the institute. AMA officials say they never had anything more than "relocation" in mind, and that "affiliation" was an unfortunate choice of words. They also say they have "long-term" plans to support the institute, and that they will probably seek to build an endowment.

As things stand now, the foundation directors and the AMA House of Delegates have endorsed the move in principle, most of the institute's scientists and scientific advisers either approve the move or are willing to accept it, and the University of Chicago trustees, always eager to add to their community of scholars, have agreed in principle to make land available on a long-term token-payment lease. A final agreement is expected to be approved by the first week of February. What the move will mean in the long run remains to be seen, but Beadle obviously has no small plans. He has told AMA officials he expects the institute to become "the outstanding biomedical research institute in the world."

Beadle's words are reminiscent of the optimistic forecasts that flowed forth in 1965 when the institute was dedicated. At this point it remains to be seen whether the difficulties that ensued were the products of particular and avoidable personality conflicts, or whether there is a more fundamental problem, namely, the suitability of the AMA as an institutional base for the peculiar requirements of basic research.

—PHILIP M. BOFFEY

Fund Raising: Yale Launches Marathon Campaign

New Haven. Yale has just announced a fund-raising drive of $388 million, the largest goal ever set by an American university. The campaign's significance lies not so much in its staggering target as in its time span, 10 years. Nearly a decade ago, Yale's rival, Harvard, upset the conventional wisdom of university fund-raisers by seeking, and getting, $82.5 million; up to that time no university had ever dared seek so much. The pattern established by Harvard was that of a mammoth, single, capital campaign of limited duration, usually 2 or 3 years—donors could be asked to give generously on the presumption that the drive was a unique event. The Yale announcement now explicitly says that this approach will not suffice; the gigantic fund-raising campaign is becoming permanent.

Yale, of course, is not alone in realizing this. The California Institute of Technology recently announced a 5-year projection of needs, and a number of other colleges have done the same. Harvard President Nathan Pusey, after listing some $160 million of capital needs in his last annual report, reflected: "What I have listed above are only the immediate needs of a single university. Multiplied nationwide by hundreds of institutions larger and smaller, it is clear that in the last third of the 20th century we shall require huge sums of money [for higher education] . . . this is not an expression of avidity or cupidity. It is simply a sober statement of fact."

Why do universities keep absorbing such huge quantities of money and continue coming back for more? Yale provides some answers.

According to the University's calculations, Yale's expenses are rising 8½ percent annually; and its income, at present rates, is increasing only 7 percent. The costs of good scholarship are becoming progressively more oppressive—maintaining a strong library system and catering to the rising demand for computers are particularly expensive. Yale has already conceded that it will not be able to do everything it pleases. For example, the library budget, which now stands at $4.5 million, would have to double every 5 years if all the requested books and services were to be provided; almost certainly, they will not.

Faculty salaries exert the most irresistible pressure. "The single most important fact of current academic life," Yale President Kingman Brewster wrote in his last annual report, "is that demand for faculty far outstrips its availability. Faculty salaries will inevitably respond to this imbalance by going upward far faster than the rise in the cost of living." In the next decade, Yale expects the cost of supporting its faculty to rise from $22.6 million to $50.6 million. Yet, inflation and expansion will force most other costs up, too, and the whole budget is expected to more than double, from $90 million to $205 million.

To meet higher costs, Yale will rely on new endowment, $241.5 million of its $388 million total. Yale is also trying what amounts to a major experiment with its endowment: it is taking funds from its annual gains on stock and bond transactions and appropriating this money toward current expenses. In times past, this practice has been strictly taboo. Almost all major universities, including Yale, have used only endowment yield (interest from bonds and dividends from stocks) for current operating expenses; endowment gain (appreciation of stocks or bonds) has always been reinvested in the hope that a larger fund would bring greater future yields.

Yale changed because it needs both future assets and current cash. Its present yield is too small to cover expenses. Yet, if it attempted to increase its yields by investing more in high-paying bonds or stocks with large dividends, it would surely stunt the long-term growth of the endowment fund; some of the fastest growing stocks have low yields. Eventually, the yield from a slow-growing endowment would not be able to meet the costs. To escape this dilemma, Yale hired three highly successful mutual-fund managers to run the university's investment portfolio; the hope is that they will raise the fund's productivity and provide enough money for current expenses, while maintaining a healthy rate of reinvestment.

Besides endowment needs, Yale is asking for $146.5 million for construction of new facilities, ranging from music and drama centers to graduate-school dormitories. The most ambitious project, and the best reflection of the pressures to expand and excel in every area, is a $27-million Social Sciences Center.

The key to raising this kind of money is getting the University's affluent friends and alumni into the habit of giving. Good public relations will promote the cause and stress the importance of the private university. President Kingman Brewster seems to have a knack for making headlines. He has already had himself painted on the cover of *Time* and he has been invited recently to participate in a nationwide television press program.

To concentrate the University's appeal on the most likely prospects, Yale has already assembled a "development board" of more than 150 affluent alumni whose job it will be to stump for the university and cough up some cash of their own. "Most of them are good for about a million," says one official. Yale has also devised a new way for its friends to give. Instead of making one single pledge, many of them will be asked to commit a certain percentage of their annual capital gains. This is a new technique—a vehicle to accustom alumni to sustained giving—and Howard T. Phelan, the university's development officer, insists it will work.

"One of the things wealthy people do not like to do is to commit fixed sums of money," he says, and the new plan proportions the donor's giving with his profits. If he makes capital gains of $1 million in a year and has pledged Yale 5 percent, the university receives $50,000; if the donor makes nothing, Yale gets nothing. The arrangement, Phelan says, is especially well suited to men whose money is tied up in relatively liquid assets.

In the end, what undoubtedly makes Yale's experience characteristic of other universities is that, despite the magnitude of the university's goal, the target is actually understated. The total eliminates anticipated federal construction grants of about $30 million. Nor does it include $50 to $80 million which Yale covets to establish a coordinate women's college in New Haven. Vassar was invited, but refused, and now Yale insists it is waiting for a generous patron who will underwrite most of the project. This ideal founder should have no real interest in giving to Yale itself—if he does, he should contribute toward the $388 million. The University, besides appealing to the donor's vanity, has one chief selling point: the women's college will be, according to Brewster, one of the nation's best the moment it opens. This sort of Andrew Carnegie may or may not exist. But the search to find him will be seriously competitive, and Yale will not be the only one looking.

—ROBERT J. SAMUELSON

APPOINTMENTS

R. J. Hayes

Richard J. Hayes, chief of the Space Guidance Laboratory, Electronic Research Center, NASA, to assistant director at the center. . . . **Gerald P. Burns**, president of the Independent College Funds of America, to vice president for development, Johns Hopkins University and Johns Hopkins Hospital. . . . **Wallace R. Brode**, science adviser to the Secretary of State during the Eisenhower Administration, former associate director of the National Bureau of Standards, and former professor of chemistry at Ohio State University, to president-elect, American Chemical Society. He is a former president of AAAS. . . . **James S. Coles**, president of Bowdoin College and director of Research Corporation, a New York foundation for the advancement of science, to president of the corporation.

RECENT DEATHS

Inez Adams, 62; specialist in graduate education, Office of Education, and a former professor of anthropology, Brooklyn College; 15 December.

Samuel N. Alexander, 57; senior research fellow, National Bureau of Standards; 9 December.

W. A. Andreae, 53; agricultural research officer and senior plant physiologist, Pest Research Institute, Canada Department of Agriculture; 14 October.

Dwight W. Batteau, 51; professor of mechanical engineering, Tufts University, and president of Listening, Inc.; 19 October.

James A. Bell, 86; retired president of Southeastern University; 26 November.

Henry B. Bigelow, 88; professor emeritus of zoology, Harvard; 11 December.

Bruno Beyer, 66; professor of biophysical chemistry, University of Milan; 12 November.

John W. Cell, 60; head of the department of mathematics, North Carolina State University; 9 November.

Roger M. Choisser, 73; professor emeritus of pathology, George Washington University Medical School; 19 December.

Fulton Cutting, 80; professor emeritus of physics, Stevens Institute of Technology; 4 December.

Paul Daston, 46; professor of psychology, University of Maryland; 19 November.

Leo H. Dawson, 77; retired head of the photometry branch, Naval Research Laboratory; 15 November.

Cavid Erginsoy, 43; physicist, Brookhaven National Laboratory, on leave as professor of physics, Middle East Technical University, Ankara; 7 December.

LeRoy Fothergill, 64; former scientific director, Army Biological Laboratories, Fort Detrick, Md.; 24 November.

Christopher M. Granger, 82; retired assistant chief, U.S. Forest Service; 21 November.

George E. Kimball, 61; vice president, Arthur D. Little, Inc.; 5 December.

Jack Leitner, 36; professor of physics, Syracuse University; 21 November.

Catherine F. MacKinnon, 65; nutrition consultant, Children's Bureau, and former associate professor, School of Public Health, University of North Carolina; 29 November.

Joseph A. Muldoon, 72; former chairman of the department of chemistry, Georgetown University; 10 December.

John P. Quigley, 71; professor emeritus of physiology and biophysics; University of Tennessee Medical Units; 22 November.

Howard L. Ritter, 51; research professor and former chairman of the chemistry department, Miami University; 21 November.

Howard F. Root, 77; president of the Diabetes Foundation, Inc. and medical director of the Joslin Clinic, Boston; 17 November.

Bela Schick, 90; developer of the Schick diphtheria test; 15 December.

Charles S. Wise, 51; chairman of the department of physical medicine and rehabilitation, George Washington University; 23 November.