related field of chemical engineering.

Dr. Leal, 42, received his B.S. in chemical engineering from the University of Washington in 1965, and his M.S. and Ph.D. degrees from Stanford in 1968 and 1969, respectively. He spent 1969-70 as a National Science Foundation Postdoctoral Fellow in Applied Mathematics at Cambridge University.

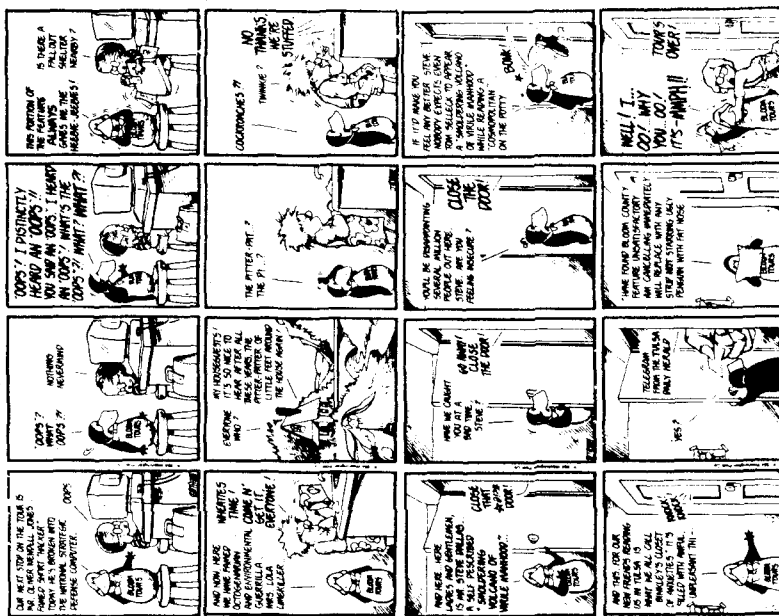
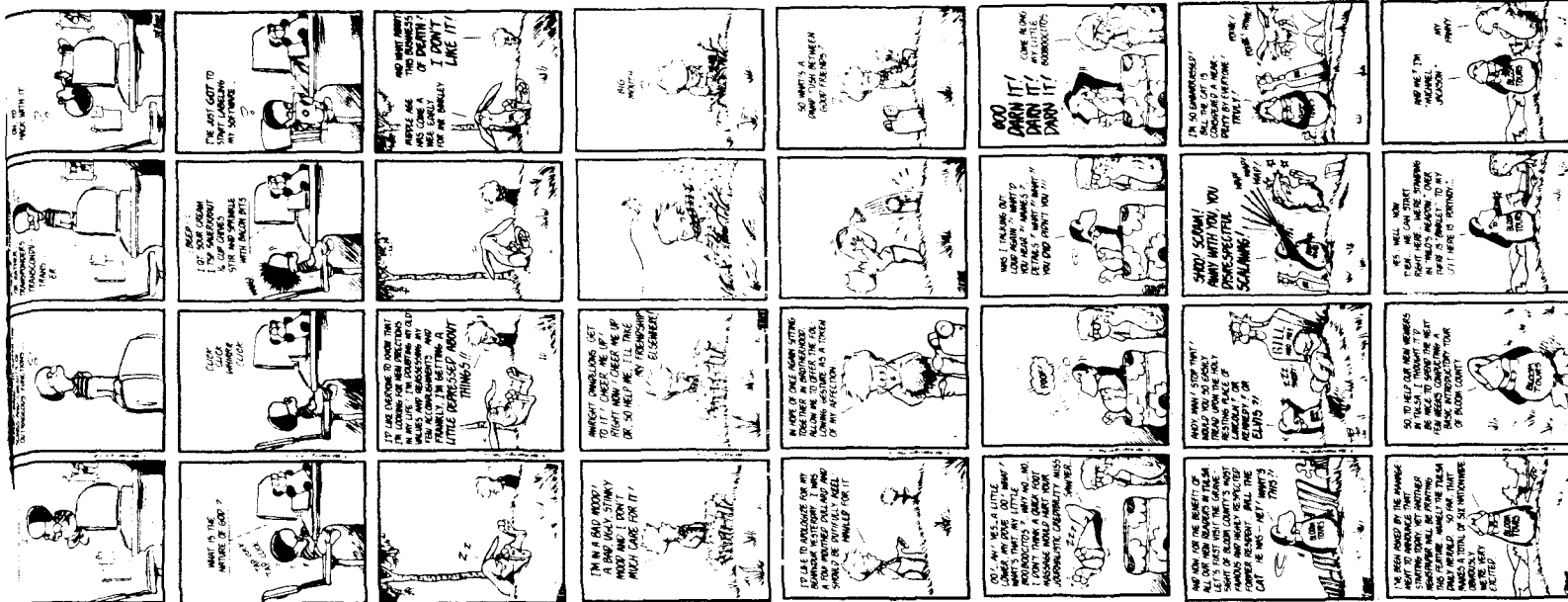
He came to Caltech in 1970 as an assistant professor of chemical engineering, becoming an associate professor in 1975 and a full professor in 1978.

Dr. Leal was elected a fellow of the American Physical Society in 1984. His honors also include the 1978 Allan Colburn Award of the American Institute of Chemical Engineers and the 1978 Technical Achievement Award of the Southern California Section of the AIChE. In 1976, he was named a John Simon Guggenheim Fellow.

His research aims at understanding the fundamental fluid mechanics behind such phenomena as the movement of oil drops in porous media, important in the technology of enhanced oil recovery. He is also trying to understand the relationship between the behavior of individual particles or macromolecules in suspension or polymer liquids, and the bulk flow properties of these materials. Such studies are important in the engineering of advanced polymers in the petrochemical industry, and in the efficient use of polymer drag reduction to reduce energy consumption in pipeline transport of crude oil.

Human Relations from page 1

Director Lew Allen in July of last year, and what came out was the position of Human Relations Advisor. What upset most those who drafted the original proposals was the subtle shift of emphasis; instead of uncovering problems with the way that Caltech works and the way it affects people, the Human Relations Advisor would help discontented individuals deal with "their" problems. Fortunately, Dr. Aura has a keen interest in the workings of the Caltech system, and she will not be content to be only a therapist. The fact that the position was even created is a positive step forward, and Dr. Aura will serve a useful and needed role on campus. Yet the message sent by the administration seems clear enough; it is not ready to confront problems that people have, not with each other, but with Caltech itself.



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IRAS Center

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sophisticated processing techniques will allow the IRAS data to be used in ways unintended by its designers. With the higher sensitivity available, he said, researchers may be able to look for a faint infrared glow that may pervade the universe, left over from the first burst of galaxy formation billions of years ago when the universe was young. The existence of this "100-micron background" is controversial, but if found, it will yield insight into the beginning of galaxies in the early universe.

With its greater sensitivity, the IRAS data may also be used to search for "brown dwarfs," planetlike objects in the galaxy that were not quite large enough to ignite in the thermonuclear fires of stars, but which still glow in the infrared. According to Dr. Soifer,

such objects, only slightly larger than the planet Jupiter, could be an important key to one of the great mysteries in astronomy, called the "missing mass question." Astronomers know by measuring the motion of bodies in our galaxy and others that there exists a great deal of dark matter not bound up in luminous objects such as stars.

This dark matter may be enough to effect the evolution of the universe—that is, to provide enough mass to cause the universe to cease expanding and eventually collapse in upon itself, rather than continuing to expand forever. By using the IRAS data to search for brown dwarfs nearby, researchers may be able to estimate their density and, thus, how much of the universe's matter could be bound up in these bodies.

Professor David Politzer Wins J. J. Sakurai Prize

[CNB]—Dr. H. David Politzer, professor of theoretical physics at Caltech, has been awarded the 1986 J. J. Sakurai Prize by the Council of the American Physical Society for his pioneering research into the nature of quarks, the fundamental constituents of matter. He shares the \$5,000 award with Dr. David Gross of Princeton University and Dr. Frank Wilczek of the U. C. Santa Barbara Institute of Theoretical Physics. The prize will be presented at the APS annual meeting, April 28-30, in

Washington, D. C.

Dr. Politzer was awarded the Sakurai Prize for his role in explaining how interactions among quarks, the building blocks of protons and neutrons, produce the strong force, which binds the atomic nucleus and holds matter together. He is currently conducting research into how events that occurred an instant after the birth of the universe may have determined the structure and distribution of matter in the cosmos.

Dr. Politzer received his B.A.

from the University of Michigan in 1969 and his Ph.D. from Harvard in 1974. He came to Caltech as a visiting associate in 1975, and returned in 1977 as associate professor of theoretical physics. In 1979, he became professor of theoretical physics.

Pro Statement, Continued

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(2) doesn't apply. The current wording allows the *California Tech* to "enter into contracts for national advertising . . . for a period not to exceed three (3) years." But for many years, the *Tech's* national advertising representatives have been offering annual contracts which automatically renew, and which have a termination clause. The new language reflects the real situation better.

The Publications Darkroom Chairman's term of office was changed to start with the ASCIT fiscal year (March 1) instead of the academic year. This will allow the new appointee to consult his predecessor while actually doing the job—an advantage the current office holder did not have.

Because "the net commission will be distributed at the end of each term" (new §8(a)), the wording of the amount guaranteed to the Business Manager was changed from \$1200 (for the year) to \$400 (for each of three terms).

To be more explicit, and to parallel the *little t* clause which follows (new §9), the phrase "the beginning of" was changed to "the day of general registration" in describing the *Big T* distribution deadline.

—Gavin Claypool

Con Statement, Continued

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perpetuating it. The 10% reserve clause can only tie the hands of the publications.

The new section 8 is positively frightening: salaries may be withheld for "unsatisfactory performance by the Editor or Business Manager." No clue is given as to what actually constitutes unsatisfactory performance; as it stands, the BOD could withhold salary upon a whim (indeed, one recent Editor did not get paid for two years after he finished his job). Furthermore, I do not believe that the BOD has any business withholding salary; it is the bonus which is meant to reflect the quality of a yearbook (or other publication). An Editor works many hundreds of hours to make a finished book, and it is unfair to deny salary.

I do not intend to suggest that there are not any changes needed in the publications bylaws; changes are needed, and I would like to see many made. This amendment, however, will do more harm than good. Now that I have published an opposing view, I sincerely hope that we will all get the chance to rethink and revote. I also hope that my criticisms are taken positively, as I intend them to be.

—John Fourkas

Co-Editor, the Big T

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