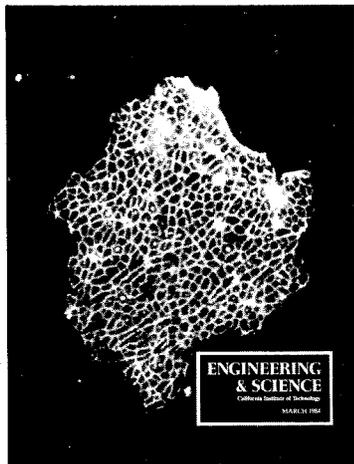


In This Issue



Cell Skeleton

On the cover — the scaffolding of a muscle cell under a fluorescent light microscope (1 micron equals 2.8 mm). This cross section is perpendicular to the long axis of the muscle fiber, showing the intermediate filaments, which surround and integrate the muscle cell's contractile units with each other and with the cell membrane. The techniques for getting inside the cell to illuminate its structure were developed by research fellow Bruce Granger, working in the laboratory of Elias Lazarides, associate professor of biology, and were part of his thesis, which won the Clauser Prize for the most original dissertation in 1982.

The structure is made of desmin, a protein discovered by Lazarides in his work on a small group of such proteins, which make up the "skeletons" of all cells. In his article, "Spaced-Out Cells," adapted from his Seminar Day talk, Lazarides explains the common principles he has found governing these proteins as cells differentiate into specialized cells with different functions. The article begins on page 12.

Lazarides came to Caltech in 1977. Born in Athens, Greece, he came to the United States for a high school philosophy course and stayed on to earn his BA from Wesleyan University in 1971 and PhD in biochemistry and molecular biology from Harvard in 1975.



Planning Parenthood



Alan Sweezy has been listed as emeritus in the Catalog since 1977, but he's far from retired, even from academic pursuits. He has, for example, kept right on meeting with a class in economics each term. And that's a good thing. Recently David Grether, chairman of the Division of the Humanities and Social Sciences, pointed out, "He has one of the most remarkable records as a teacher of anyone I have ever heard of. If you were to look around today at such major universities as Chicago, Yale, Stanford, Minnesota, MIT, and Caltech, you would find on all their faculties professors of economics who first learned economics from Alan Sweezy. That's an amazing achievement considering that for most of the 34 years he's been at Caltech, there wasn't any graduate work in economics here. He was and continues to be one of the most popular and effective teachers at the Institute."

The Watson Lecture for which Grether was introducing Sweezy was not about economics but population control problems, a subject to which Sweezy has long contributed both scholarly papers and practical help. He has been associate director of Caltech's population program and is active in various off-campus organizations that deal with family planning and population growth. For three years he was chairman of the board of the Planned Parenthood Federation of America, and he has long been a member of the local chapter of Zero Population

Growth. In "Is the Population Bomb Still Ticking?" which begins on page 21, he brings us up to date on current thinking about population control.

Medicine Man

When *Newsweek* described Lewis Thomas as "evolution's most accomplished prose stylist," it was complimenting the clarity of his writing about the interrelationships of living things. Dr. Thomas recently addressed the annual black tie dinner of The Associates, and they found him equally clear as a speaker. His talk on that occasion, "Science and Social Science," begins on page 5. Parts of the talk were adapted from material published elsewhere.

Dr. Thomas is now chancellor of The Memorial Sloan-Kettering Cancer Center and professor of pathology and medicine at Cornell University Medical College. He has also served as dean of New York University Bellevue Medical Center and Yale University School of Medicine. From 1968 to 1972 he was a member of the President's Scientific Advisory Committee.

Known as the father of modern immunology and experimental pathology because of his medical achievements, Thomas has also received numerous honorary degrees and awards in science, law and letters, and music. And he is an award-winning author, having received the National Book Award in 1974 for *Lives of a Cell* and the American Book Award in 1981 for *The Medusa and the Snail*. More recently he has published a memoir of his career, *The Youngest Science, Notes of a Medicine Watcher*, and *Late Night Thoughts on Listening to Mahler's Ninth Symphony*.

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