made important contributions to the development of American rocket technology through the Vanguard program, its major forte has always been in development of instrumentation for space aeronomy and astronomy. However, the Vanguard program also provided the vehicle, in at least two important senses, for the development of NRL's space research capabilities which are now so well integrated in the Hulburt Center for Space Research. The talents and expertise now in this Center were then responsible for the design of America's first space payloads for astronomical research. And they are still in the forefront of astronomical space research. Herbert Friedman and his asociates' studies of the sun in the ultraviolet and x-ray regions of the spectrum, and, more recently, in x-ray astronomy generally, have received worldwide recognition. No other governmental space research laboratory in the United States has the distinction of having two members of the National Academy of Sciences among its active scientific staff.

Another aspect in which the scientists at the Hulbert Center for Space Research are making a major contribution is through its program, in cooperation with the National Science Foundation and the National Aeronautics and Space Administration, to provide training in astrophysical research at the graduate level. This program provides opportunities for graduate students, doctoral candidates, and postdoctoral research fellows to acquire firsthand experience in space research. This program is well regarded not only within the Navy and the government, but also within the academic community. Since 1963 it has provided space research opportunities to some 20 scientists, and serves as a brilliant example of Navy-NRL leadership in making unique government research facilities available to the academic community. The academic support phase of the Hulburt Center's program has always had the full support of the President's Science Advisory Committee which in 1960 urged increased cooperation between the universities and governmental laboratories in graduate education.

Again the skeptic might ask, why should the Navy support research in astrophysics? In addition to the general answer I have given earlier to questions of this kind, I would like to reiterate: (i) because frontier scientific work in a field so complex and demanding from the instrumentation and measurement points of view will eventually lead, in addition to directly useful scientific results, to new ideas in sensor-related technologies which will be useful in many fields other than astronomy; and (ii) because the scientists involved in such work have the training, the capabilities, and the insights to advise the Navy, the government, and the U.S. economy in these fields.

NEWS AND COMMENT

Du Pont and Delaware: Academic Life behind the Nylon Curtain

Newark, Delaware. Tucked away in this tiny eastern seaboard state that considers itself the "chemical capital of the world" is an institution whose overall quality is considered only average but which has nevertheless achieved considerable eminence in engineering and somewhat lesser recognition in science—the University of Delaware. As is true of many institutions in this area, the university has been greatly influenced by Delaware's wealthiest family, the du Ponts, and by the nearby chemical complex created by E. I. du Pont de Nemours & Company, the world's largest chemical company. Indeed, the university comes close to being a du Pont-directed enterprise. Of the 14 trustees currently serving on the university's executive committee, nine are either members of the du Pont family by blood or marriage, or are executives of the Du Pont Company or of a family-owned bank. The university draws great strength from its ties with the du Ponts, but, according to many faculty members and students, it has also been "distorted" and "intimidated" by the du Pont presence.

The university is an unusual blend of public and private characteristics. National surveys often lump it in the "public institution" or "state university" category, but Delaware generally refers to itself as a "state-related" or "state-assisted" university. It is a land-grant institution; it admits all qualified residents of the state; it performs various service functions for the state; and it draws about 35 percent of its operating budget from state sources. Yet the ultimate authority is vested in a 32-man board of trustees which is largely self-perpetuating and thus not directly controlled by the state. And within that unwieldy board, power tends to reside with the du Ponts. When *Science* asked John A. Perkins, president of the university from 1950 to 1967, to name the most influential current trustees, he cited eight men—six of them Du Pont executives or family members.

The university's largely independent status was underlined a few years ago when a state budget director tried to force the university to give a detailed accounting of all its expenditures and finances instead of merely an audit of its use of state funds. After a bruising and bitter fight, the university pushed through legislation that assured it of fiscal autonomy. Local politicians still reminisce about "Rolls Royce Day" in Dover, the state capital, a reference to the assemblage of multimillionaire trustees who descended on the legislature to support the university's cause.

Though the university is of only average reputation and medium size (about 6500 full-time undergraduates, 1800 full- and part-time graduate students, 425 full-time faculty), the du Pont presence has made it richer than many larger and more prestigious institutions. A survey by the American Alumni Council and the Council for Financial Aid to Education indicates that Delaware had an endowment of $65.5 million (book value) in 1965–66, the fourth highest endowment among 183 public institutions surveyed and an amount exceeding the endowments of such well-known private universities as Duke, Brown, Southern California, and Tulane. Delaware's first major benefactor was H. Fletcher Brown, a Du Pont executive, and its greatest contributor by far has been H. Rodney Sharp, a member of the du Pont family by

marriage. University officials call Sharp "one of the greatest benefactors of higher education in America" over the past two decades and the designation seems apt. Though Sharp's contributions have never been publicly revealed, he has set up trusts that are currently said to produce some $3 million for the university each year. Another du Pont family foundation, Unidel, has granted more than $1.7 million annually to the university over the past 4 years, while still other du Pont family resources have also contributed hefty amounts.

This private largesse has unquestionably been important to the university's development. Almost all the university's land and about half of its classrooms and laboratories have been acquired through gifts and the use of endowment funds. But, significantly, none of the du Pont foundations and trusts that contribute to the university is under the direct control of the university—a situation which is said to make university administrators very conscious of the danger of offending their benefactors. One prominent du Pont who was on the verge of setting up a scholarship fund some years ago is said to have changed his mind after the students staged a panty raid.

The Du Pont Company, which regards itself as a nationwide enterprise with a nationwide commitment to support education, is not a prolific supporter of the University of Delaware. This year the company contributed $225,500 to Delaware, out of a total of $2.1 million in grants to 145 colleges and universities. Most of the company's grants to Delaware support engineering and science, but Du Pont also contributes to an "Upward Bound" program to prepare deprived high school students for college.

Influence of Industry

The "shape" of the university and its direction of growth have been profoundly influenced by the proximity of the chemical industry. In addition to Du Pont, northern Delaware is the home of Hercules, Inc., and Atlas Chemical Industries, Inc., two sizable chemical firms that were spun off from Du Pont in 1912 as the result of an antitrust suit. A number of other chemically related industries also have plants in Delaware and nearby parts of Maryland and Pennsylvania. Thus it is not surprising that the university's most distinguished department is chemical engineering. The 1966 survey of quality in graduate education by Allan M. Cartter, vice president of the American Council of Education, rated Delaware's chemical engineering department sixth in the nation. The only other Delaware department cited was chemistry, which was judged "adequate plus." University administrators say most of Delaware's other graduate programs are too young to have established a reputation among respondents to the survey.

Both chemistry and chemical engineering seem to have developed more in response to the "gravitational effect" of the nearby chemical complex than in response to any extraordinary effort by the chemical companies to build up the university. Both departments were developed by men who left industry to enter academic life—chemical engineering by two Du Pont engineers, the late A. P. Colburn and R. L. Pigford (now at Berkeley); and chemistry by a former Hercules scientist, W. A. Mosher. Another former Du Pont engineer, Jack A. Gerster, currently heads the chemical engineering department.

Both departments got into graduate work by providing evening courses for scientists and engineers working at the local chemical companies; both received critical "seed" money, equipment, library resources, chemicals, and the like from local industry in their formative stages; both drew on the part-time teaching talents of industry scientists and still hold seminars and meetings with local industrial specialists; and both have developed strong polymer interests, reflecting the interests of local industry.

However, the ties with local industry are not all-embracing. Not a single member of Delaware's chemistry or chemical engineering faculties consults with the Du Pont Company, apparently because when that highly sophisticated company needs outside advice it seeks more specialized and authoritative help than is available at the local university. And, while Du Pont hires a sizable number of Delaware graduates, the company's prestigious Central Research Department has never hired a Delaware chemistry graduate. "We've never had anyone good enough for them who wanted to go into industry," explains Mosher.

Delaware is not solely concerned with chemistry, of course. University administrators rate the departments of art, history and psychology as among the best in the university—perhaps even stronger than chemistry, which is about to be revitalized with the help of a 5-year $50,000-a-year grant from the Du Pont Company. The physics department recently won a $556,000 development grant from the National Science Foundation, while all four engineering departments are sharing in a Themis development grant from the Defense Department that will total $1 million if the expected renewals are approved. During 1966–67 about 32 percent of the faculty performed sponsored research totaling $2,150,856.

The university also has several respected graduate programs that make use of unique du Pont family resources. These include a program in the history of American science and technology, which draws heavily on the resources of a distinguished industrial museum supported by the family and company; a program in early American culture, which utilizes the extensive collection of American art and furniture gathered by Henry F. du Pont; and a new program in ornamental horticulture operated in cooperation with Longwood Gardens, a du Pont family botanical garden in nearby Pennsylvania.

Charges of Distortion

Delaware's relatively strong programs in science and engineering and in areas that interest a few du Pont family members have led some faculty members and students to complain that the university has been "distorted" or "unbalanced" to conform with what one faculty member calls "the capricious tastes of the first family." University administrators scoff at the charge and retort that they are building a solid, all-around university but that it is natural to develop a few "spires of strength" to take advantage of the unique attributes of the state.

One research project sponsored by Robert R. M. Carpenter, Jr., a member of the du Pont family who serves as a university trustee, has particularly provoked charges that the family is "using" the university for its own purposes. The project, which is somewhat outside the usual line of university research, involves analyzing baseball swings with electronic sensors. Carpenter, who owns the Philadelphia Phillies professional baseball team, hopes that electronic gadgetry produced by researchers at the university will ultimately help him pick the most promising prospects for major league baseball careers on his team.

Leaders of the campus chapter of Students for a Democratic Society (SDS), a left-wing activist group, told *Science* the project exemplifies "how outside people can use this university for what they want." Actually, it's not

clear who is using whom. The project seems to have originated in the mind of a Delaware athletic coach who then persuaded Carpenter to finance the project. The project ultimately involved researchers from the university's psychology and electrical engineering departments and its computer center, as well as an instrument specialist from the Du Pont Company. Bruce Lutz, professor of electrical engineering, says he is delighted that Carpenter is willing to finance his work. And in fairness to Carpenter, it should also be pointed out that he has previously anted up funds that enabled the university to attract an engineering dean and develop its athletic facilities.

The university has long had a rather "repressive" atmosphere, with students and faculty chafing at what they regard as "unreasonable" restrictions. Students are not allowed to drink on campus (nor are faculty for that matter); most are not allowed to possess cars; and, until recently, they were not allowed to live off-campus, except in university-approved housing. They also feel they have little voice in university affairs. A 1967 survey of Delaware seniors, conducted by the university, revealed that a surprising 55 percent strongly agreed that "the college administration here generally treats students more like children than like adults" as compared to only 13 percent who expressed this belief in a 1963 national sample of undergraduates.

At the faculty level, a reporter visiting the campus is struck by the fact that many faculty members are critical of the administration's "heavy-handedness" but are afraid or reluctant to voice their complaints publicly. "Who wants to be a martyr?" explained one full professor. The campus is full of stories of faculty members, even department heads, who were allegedly "bawled out" for incurring the administration's displeasure. And a resolution adopted last December by the faculty of arts and science refers to a "long-standing cleavage between the university's faculty and administration."

The resolution was prompted by the university's handling of a student-faculty protest last fall against compulsory ROTC courses. The twists and turns of this campus battle are too detailed for chronicling here, but the upshot of the dispute was that a group of students disrupted an ROTC drill, a number of students were suspended, and three faculty members who participated in some aspects of the protest were disciplined. The administration's attitude was perhaps revealed by the university's public relations director who proclaimed at a public meeting, according to a transcript, that the protest was supported by "all of the kooks around, all of the ultra-liberals, all of the Communist subversives, or whatever else we have around here. . . ."

Last December the trustees, after conferring with the administration, ordered the acting president to send condemnatory letters to the three faculty members most directly involved and a general warning letter to the entire faculty. The letter to the three individuals called them "disloyal" and "unprofessional" and informed them they could no longer advise any student organization or be associated with any "disruptive" demonstrations. (Later, the university failed to renew the contract of one of the three men under circumstances that provoked further controversy.) The letter to the entire faculty warned that "any effort . . . to obstruct the legitimate operations of the university or to encourage or assist students to do so is, in the opinion of the trustees and officers of the university, an act of 'gross irresponsibility' and constitutes grounds for non-renewal or even termination of contract."

The arts and science faculty, by a vote of 104 to 69, denounced the letters to the three faculty members as "unacceptable in both content and tone," but voted down, 98 to 95, another resolution critical of the general letter to all faculty. Later the faculty, which had been pondering the ROTC problem in desultory fashion for some time, voted overwhelmingly to make the military courses voluntary.

As an ironic footnote to the affair, the university's alumni publication prepared a detailed account of the ROTC

Visa Refused for French Critic of U.S.

The State Department has denied a visa to Laurent Schwartz, an internationally renowned French mathematician who has been a leader of various protests against American policy in Vietnam.

Schwartz, who holds the Field award—mathematics' equivalent of the Nobel prize—was a member of the so-called International War Crimes Tribunal, which last year held the United States guilty of crimes in Vietnam; he is a leading figure in the French National Vietnam Committee, and is reported to have been closely involved in assisting American military deserters in France. Earlier this year he organized an anti-American appeal that drew the endorsement of many leading French scientists (*Science*, 1 March 1968).

Schwartz was invited by Chancellor Roger Heyns of the University of California, Berkeley, to deliver a scholarly talk later this month in connection with U.C.'s centennial observation. According to State Department sources and American colleagues of Schwartz, the Heyns invitation was followed by an invitation to speak about Vietnam before the Berkeley Faculty Peace Committee. In applying for a visa at the American Embassy in Paris, Schwartz stated that his visit would be for the purpose of making both talks.

In the normal workings of the visa process, persons with far-left-wing or strongly anti-American political associations are ineligible for admission to the United States, but the State Department, at its discretion, may request the Justice Department to issue a waiver. Generally, such requests are routinely made and granted in the case of visiting scientists who have such associations. According to a State Department official, Schwartz, who in the past has been granted waivers to visit the U.S., was asked at the Paris Embassy whether he would refrain from political activity while in the United States. He said he would not, the official reported, and the State Department then decided to end the matter there and not even ask the Justice Department to issue a waiver. The State Department declined to give a reason for its decision, but, in response to an inquiry from *Science*, a Department official said, "What do you think?"—D.S.G.

controversy on the grounds that "this subject could not be ignored by a responsible alumni magazine," only to have the university administration suppress the article.

Who is responsible for the repressive atmosphere at Delaware is not completely clear. Many campus observers blame long-time president Perkins, who resigned last year to become president of Dun & Bradstreet, the publishers of business and credit reports. Perkins is generally acclaimed as the man who guided the university from "cow college" status to medium renown, but he is also berated as an autocrat who ran a "tight ship" and brooked no dissent on campus.

Other observers blame the repression on the conservative nature of the state or on pressures, real or imagined, from the du Pont-dominated trustees or from the state legislature. Perkins says he "never had any trouble with the rich telling us how to run the private affairs of the university"; and James M. Tunnell, Jr., a Wilmington attorney who is president of the trustees and whose firm frequently represents the Du Pont Company, says "the real truth is that the conservatism on the board does not primarily come from the du Pont people—it comes from lesser-known members like me and a few others." But there is no question that the administration continually worries about the reaction of the du Ponts. When *Science* requested interviews concerning the impact of the Du Pont Company and family on the university, the first thing the university's public relations director asked was: "Does the company know? Our people are very sensitive about doing anything the company might take umbrage at."

Some observers believe the presence of so many du Ponts on the board has tended to neutralize the university as an independent source of ideas in a state that is so dominated by the du Ponts. The Rev. Robert Andrews, an activist liberal who ministers to university students, finds the faculty "totally intimidated" and traces the problem back to "a very very primitive point of view" on the board of trustees. "The university is the one place in the state where there is apt to be a serious eruption of new ideas," says Andrews, "so they try to keep this place under control. They like Delaware as it is and they don't want change."

It is perhaps not surprising that a Delaware faculty member felt no

NEWS IN BRIEF

● **CIVIL RIGHTS**: In an effort to encourage greater participation by members of the university in statewide civil rights and poverty work, the University of Connecticut has authorized a program of special faculty leaves that will permit up to 25 faculty members each semester to work full time in various community action projects. The program, adopted at a recent meeting of the university's board of trustees, came in response to a petition presented by a campus civil rights organization which urged the university to take a more active role in "the elimination of poverty and racism in the state."

In addition, the trustees voted to establish a Council on the University's Concern for Human Rights and Opportunities. Composed of both faculty and students, the council is intended to help administer the new leave program and to propose new areas of community involvement to the university. The Council was allocated an initial working sum of $25,000.

● **NEW COLLEGE IN BROOKLYN**: On 26 April, the New York State Board of Regents approved the founding of a 2-year community college in the Bedford-Stuyvesant section of Brooklyn. The college, which will serve a predominantly Negro area, will be oriented to the needs of disadvantaged students and will also provide adult education and community service programs.

● **BRAIN DRAIN**: About 45 percent of foreign neurosurgeons who complete their full residency in the United States do not return to their homelands, preliminary studies conducted by the Adlai Stevenson Institute of International Affairs have revealed. The institute's study of the migration of scientific and medical personnel, which began last fall, also shows that 49 percent of foreign students who receive M.S. degrees in nuclear engineering and 73 percent of those who receive Ph.D.'s in that field do not return to their native countries. The low rate of return was attributed to "over-anticipation of the needs in developing countries." When the development does not materialize, the students remain in the United States, the institute reported: "When opportunity exists at home people do return."

● **NSF'S SOCIAL SCIENCES COMMISSION**: The National Science Foundation's recently appointed Special Commission on the Social Sciences will hold its fourth meeting in Ann Arbor, Michigan, on 13 and 14 May. At earlier meetings, the commission elected sociologist Orville G. Brim, Jr., president of the Russell Sage Foundation in New York City as chairman, and H. Guyford Stever, president of the Carnegie-Mellon University in Pittsburgh, as the Commission's vice chairman. One of the assignments given the Commission is to determine what federal programs, including those administered by NSF, are required to make the social sciences more effective. The Commission hopes to have its report completed this year.

● **NUCLEAR INSPECTOR TRAINING**: The Atomic Energy Commission (AEC) is setting up a new program at Argonne National Laboratory to train inspectors in the field of nuclear materials safeguards. No date has been set for commencement of the program, which will instruct 20 to 25 inspectors during each training period. The safeguards program deals with detecting and deterring diversion of nuclear materials from peaceful to military uses. In addition to the safeguards program, two other courses are planned at Argonne, including a short seminar that is "designed to indoctrinate and provide basic safeguards background to industry and government management personnel." The other course will train technician-level inspectors and safeguards operators. The new training program is under the jurisdiction of Brigadier General Delmar L. Crowson (USAF, Ret.), director of the AEC's Office of Safeguards and Materials Management.

● **NEW PUBLICATION**: A *Bibliography of Translations in the Neural Sciences 1950–1966* has been published by the National Institute of Mental Health. The 111-page document lists translations from 13 countries; more than 90 percent of the research listed was originally published in Russian. Copies are available, without charge, from the Office of Communications, Information Services Branch, National Institute of Mental Health, 5454 Wisconsin Ave., Chevy Chase, Maryland 20203.

qualms about publicly criticizing Rachel Carson's attacks on pesticides and the chemical industry, but when two faculty members asked permission to give testimony that was expected to be adverse to industry at a pollution hearing last year they were advised by the university administration to submit remarks in writing but not to testify in person. The administration told *Science* the men had done little research on pollution and "would have folded under cross-examination," thus discrediting the university.

In another case, a faculty member who was designated by the university to study local water resources concluded that a reservoir proposed by the Du Pont Company—and for which the company is buying up land in anticipation of making it available to public authorities—was economically unsound. The university refused to publish the study on the grounds that the

NSF Budget: House Committee Votes $100-Million Cut

The House Appropriations Committee last week arrived at the astounding conclusion that the National Science Foundation has too much money in the bank from past appropriations—and, accordingly, it sliced $100 million from NSF's request for the coming year. Since the Senate is yet to be heard from, and any differences between the two chambers must be resolved, the final verdict is uncertain. But, in very simplified terms, and without regard to the budgetary gyrations now afflicting all federal agencies, NSF currently has an appropriation of $495 million, plus a $21-million carryover from the defunct Mohole project. For the coming year, the Administration sought $500 million, plus $27 million that was frozen and later released in the current appropriation. The decision of the House committee was to set the appropriation of new money back to $400 million.

In arriving at the $400-million figure, the House Independent Offices Appropriations Subcommittee specifically noted that, at the end of fiscal 1968, NSF will still have on hand from past appropriations $657 million in obligated but unexpended funds, plus $46.5 million in unobligated money. During hearings on the budget, held in closed session at the end of February and just released last week*, NSF director Leland J. Haworth explained that the $657 million was for commitments that stretch over several years, such as long-term grants and construction projects. As for the unobligated money, Haworth explained that part of that sum had been frozen and later released by the Bureau of the Budget, and that NSF was in the process of allocating it to various programs. The subcommittee, however, was unimpressed with these explanations, for in its report, issued under the imprint of the full committee, it referred to the unexpended sums, and mysteriously stated, "The Committee recognizes the competence of the Director and Members of the National Science Board and recommends that they make the necessary contractual adjustments in the institutional and fellowship grant programs to effectuate the economies proposed. The Committee recognizes the necessity of this action because of the budgetary situation, while appreciating the importance of the work and the long-range beneficial effects to the Nation of the programs of the National Science Foundation."

The subcommittee also cut back sharply on the budget request for the Office of Science and Technology, and altogether eliminated $500,000 for a comprehensive study of energy resources. Not counting this sum, OST sought $1.9 million, compared with its current appropriation of $1.5 million. The committee's verdict was for $1.7 million.

Meanwhile, the Senate Labor and Public Welfare Committee has added an important provision to the NSF bill (H.R. 5404) authored by Representative Emilio Q. Daddario (D–Conn.) and passed last year by the House. In the Senate version, which is yet to come to the floor, NSF would annually be required to receive congressional authorization for its appropriation, rather than operate under a continuing authorization, as it does at present.

Technically, what this means is that each year the President would have to propose, and Congress would have to pass, a law authorizing the existence of NSF before an appropriation could be voted. In actual practice, this is a commonplace process for many federal agencies—NASA and the Defense Department among them. If the Senate provision is adopted, the principal effect would be to subject NSF to a new set of committee hearings in each house, prior to the traditional appropriations hearings. The new hearings would be for the purpose of preparing a bill setting forth the NSF jurisdiction and, most important of all, specifying a ceiling for the appropriation. In terms of congressional politics, such hearings can cut either way—they can be used by a friendly authorizing committee to boost an agency, or they can be used to cut it up. In the case of NSF, it would probably be the former, since, in the House, NSF's authorization would come before Daddario, a longtime friend of NSF; in the Senate, the prospects are less certain, though not too bad. For examining the Daddario bill, the Senate Labor and Public Welfare Committee created a temporary subcommittee on science, chaired by Senator Edward Kennedy (D–Mass.), who last year fought hard and successfully on the floor in behalf of the NSF appropriation. Kennedy's subcommittee expires with the 90th Congress, but if the bill should pass with the authorization provision intact, Kennedy has a good chance of heading up a new subcommittee to handle NSF affairs. What must be emphasized, however, is that most of the final say on money rests with the appropriations subcommittees, and these, as has been demonstrated in recent years, are not overflowing with affection for NSF.

In passing the Daddario bill, the Senate committee left intact all the other provisions. Most significant are those calling for specific authorization to support the social sciences, the creation of four assistant directorships, to be filled by presidential appointment, and clarification of the authority of the National Science Board.

—D. S. GREENBERG

* *Hearings*, part 1, *Independent Offices and Department of Housing and Urban Development, Appropriations for 1969*, 1224 pages; *Report*, 40 pages, both available without charge from the U.S. Government Printing Office, Washington, D.C.

work was of poor quality. The study was criticized by some Delaware faculty members, but an outside reviewer, Edwin Mills, chairman of the department of political economy at Johns Hopkins University, told *Science* it was "basically a good, professional piece of work" which "should have been published." Campus opinion of the study is split; the author of the study believes his chief sin was to reach an anti-du Pont conclusion.

Another indication of the university's timidity can be found in a policy statement, approved by the trustees, warning that "members of the faculty are expected to refrain from partisan political activity, especially at the state level." University officials say the rule is meant to avoid conflicts of interest and the possibility of antagonizing legislators.

Despite the criticisms of the university—or perhaps because of them—there are signs that the university may be entering what one faculty member calls a period of "de-Stalinization." The traditionally apathetic student body has been swept by the same virus of discontent that is affecting other campuses. Students have formed an SDS chapter, have established competing left- and right-wing newspapers, and are demonstrating on issues ranging from Vietnam to campus regulations. Moreover, some campus rules have been eased, most notably a long-standing policy that political candidates could not speak on campus. And the faculty is pushing hard for ever greater freedom during the interregnum period that has followed Perkins' departure last summer. "We're in a race against time," explained one faculty member. "We hope to establish a lot of precedents while they're still looking for a new president."

In many communities the repressive atmosphere at the university would long ago have been investigated by the newspapers and given the thorough discussion it deserves. But such is not likely in Delaware, for the newspapers suffer from much the same malady as the university—they are dominated by the du Ponts. The two largest daily papers in the state are both owned by Christiana Securities Company, a du Pont family holding company, while the top executive of these papers was formerly a high-ranking public relations official for the Du Pont Company. As a result, the papers are perhaps even more timid and muzzled than the university. An analysis published in the *Columbia* [University] *Journalism Review* in 1964 asserts that a prominent du Pont who sits on the boards of both the newspapers and the university "ordered the papers to suppress a number of items involving the university." Editors and reporters interviewed by *Science* frankly acknowledge that the university is a "sacred cow" that is largely immune from probing editorial scrutiny.

Henry B. du Pont, president of Christiana Securities, told *Science* the owners want the paper to be "a constructive influence" and would regard it as "unfortunate if they were sold and got into the hands of some wild-eyed owner." But an outside observer can't help feeling that Delaware might actually benefit if the university and the newspapers were free to generate a few more wild ideas.—PHILIP M. BOFFEY

AAUP: Focus on Financial Crisis of Private Higher Education

Some university administrators and trustees view faculty members as a money-hungry group intent on raising salaries, regardless of the other monetary strains on their institutions. There may be some truth in this characterization, but it is also true that some professors are greatly concerned about the overall financial health of higher education. Such a concern could be termed enlightened self-interest, and correctly so; if universities have severe financial troubles, they will soon find it necessary to minimize pay raises, demand more work from the faculty, or cut down on professorial amenities.

Still, it is a little surprising to have Committee Z, the American Association of University Professors (AAUP) group specially charged with seeing that professors are increasingly well paid, divert its attention, in its annual report on faculty salaries, to the more general problem of "the massive financial crisis" which threatens the nation's private universities. (The report was prepared by Committee Z's chairman, William J. Baumol, a Princeton University economist, and by Peggy Heim, an economist on the AAUP staff. The report will be generally available when it is reprinted both in the *AAUP Bulletin* and as a separate document, in August.)

The data which have helped the AAUP group focus on the problems of private colleges and universities are those which indicate, once again, that academic salaries at private institutions are not rising as fast as those at public colleges and universities. "For several years now," the group commented, "compensation levels at the private institutions, which started out well ahead of their public counterparts, have been rising at a slower rate. . . . For the current academic year, for both liberal arts colleges and universities, and for every [teaching] rank, . . . the rate of increase in compensations and in salaries has been lower (and generally substantially lower) in private independent than in public institutions."

The tendency for private institutions to falter in raising salaries, the committee noted, is indicative of the more widespread financial problems which these institutions face. Such a crisis disturbs the committee because it threatens the dual system of control, private and governmental, which has characterized American higher education. "The critical advantage of the dual system of control in our higher education structure is that it has made for healthy competition, for significant diversity, for two separate sources of leadership in which each group has helped to indicate its responsibilities to the other." The report noted that public institutions have taken the lead in meeting the pressure of growing numbers of people wanting education, while private institutions "served as bastions of academic freedom in the period not so long ago when it was so seriously threatened, and it was they who took the first steps toward rectification of the extreme loss in real faculty compensation levels which occurred during World War II and the period right after it." An obvious worry on the part of the committee is that the private sector will