our research, we sell our educational functions, we sell our social service to the community—everything—at a loss. Before the tuition is ever collected, it is more than obligated to pay the salaries of the faculty. Endowment income is, for all except the half dozen or so wealthiest universities in the U.S., becoming an almost negligible component of the annual operating income of the institution. It may not be enough even to maintain the physical plant.

Our universities have on their faculties talented and highly trained people, they have in their libraries valuable books, they have in their laboratories unique and valuable equipment, and they have among their students eager and gifted minds hungry to learn.

All these resources can be and should be made available to help the nation meet its important educational and scientific problems, and even some of its social action goals. But if society wishes to call upon these resources in efforts to meet the nation's problems, *it must pay the cost.*

Finally, I cannot resist remarks on the tactics of both private foundations and government agencies which engage in the support of various educational, research, and social programs in the universities. My first complaint is that these public and private agencies have a disease that I will call "gimmickitus." Even if a university has a good, solid program of distinction and quality under way, one cannot sell it to these agencies unless it is dressed up to indicate a new angle or some alleged new approach. I suppose it is easier to recognize that a program is new than to select the best programs from existing ones. Or perhaps it is easier because there are fewer new programs than existing good ones. In any case, the tendency is to regard good, solid, substantial work as simply not exciting or "innovative" enough to merit support. (This comment does not apply so much to project support grants as it does to institutional programs and grants.)

A second tactic is what I call the "hit and run" approach of the foundations and government agencies. The thought here is that the foundation or agency money is to be used for a period of time as "seed money." The agency wants to get something started and then pull out, leaving it for the university to sustain, from its "general funds." This of course has to mean previously uncommitted general funds —but we have seen earlier that there are no such funds, at least in most private universities.

American private universities and their independent boards of trustees certainly are grateful for the substantial institutional support they have received from agencies such as the National Science Foundation in its Science Development Program, and from private foundations such as the Ford Foundation in its program of challenge grants. But, given the other fiscal developments that have been described earlier in this article, given the Ford Foundation's apparent decision to abandon its program of challenge grants, and given the fact that none of the customers of the university seem to expect to pay full costs, it is tragically clear that the invaluable quality national resource represented by the private universities of the U.S. faces a crisis of survival.

References and Notes

1. "Margin for Excellence. The Role of Voluntary Support in Public Higher Education," National Association of State Universities and Land Grant Colleges, 1785 Massachusetts Avenue, NW, Washington, D.C. (1966).
2. The influence of mass media through disproportionate emphasis on what they or their readers consider unorthodox behavior—whether in universities or elsewhere in our society—must torture the consciences of news reporters, editors, and publishers. This influence seems to me to be a subject that merits extensive social science research.
3. These tendencies on the part of some program officers within the federal agencies appear to the writer to be either over-reaction or mistaken reaction to statements of the President. Careful reading of the President's pronouncements on science will show his interest in applications *and* his appreciation that a strong foundation of basic science is essential. See, for example, President Johnson's letter of 6 April 1967, transmitting the annual report of the National Science Foundation to Congress.
4. The entire residential campus was built during the past 10 years, and there are larger capital costs to be amortized than for most universities.

NEWS AND COMMENT

Columbia and Its New Filter: Smoke Over Morningside Heights

New York. When Columbia University called a press conference to announce that it had been given the patent rights to a new cigarette filter, there were few signs of the hostile clamor that would follow. After all, cigarette smoking is hazardous and scientists have long been searching for ways to make it safer. To Columbia officials, the filter, which drastically reduces tar and nicotine content in smoke, obviously seemed to be in the public interest.

The press conference ended this simple view of things. What was expected to be a reasonably small and quiet briefing turned into a two-hour free-for-all as more than 100 reporters fired angry questions at Grayson Kirk, Columbia's president, H. Houston Merritt, the Dean of the Medical School, and Robert Strickman, the inventor. In the ensuing weeks, the University was the butt of both jibe (see, for example, Herblock's cartoon, page 521 and serious criticism. The announcement of the filter had—as far as the University's public image was concerned—backfired.

The attacks followed several well-defined patterns, and in each case, the critics accused the University of acting improperly. They saw Columbia encouraging cigarette smoking by its endorsement of a filter. They were appalled by the "hoopla" of the press conference and envisioned the University making an unwise venture into commercialism—in this case, the product was a cigarette filter, but what next? And finally, they were disappointed by the University's decision to make the announcement through the public press rather than through the normal channel of scientific communication, publication in a professional journal with the findings for all to see.

Had University officials handled the press conference astutely, they might have cushioned the shock. But the press conference was a disaster. Reporters, in general, do not like people who either hide information or appear ignorant of things they "ought" to

know. Columbia spokesmen were guilty on both counts. There was much they refused to tell: the composition of the filter and how it works (the patent application is still pending and the University did not want to endanger it); the split of royalties between the University and the inventor; and the amount Columbia might make from the filter. On other questions many reporters simply felt that the University representatives weren't very well informed. "The more evasive they got, the dirtier the questions got," said one newsman.

Regardless of merit, then, the debate materialized quickly. How did Columbia become involved?

There certainly was no preparation for the attacks; criticism, if it were to come, was not expected from either the journalistic or scientific estates, but from the tobacco industry. If skeptics now believe there is something unusual about a University sponsoring a cigarette filter, no one at Columbia did during the past spring when the gift was under consideration. University officials could (and now do) point to a variety of products and patents which have benefited institutions of higher learning all over the nation. And it was in this light that Columbia considered the Strickman offer.

The idea of donating the filter to the University originated with Robert Katz, a New York lawyer. Katz suggested that the filter might be presented to Columbia because he had a compelling personal reason to be indebted to the University: its doctors had saved his son's life after the boy suffered serious head injuries from an accidental fall. Katz, a Harvard alumnus with no official ties with Columbia, became acquainted with Strickman through a mutual friend, William Suitt, an advertising man. Suitt had been advising Strickman on the possibilities—and the problems—of getting cigarette firms to use the filter. Suitt knew about such practical matters; he had worked on the accounts of at least three cigarette firms. Now he was searching for a "broad delivery of this thing [the filter] that would hit the whole industry."

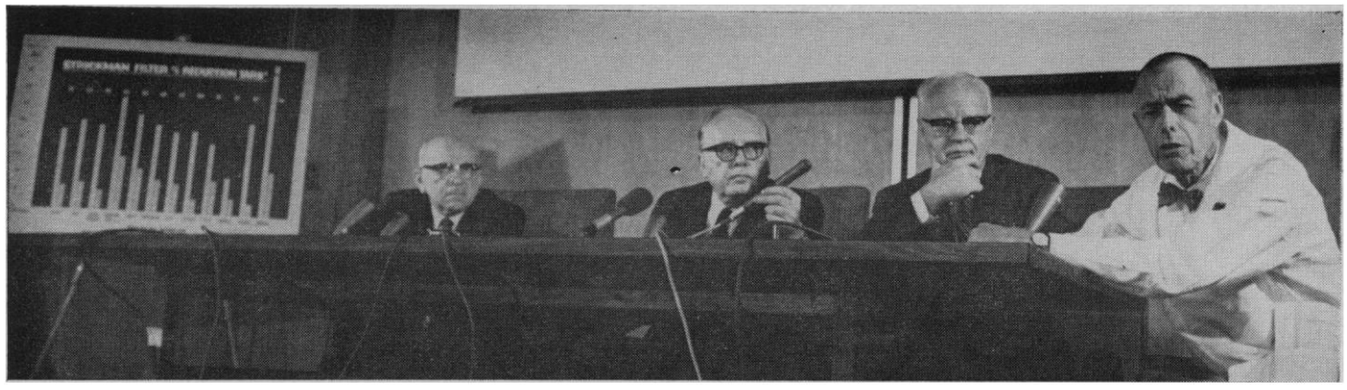
At first, Suitt considered asking an industrial firm to market the filter, but Katz's idea that the rights should go to a nonprofit organization, specifically Columbia, hit home. Strickman agreed. Undoubtedly, there was more than simple generosity to this decision, though that certainly was involved. Strickman had finished the major research on his filter more than two years before, but his approaches to the tobacco industry had been firmly rebuffed. He is a bustling, talkative man, who had worked successfully on a number of inventions and now runs his own chemical testing laboratory in Hillsdale, New Jersey. The prospect of his filter being bottled up forever was probably far more maddening than any royalties he might be missing. If Columbia accepted the offer, the prestige of one of the nation's foremost universities would be behind his filter.

Sometime last winter, Strickman met informally with a number of people from Columbia who quizzed him about the filter. They apparently came away converted, or at least persuaded that Strickman's device deserved both official attention and further study. The offer went to the 24-man board of trustees, but the full board did not consider the proposal. Probably because of its size and the infrequency of its session (it meets once a month), the Board, like Congress, does much of its work in committees. The Strickman filter was assigned to the finance committee.

The finance committee's jurisdiction reflected the filter's most obvious advantage for Columbia—money. About 280 billion packs of filter cigarettes are sold annually; at a penny a pack, the price Columbia eventually decided to ask, even a small slice of the market would bring in millions (though University officials generally pooh-poohed *Time* magazine's estimate of an income of $280 million if all brands adopt the filter). Columbia, like most private universities, needs money desperately and is now in the midst of a $200 million

"Yessirree, Folks, Your Little Old Institution Of Higher Learning Has Right Here The Greatest Secret Cigarette Discovery Of The Age. Don't Crowd, Folks. Now I'm Gonna Tellya Something"

Typical of the skeptical press reactions.



At the press conference announcing the new filter, from left to right: Robert Strickman, the inventor; Grayson Kirk, president of Columbia; H. Houston Merritt, dean of the Medical School; and Cushman Haagensen.

fund-raising campaign. Because the filter had not been presented to the board over the objections of anyone at the medical school, the finance committee probably seemed the proper place to study the proposal. The finance committee itself established a special subcommittee, but in practice, many details of talks between the University and the inventor were left to the Columbia treasurer, William Bloor.

The initial reception was warm but circumspect. Everyone appreciated the high value of Columbia's prestige. Two questions were vital: would the filter do everything it claimed to do? and would the cigarette industry actually use it? A firm of patent lawyers was brought in to examine the patent application. No one wanted any part of a patent whose validity could be challenged. Columbia also asked for tar and nicotine tests from the independent Fitelson laboratories and toxicity tests on the filter material from Charles Umberger, acting director of the toxicological laboratory in the office of New York City's Medical Examiner. Finally, the University hired David Thomas, a vice president of the advertising firm McCann Erickson International, to supply information on the cigarette industry and to conduct taste tests with the Strickman filter.

On every count the filter was reported to perform as claimed. The patent attorneys found the application solid. The Fitelson tests substantiated that the filter drastically reduced the tar and nicotine content of cigarettes. And Thomas says the results of the taste test were astounding. In fact, his first tests—an ordinary comparison of brand cigarettes with their regular filters against the same cigarettes with Strickman filters—showed such an overwhelming preference for Strickman filters that he switched to a more sophisticated approach. In the second test the subject was offered three cigarettes; sometimes two Strickman filters and one regular, sometimes two regulars and one Strickman. Using three cigarettes would locate those people who were taste-insensitive—if they selected their own brand (with the regular filter) as the cigarette they liked least and liked most, they obviously could not tell the difference between the Strickman filter and the regular filter. This test, too, supported the claim that the filter allowed a distinctive taste to come through (though the taste is not identical to that of the cigarette with a regular filter).

The intensive series of market and tar tests were conducted during the spring, and by June a definite agreement was in sight. To Strickman, or at least to some of his colleagues, Columbia's study had seemed too strict. But the University, too, felt it was under pressure. As President Kirk explained later: "We felt that in fairness to them [the inventor and his associates] we had to accept or reject the offer without excessive delay." This constraint effectively removed the possibility of extended biological testing of the filter.

Once the filter had passed the tests Columbia had demanded, there was probably never any danger that the University would not accept the patent rights. The basic question of the alliance—whether or not Columbia should become involved at all in the cigarette controversy—was apparently settled reasonably quickly. Columbia officials willingly repeat their reasoning in public and in private. Most people, they argue, have not and will not give up smoking. The University wishes they would, but, like the government, is powerless to stop them. The best and most socially desirable alternative, then, is to make the cigarette safer. Presented with a filter that sharply reduces tar and nicotine, the University decided to cooperate for the public good.

The medical argument undoubtedly had its effect, but many university officials mention an eminently practical argument for taking the offer: if Columbia didn't, someone else would.

The University's acceptance of the filter was also assured by the manner in which it was handled at the medical school. The project acquired a life and momentum all its own. Almost everyone who worked on it, for good reasons, favored the filter. The physician who handled most of the details, Donald Tapley, was a close friend and neighbor of both Katz and David Thomas, and it was not coincidence that the three became involved together. Except for guidance by the trustees and treasurer, there was only limited supervision from the University's top administrators. Although President Kirk and Dean Merritt participated in the announcement of the filter, neither met Strickman until the day of the press conference. In fact, neither Kirk nor Merritt was ever preoccupied with the offer—Kirk was busy with the $200 million fund-raising campaign (and also nursing a slipped disc) and Merritt spent a great deal of time tending to an embarrassing charge of bias by a Negro doctor at an affiliated hospital, a charge that had caused a great deal of local publicity.

The full board of the trustees never heard a dissenting word from the medical school, although after the press conference not everyone on the faculty was pleased. The Strickman offer had not been generally aired; widespread discussion, it was feared, would lead to premature disclosure before a final decision had been reached. The silence left most doctors, including the head of the Uni-

versity's Institute of Cancer Research, unaware of what was happening.

The trustees, even Dean Merritt, proceeded on the advice they had. And the opinion of Tapley and Cushman Haagensen, a close friend of Tapley's and a cancer researcher who advised on the project, was that tars were the fundamentally dangerous element in cigarette smoke and that a filter that drastically reduced tar would probably produce a safer cigarette. There is nothing radical about this view. The Federal Trade Commission is campaigning for tar and nicotine ratings on cigarette packages, and most cancer experts have been asking for years for cigarettes low in tar and nicotine.

The project apparently proceeded smoothly until it neared disclosure. The full board of trustees discussed it at the June meeting, the finance committee and the special subcommittee having completed most of the work. All details were not settled, and no binding vote was taken. Undoubtedly, contract arrangements were ironed out during this time. [These arrangements have not been disclosed, but from all indications the portion of the royalties Columbia will get is nowhere nar 100 percent. A spokesman for the University said last week that Columbia would receive slightly more than half of the royalties over the period of the patent, with the rest divided between the inventor and some of his principal backers.] Later in the month, a report and ballot was sent to each trustee, and, with only a few dissenting votes, the agreement was approved. Strickman and the University signed final papers 7 July.

It was then that the trouble began. News leaks developed quickly, and soon there was a flood of information—and rumors—about the Columbia filter. The stock market reacted as early as 11 July, two days before a scheduled press conference to announce the filter. No one claims to know where the leaks started. But at least one large leak was planned; William Suitt, Strickman's friend and adviser, informed some television reporters three days before the press conference to allow them time to visit Strickman's laboratory.

By Thursday, 13 July, the press conference was almost an anticlimax. Both of New York's morning papers, the *Times* and the *Daily News*, had run stories about the filter. The television stations ran their films Wednesday night rather than Thursday as originally planned. This coverage before the press conference only attracted more attention

NEWS IN BRIEF

● **MARINE SCIENCE ACTIVITIES:** The Commission on Marine Science, Engineering and Resources has awarded a $92,000 contract to the Institute of Public Administration, New York City, for an 8-month study of the activities and roles of state and local governments in relation to the marine environment. The Institute will subcontract a portion of the study to John I. Thompson and Company of Washington, D.C. The contract is the fourth awarded by the Commission, which was created last year to recommend a national marine science program by 1 July 1968. In addition to using data compiled through its own studies, the commission will also draw on data compiled by the National Council on Marine Resources. The Commission will be terminated 30 days after the publication of its report. The Council will end 90 days after the Commission.

● **NEW COMPUTER OFFICE:** All NSF computer programs were combined 1 July under a newly established Office of Computing Activities. The office will administer NSF university assistance programs for establishing or upgrading computing facilities as well as establish a new program of experimental computer activities. The office will be in three units: Institutional Computing Services Section; Education, Research, and Training Section; and Special Projects Section. Last year NSF awarded $409,000 in grants under the Instructional Science Program and $11.5 million under the Program for University Computing Facilities. Dartmouth College has announced it was awarded $142,500 under the latter program which will be used to link 18 New England Secondary schools via teletype consoles to its time-sharing computer system. Up to 200 callers will be able to use the computer simultaneously.

● **NEW NIH GRANTS:** Five universities have been awarded Health Sciences Advancement Awards, totaling $3.6 million, to upgrade their biomedical research and research training programs. The awards, by the Division of Research Facilities and Resources of NIH, are the first in a new program designed to advance broad segments of graduate schools with biomedical facilities which are now in the middle level of competence. Universities receiving the awards are the University of Colorado at Boulder and Denver, $687,000; University of Oregon, Eugene, $695,000; Purdue University, Lafayette, Ind., $564,000; Vanderbilt University, Nashville, Tenn., $620,000; and Washington University, St. Louis, Mo., $592,000. The University of Virginia at Charlottesville and Cornell University at Ithaca, N.Y., received continuation grants of $483,000 and $359,000, respectively. Both had pilot grants last year. Grants are renewable up to five consecutive years. NIH plans to expand the program next year.

● **EDUCATIONAL RESEARCH CENTERS:** Five pilot research centers, each operating on a $110,000 grant from the Bureau of Research of the U.S. Office of Education (OE), have been established to assess and develop techniques for educational planning and operations. According to an OE announcement, the centers will investigate four major questions: "What will society require of schools in the future and how might schools begin to prepare for these new demands? What should be the curriculum objectives now and in the future and what are their implications for schools today? What resources will be available to schools in the future and how might this affect planning today? What technologies will be available to schools in the future and what are their implications for schools today?" Centers in the pilot program and their heads are: Stanford Research Institute, Menlo Park, Calif., Willis W. Harman; Syracuse University-General Learning Corporation, New York, Thomas Green; Systems Development Corporation, Santa Monica, Calif., Marvin Adelson; Western Behavioral Sciences Institute, La Jolla, Calif., Richard Farson; and National Planning Association, Washington, D.C., Leonard Lecht. The pilot programs got underway in June and will continue until 1 March 1968. At that time OE will announce which of the five, if any, will continue their programs as operational centers. Plans call for two centers to be funded for an indefinite period at $600,000 annually. Each would be manned by approximately 15 full-time researchers. Depending on the results of the pilot programs, as many as four or as few as none could be funded.

to the official announcment. In the end, David Thomas was informed by cigarette firms that the filter had generated "$80 million" worth of publicity. Planned or unplanned, the coverage obviously helped the University's efforts to sell the filter to the cigarette industry.

But the press saturation soured many scientists and stimulated an adverse editorial reaction. The publicity amplified everything "bad" about the episode: it illuminated the fact that Columbia had not gone the usual scientific route of announcement and that the University was becoming involved in a project of enormous commercial potential. A skeptical statement by the American Cancer Society on the heels of the press conference did not help.

The Society's statement surprised and irritated some at Columbia involved with the filter. Two days before the press conference, Tapley and Haagensen visited with Society representatives and informed them of the impending announcement. This much is known about the meeting. Columbia invited the Society to participate in the announcement; the Society declined. The Society asked whether the announcement could be held up so it would not coincide with a report from the Surgeon General on smoking and health; Haagensen and Tapley said it could not because rumors and leaks were already spreading too much false information about the filter. [The simultaneous release of the Surgeon General's report and the Columbia filter apparently created some ill will, but University officials explain convincingly that they did not know when the government report was going to be released.] The University also offered the filter material for tests, but the Society estimated that such tests would cost $250,000 and asked the University to support the experimental program. Despite these problems, Tapley says, the Society supported the basic purpose to force down tar and nicotine. Yet, two days later, the Society issued a statement saying the filter had been given "extraordinary sponsorship by a great university."

Columbia was bound to get in trouble. By endorsing a filter that "may make a significant contribution to lessen the hazards of cigarette smoking," the University was, without realizing it, making claims of instant success in an area of long-standing scientific and political frustration. The quick, superficial treatment of a press conference for so serious a subject was naturally suspect to those who have spent decades studying cancer.

The cigarette industry also was apparently confused. Many tobacco executives would like to know more about the filter, and some clearly were not satisfied with the taste testing that has been done. Yet, they now seem to be stumbling over each other in an attempt to take advantage of the new filter: the first one on the market, many industry observers believe, will have an incomparable advantage over its rivals.

Even so, the ultimate effect of the University's action is unclear. Columbia backed the filter on the grounds that a sharp reduction of tars would probably be a significant health benefit. Yet, as widely accepted as this view is, it may be wrong. No one has conclusively identified the damaging portion of cigarette smoke: the tars are strongly suspected, but it is not known what part of the tars are damaging or whether the tars act in conjunction with the gaseous elements in the smoke; conceivably, the mere process of smoking anything may be unhealthy.

There is a real dilemma here, although it is not that clear Columbia officials gave it central consideration. The filter may give the appearance, but not the assurance of safety. Should a great University lend its name to something which may be conceivably useless and deceptive? Or, when tars are generally recognized as dangerous, why shouldn't a University give its prestige to a filter which both drastically reduces tar and may be acceptable to the industry. The debate drew much of its life from men who answered differently. Said one cancer researcher who thought Columbia's action might turn out for the good: "I think many of my colleagues get suspicious when a University tries to do something 'useful.' "

That most common cliche—"only time will tell"—applies to the entire Strickman–Columbia history. Only time will tell whether the filter is a safety improvement. Only time will tell whether the cigarette companies can (or will) market it in great bulk. And only time will tell whether a great University, out of good intentions and narrow self-interest, has made a great contribution to health or only a misguided and unfortunate mistake.

—ROBERT J. SAMUELSON

Students' Rights; They Should Have More, "Establishment" Agrees

In accordance with the American tradition that yesterday's extremism is often tomorrow's orthodoxy, a group of solidly established educational organizations which are very much on the inside have recently produced a draft statement on the "Rights and freedoms of students" covering many of the issues raised in campus rebellions during the last few years.

The group includes the American Association of University Professors (AAUP), academe's general professional society; the Association of American Colleges (AAC), an association of small liberal arts colleges; the National Student Association, the largest American association of students; the National Association of Student Personnel Administrators; and the National Association of Women Deans and Counselors. As if such support were not enough, the effort to draft a students' bill of rights also has the blessing of the American Council on Education, the Association of American Universities, the Association for Higher Education, the Association of State Colleges and Universities, and the American College Personnel Association. It is a curious alliance which bridges the generational gap and assumes, for perhaps the first time, a common interest between elements of the university community whose traditional stance toward one another has been one of skepticism, if not hostility.

The draft statement contains both general principles and specific prescrip-