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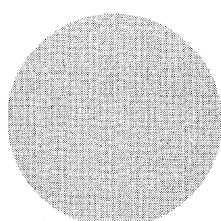
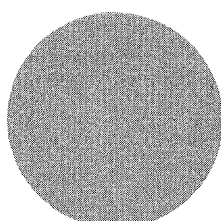
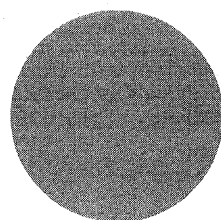
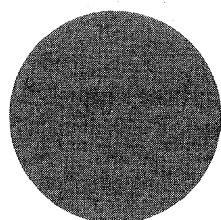
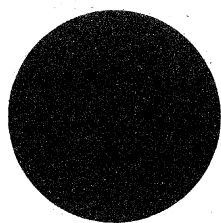
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Pyramid of Temple I at Tikal, Department of Petén, Guatemala. Tikal is the largest of the Maya ruins of the southern Maya lowlands. It was first settled in the first millennium B.C. and became an important political and religious center before the beginning of the Christian era. Temple I dates from the Late Classic Period of the site's occupancy. The total height of the building, from the plaza floor to the top of the ornamented roof comb of the temple, is more than 200 feet. Temple I was excavated by the University of Pennsylvania expedition to Tikal, under the direction of W. R. Coe II. See page 260. [Richard M. Leventhal, Peabody Museum, Harvard University, Cambridge, Massachusetts 02138]

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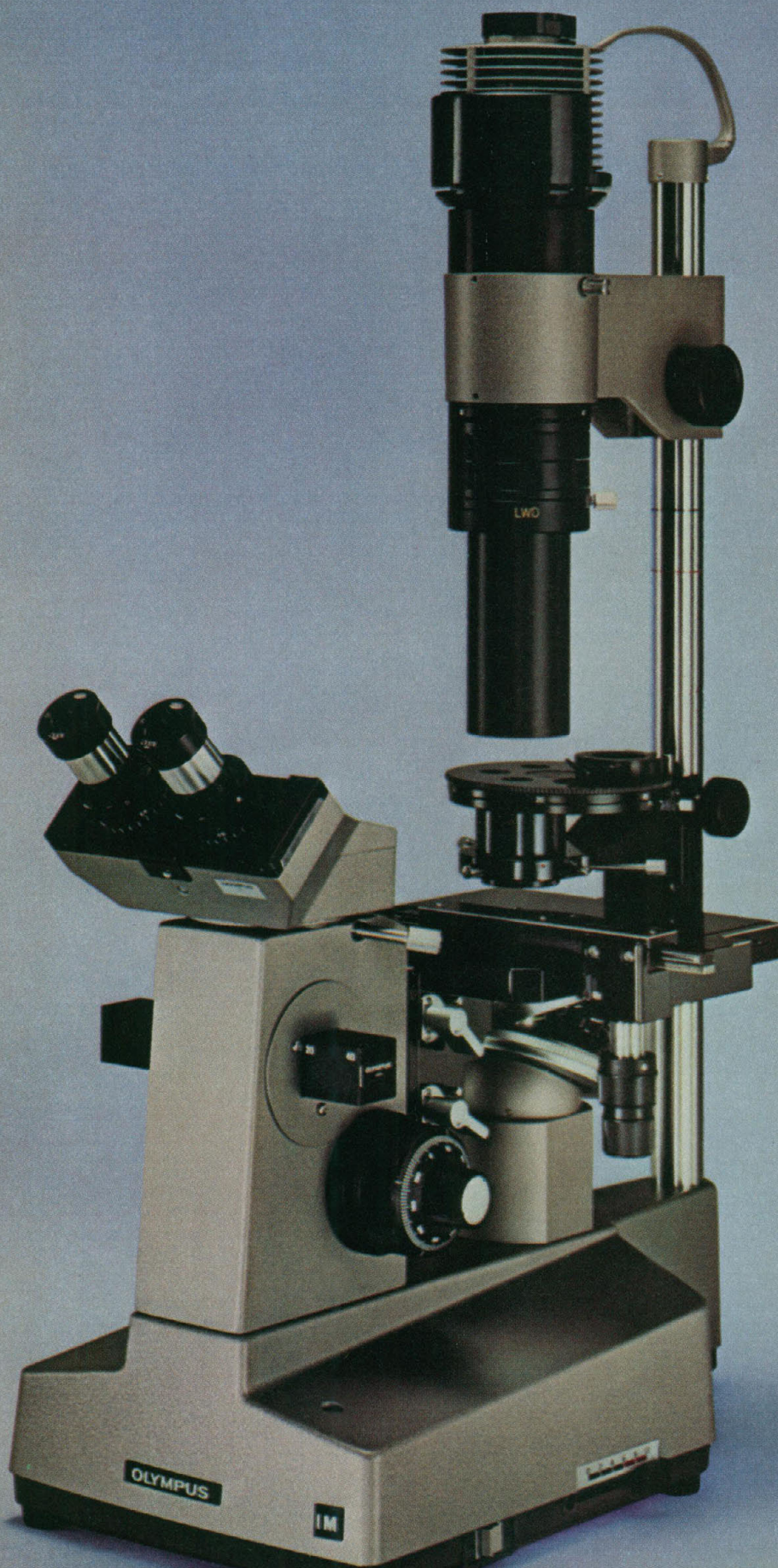
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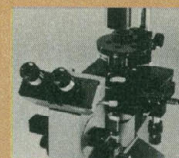
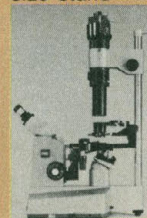
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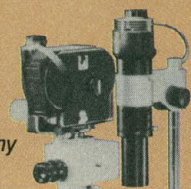
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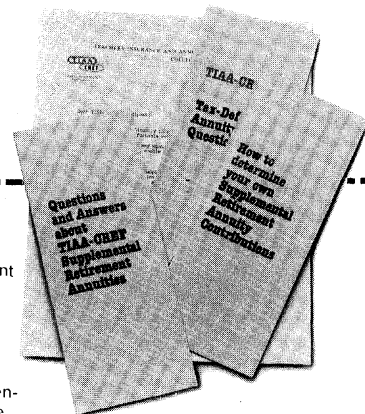
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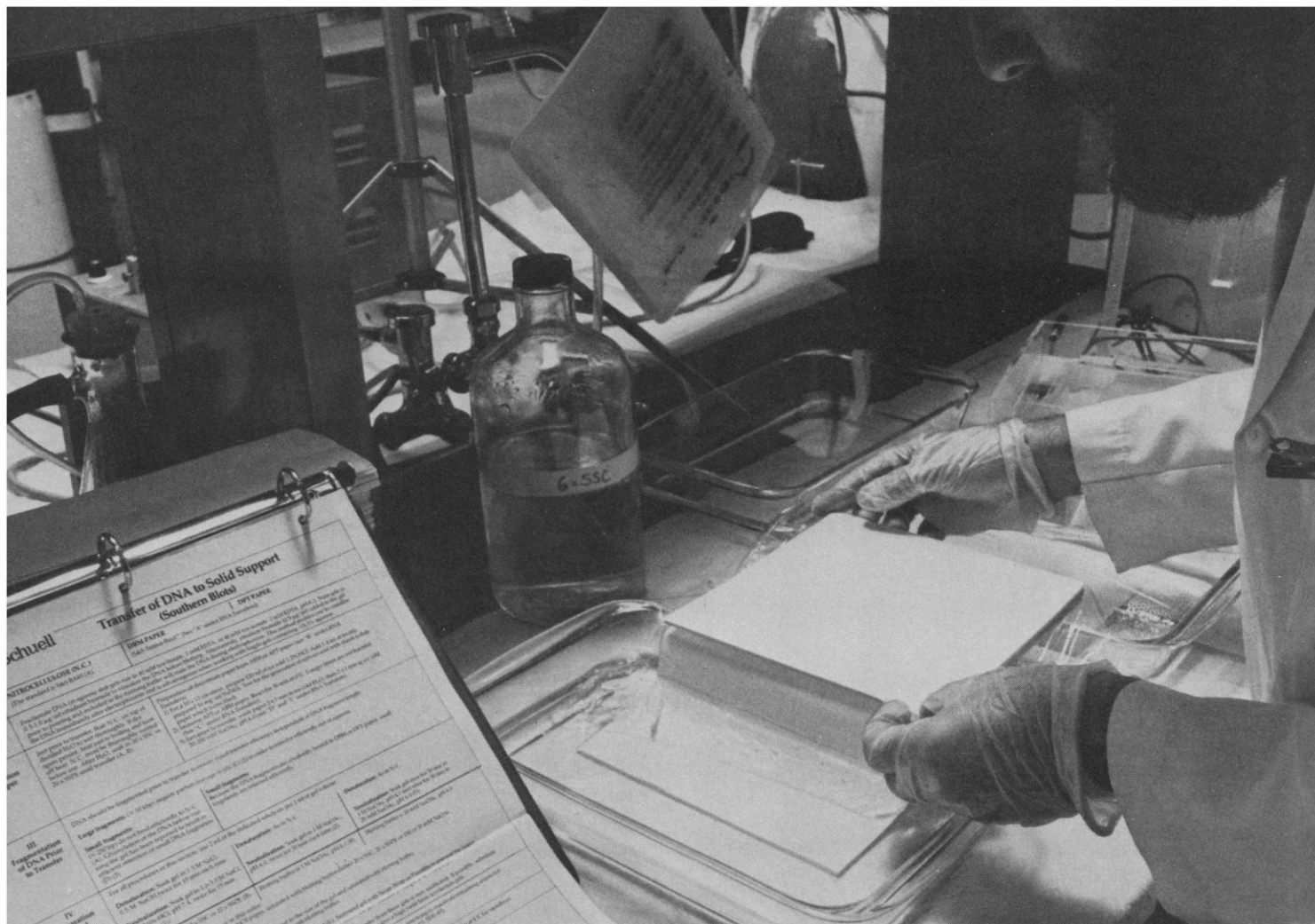
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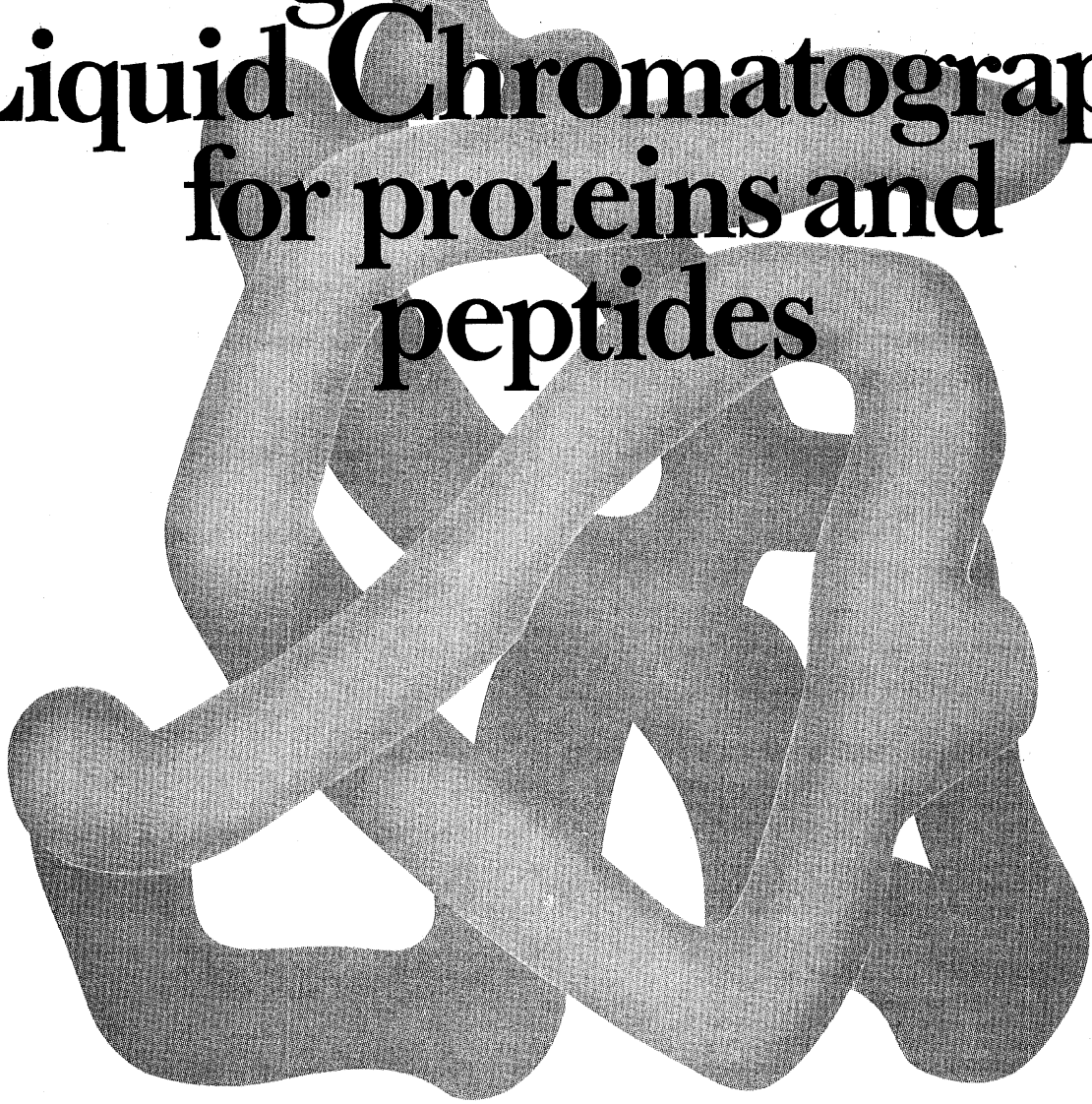
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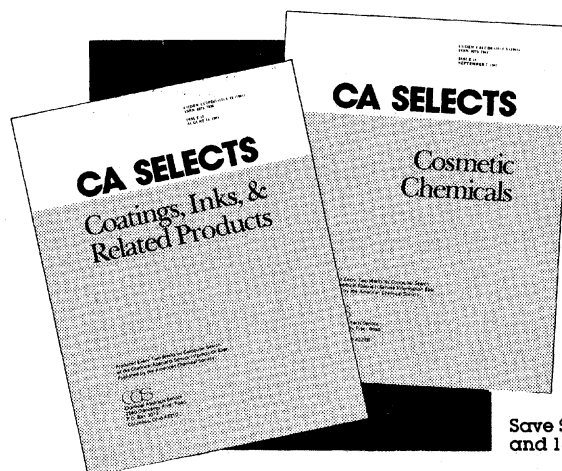
This current-awareness service covers studies on radiation damage whose abstracts appear in CA Sections 35-59, 65-69, 71-73, and 75-78. Included are radiation effects (including optical) on material properties and the formation of color centers and defects. Excluded are such topics as radiation biochemistry, photochemistry, and radiolysis.

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Computers and Electronics

Edited by Philip H. Abelson and Mary Dorfman, Science

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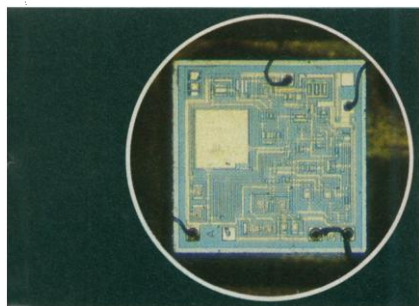
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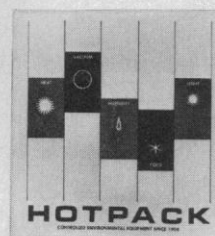
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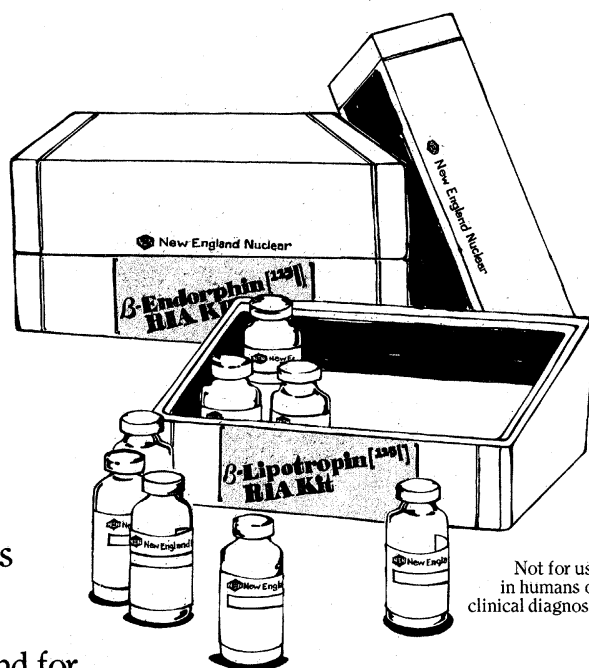
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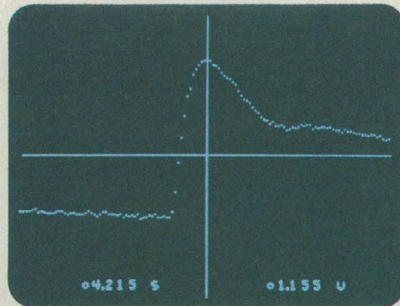


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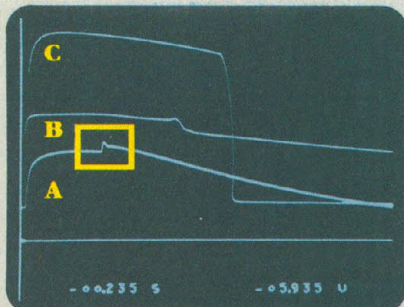
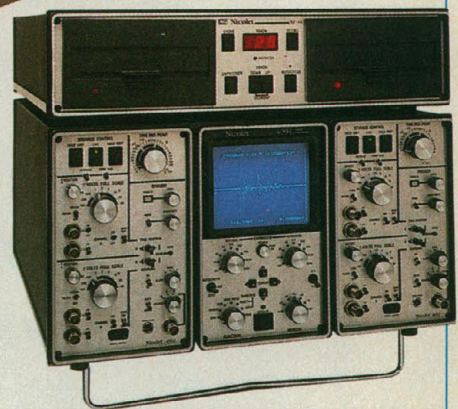


Fig. 1—Tetanic response in avian embryonic muscle after 15 days (A), 17 days (B), and 19 days (C) *in ovo*.

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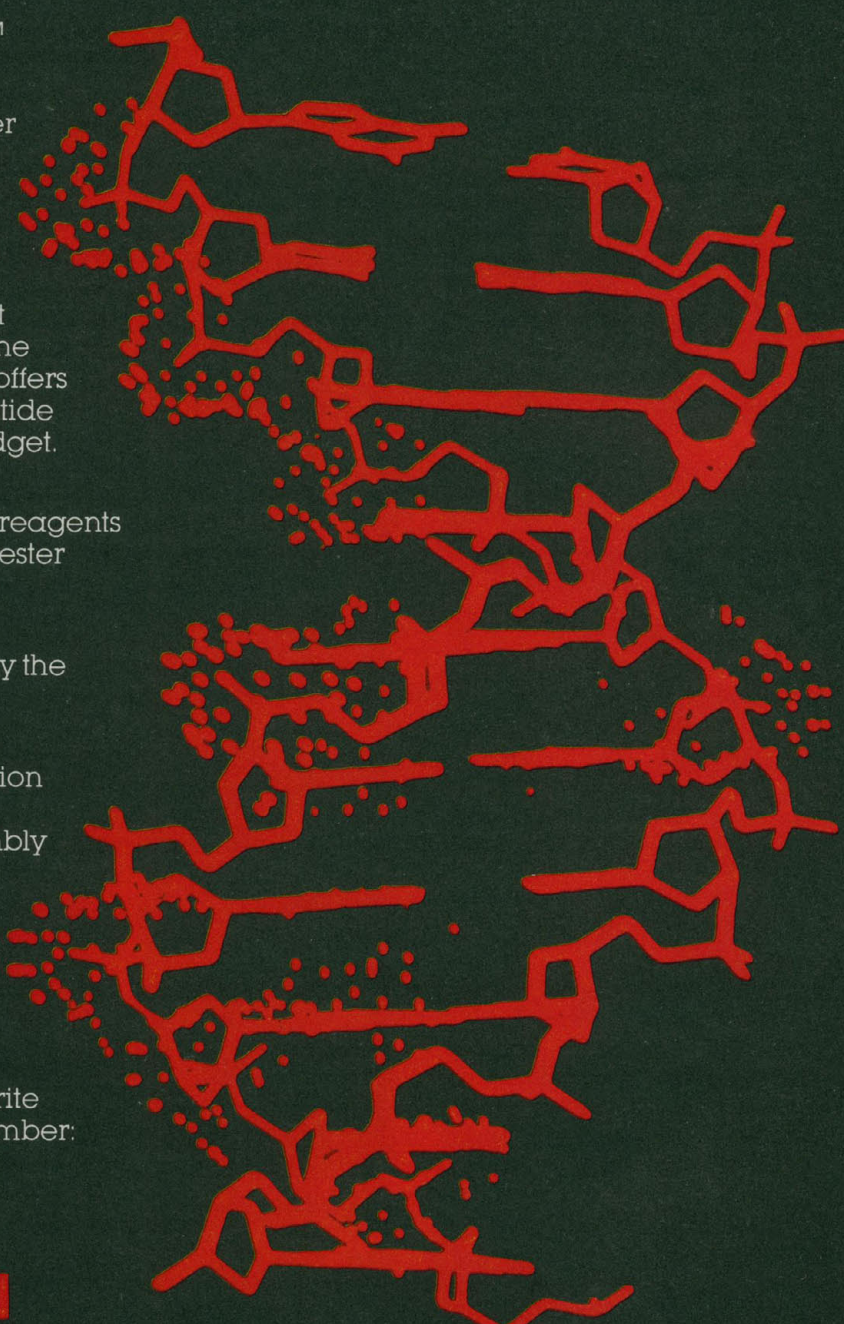
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Science in an Election Year

1981, now safely behind us, was a year when scientists spent more time searching for signals as to where the scientific enterprise stood in nation's business than they, or the nation, could afford. It was a year of discontinuity, with policies determined by the budget instead of the way around. Now the question is whether, in an election year, scientists get back to work with fewer alarms and distractions and with renewed energy.

One would like to practice composure, believing that the budgetary gap have subsided and that, with the sacrificing of science education, environmental conservation, and much social science research, the worst is over. They may even be optimists hoping for new scientific goals to be proclaimed the next batch of state messages. Such blessings being unlikely, decision makers should know that the recent ordeal of fiscal confusion and retirement has shaken the research system profoundly. Defensive management research and development, burdened by prospects of continued uncertainty, leads to hedging risk and exposure and to a climate of mediocrity.

But it is important also to preserve a degree of perspective. Science has not been ditched as a public sector good, and the government is not abandoning its commitment to basic scientific research. The provisions for research and development in the aggregate, helped by the pumping up of defense-related research, look healthy when compared with programs serving less fortunate groups who depend on considerate public policy. The Head Start program does not deserve lower marks for social value than given to science education, for both programs make better citizens. Perhaps that basic research be sheltered while ignoring the predicament of the humanities does not ennoble science. 1982 will be a more decent year if scientists address the dilemmas of budgetary justice evenhandedly.

Moreover, budgetary expediency is not the only problem. Science as an instrument of diplomacy in an edgy world is poorly understood. Instead of being employed for long-term stability in great power relationships and dealing with the developing world, it seems to be dispensed as either reward or punishment. To make matters worse, international communication in science encounters fretful interventions from government on grounds that is exploited by our adversaries. Little mind is paid to the consequences of a policy of scientific concealment for the free-world countries, which is this way for leadership.

Closer to home, the postwar construct of the R & D enterprise is being thought about. Serviceable as it has been, it shows signs of aging and struggle. The triad of academia, industry, and government, sustained by consensus rather than fiat, has fewer unifying principles than legend would have it. Under continued economic stress, if that is in the cards, qualitative and possibly structural changes soon may have to be faced. Unthinkable though it seems, the United States may have built a scientific research capacity that the government partner no longer can maintain in the role style it requires. The implications of this are profound, and all the natives carry costs. But the price of avoiding the question and seeing strong survive while the weak lose out will, in the end, be higher. The erosion of capacity and potential in the research universities and multi-program government laboratories which results from continued cutbacks, freezes, and equipment obsolescence has foreseeable consequences. They must be averted while there is still time to think the problems through.

One of the brighter aspects of our governing process, in recent years, has been the steady gain in congressional understanding of the roles and uses of science and technology. In an election year in which economic argument will be the main attraction, the need to sustain leading-edge research innovation and to count it as investment rather than consumption should be beyond partisan dispute. If this much can be agreed to, there is hope for a balance of science's troubled agenda.—WILLIAM D. CAREY

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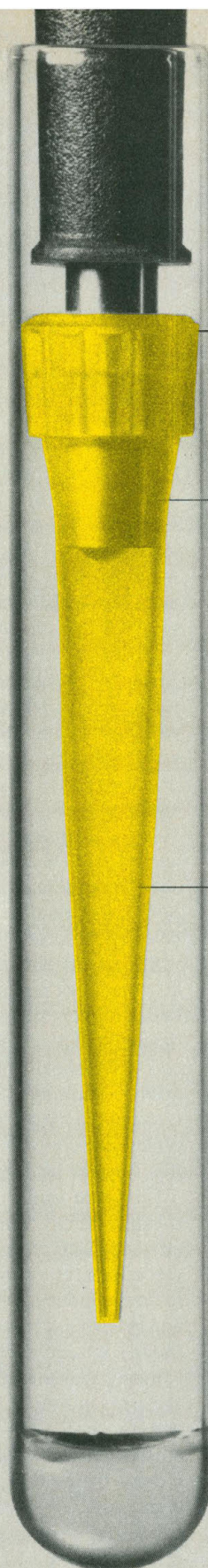
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