Cleveland: An Early Start, Philanthropy, and Planning Built the University Circle

Back in the 1880's, Western Reserve University and Case Institute of Technology were established side by side in what was then a woodsy spot at the end of the streetcar tracks on the eastern outskirts of Cleveland. Reserve and Case are still there and over the years have become the core of what Clevelanders like to suggest may be the largest concentration of educational, clinical, and cultural institutions in the world.

Adjacent to the main Western Reserve campus is a medical center which, with its medical, dental, and nursing schools, its complex of University Hospitals and lesser health education and treatment facilities, forms the third major component of what is called the University Circle development.

Within easy walking distance (see aerial photograph) are Cleveland's Museum of Art (with its lagoon and formal grounds designed by the Olmsteads) and Museum of Natural History, the Western Reserve Historical Society's museum, the Cleveland Institute of Art and Institute of Music, and Severance Hall, the concert hall of the Cleveland Symphony, which under conductor George Szell places on almost anybody's list of the half dozen best symphony orchestras.

Cooperation on common problems among these institutions and the score of others—churches, hospitals, schools of various kinds—had been based on proximity and mutual interests and conducted largely ad hoc until 1957, when the University Circle Development Foundation was set up. The foundation was created to handle long-range planning, to act as a mediator among the various public and private institutions and as intermediary with government agencies, and to serve as a financial agent for expansion and development. While the foundation's main role was to be that of author and custodian of a grand design for the area, a good deal of the enthusiasm for the foundation, at the outset, was engendered by the hope that it could mitigate a bad parking problem that was growing rapidly worse. The University Circle institutions are faced with a full set of the problems which are the lot of most urban institutions these days—traffic, street crime, high land costs, trouble in "transitional" neighborhoods—and the foundation is expected to take the lead in dealing with these difficulties. (The parking problem seems to be fairly well in hand and a small University Circle police force is said to be keeping alfresco crime down). By the same token, formation of the foundation and the investment in the 500-acre University Circle area by member institutions that has ensued represent a concerted decision by these institutions to stay in the city.

During the years that all these University Circle institutions have been working more closely together, bilateral cooperation between the two mainstays of the Circle, Reserve and Case, has also been growing. Sheer propinquity and the fact that the two institutions are in many ways complementary in character fostered a certain amount of fruitful collaboration as well as some predictable two-cultures antagonism. An early and notable example of the former was the famous Michelson-Morley experiment, which helped open the way to modern physics and was the work of A. A. Michelson of Case and Edward Morley of Reserve. In the 1920's, in fact, a move was made to unite the two schools, but this effort foundered, mainly, it seems, in a storm of alumni separatist sentiment. Since World War II, the paths of development of the two institutions have thrown them increasingly closer together.

Local Ties Strong

Both Case and Western Reserve, for most of the years of their existence, primarily served students from Cleveland and its environs. Reserve got its start in 1826 as Adelbert College in the little town of Hudson, Ohio, which was expected to grow at a great rate. The move to Cleveland in the 80's was dictated by the realization that the founders had bet wrong on Hudson's future.

Reserve, therefore, chose to become an urban university and consciously assumed responsibilities and ties to the city in which it is located. Reserve is the largest privately operated university in Ohio. It has a very healthy endowment of $70 million, and its campus buildings reflect the benefactions of generations of wealthy Cleveland families. The philanthropic Clevelanders who supported Reserve, however, generally sent their sons and daughters East to college, and Reserve, until World War II, was essentially a streetcar college.

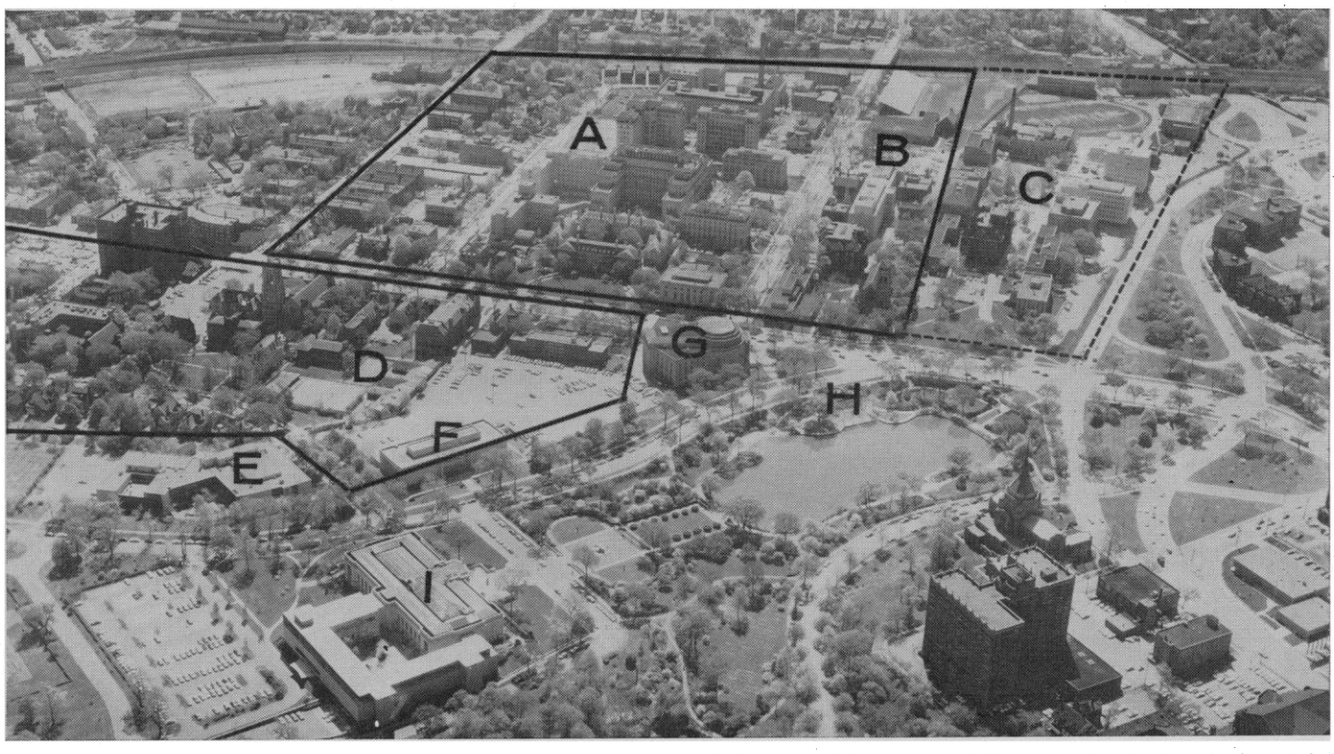
Since the war, without cutting its regional ties, Reserve has set itself on the road to becoming a national university. To move toward this goal, it has stressed two things—measures to expand research activities and graduate and professional education and efforts to attract graduate and undergraduate students of higher academic ability from a wider geographic area than before.

Total enrollment last fall was about 8300 students working for degrees. About 50 percent of these students were enrolled in graduate and professional schools. Some 1700 were enrolled in the university's two full-time undergraduate colleges, about 900 men in Adelbert College and 800 women in Mather College. About 2200 more undergraduates working part-time for degrees were enrolled in Reserve's Cleveland College, the university's night school and adult education branch, which also offers noncredit short courses, seminars, and refreshers for professionals.

In terms of total enrollment, Reserve has not expanded at the furious rate shown by most public and some private universities, and in fact has only recently built back to the enrollment of the early postwar years after a drop following the era of the GI Bill. But the university budget and the mix, the origins, and the academic credentials of its students have markedly changed.

Reserve in a few years has become essentially a residential university, in large part through a forced-draft dormitory building program. As of last year, 82 percent of undergraduate women and 69 percent of undergraduate men lived on campus. Of these, 60 percent of the women and 36 percent of the men were from outside Ohio, figures that reflect remarkable changes in the make-up of the Reserve student body. The academic profile of the student has altered as well. In 1959, 8.9 percent of men and 17.7 percent of women entering as freshmen stood academically in the top 10 percent in their high school graduating classes. In the fall of 1963, 30 percent of the men and 44 percent of the women were in the top 10 percent.

Fifteen years ago the Reserve research budget was $800,000; this year the level will be about $15 million. About two-thirds of this will go for research in the medical center, a fraction which accurately suggests the role of medical research in the surge at Western Reserve. And it should be noted that at Reserve, as at other universities striking for greater scope and



This is an aerial view of the main part of Cleveland's University Circle area with several of the major institutions indicated by superimposed capital letters. **A**, Medical center complex including University Hospitals and Western Reserve University schools of medicine, dentistry, nursing; **B**, Western Reserve south campus; **C**, Case Institute of Technology campus; **D**, Western Reserve campus; **E**, Cleveland Institute of Art; **F**, University Library; **G**, Severance Hall; and **H**, Cleveland Garden Center. Cleveland Museum of Natural History is off photograph at bottom center.

status, the elixir of growth has been federal funds.

Reserve's campaign for advancement has had a firm foundation in the prestige of its medical school and the hospitals in the medical center. In other areas of the sciences and in the humanities, Reserve programs were and are of uneven quality. It may well be significant, however, that the percentage of research funds for medical and health research in the increasing total of research funds has declined from more than 80 percent to about 66 percent in the past 5 years.

The university medical school over the years developed a good national reputation, and this was enhanced in the 1950's by extensive reforms in curriculum, teaching methods, and general attitude toward students and the subject of medicine in the medical school. These reforms have attracted wide interest among medical educators and also among would-be physicians (applications for the 80 places in the entering class this year were up to 1500 from 1100 last year).

The medical school's reputation and resources and the administrative structure of the medical center enabled the medical school to achieve a distinct measure of autonomy. To some extent this semi-independent status still prevails, but there are also signs that the medical school is being integrated into the university as a whole in a way that it has not been before. Increasingly, medical researchers need the help of other university scientists and resources, such as the computer center. A university office of research now handles all research proposals and programs, including the medical school's. And Western Reserve president John S. Millis, himself a recognized authority on medical education, is obviously trying to find ways to tighten the ties that bind.

The medical complex has been one of the factors fostering an increasingly close cooperation between Case and its old neighbor. Outward signs of this alliance are easy to find. Two years ago the two institutions decided to adopt the same academic calendar and daily class hours. Reserve and Case swap athletic facilities—Case's swimming pool and Reserve's football field—and students of each institution have access to the other's libraries. Reserve has taken over the burden of teaching foreign languages.

Both institutions had geology and astronomy departments which were too small to be strong, so an arrangement was made to consolidate geology teaching at Reserve and astronomy at Case. Both are flourishing. Case president T. Keith Glennan notes that the Case astronomy department, which was too little to entertain ambitions of starting a graduate program, now has six to eight faculty members and 18 graduate students.

Case's interest in the hospitals and medical school reflects the current boomlet in biomedical engineering. At the new Medical Engineering Center at Highland View Hospital, one of the Western Reserve University Associated Hospitals, students and faculty work directly with members of the hospital staff. Their work is generally of two kinds: (i) deployment of electronic instrumentation and automatic chemical analysis and data-processing equipment in the cause of "gaining a better understanding of body systems and the nature of tissue as an engineering material," and (ii) development projects intended to produce prosthetic devices.

Case, which through most of its history was regarded in Cleveland as the local engineering school, is also undergoing a transformation. And some of the same trends are visible at Case as at Reserve. In 1947, when Glennan assumed the presidency at Case, the

institute graduated one Ph.D. In 1963 Case awarded 53 degrees; the target for 1970 is 100 or more. In 1947, also, 65 percent of Case students came from Cuyahoga County, whose county seat is Cleveland, and most of the rest came from other parts of Ohio. This year only 16 percent hailed from Cuyahoga County and 51 percent were from outside Ohio.

In 7 years the percentage of graduate students at Case has risen from 6 to about 40 percent of the total enrollment of nearly 2500. Some 375 graduate students, however, are part-timers, a pattern which is an old one at Case, but which is changing. With both undergraduates and full-time graduate students, Case now claims a level of selectivity comparable to that of the nation's top engineering schools.

The Case curriculum and academic organization have undergone the changes which have grown familiar on the better engineering campuses.

Much more emphasis is being put on research, and a bigger faculty devotes more of its time to research. The undergraduate curriculum shows a shift away from stress on early specialization and courses in applied technology and toward basic sciences. Humanities and social sciences figure larger in the undergraduate program. Case's departments of civil, mechanical, electrical, and chemical engineering have been merged into an engineering division, and Case's embrace of the trend toward interdisciplinary programs is reflected in the establishment of centers for computing, materials, engineering design, and systems research.

One of the latest and most novel examples of Case-Western Reserve collaboration is a new joint program in philosophy. The aim will be to apply philosophical analysis to the logic and methods of science and technology, art, law, politics, and moral behavior. A center for teaching, graduate study, and research in philosophy is to be established, with permanent and visiting faculty, recruited to include not only philosophers but experts in other fields. A Carnegie Corporation grant of a quarter of a million dollars for the formative years of the program should help accomplish the joint founders' aim of attracting "the best people." The new program is alluded to often at Case and Reserve as a hopeful model of what can be done through cooperation.

That increasing collaboration between Case and Reserve means eventual merger seems at this time at least doubtful. The University Circle institutions seem to be working toward something like a loose federation rather than a fully centralized system. While acknowledging the value of overall planning, Circle officials seem to agree on the value of institutions maintaining separate identities and separate administrations sensitive to the needs of each institution.

More serious problems are raised by the relations of the University Circle to the city and, particularly, the area immediately around the Circle. Cleveland is split into east and west sections by the Cuyahoga River, which flows north into Lake Erie. On the east side are older residential areas, some of them rundown, some not, and a large proportion of Cleveland's Negro popuation. East of the city lie wealthy suburbs. On the west side are concentrated middle- and lower-income white neighborhoods.

Lying virtually on the city boundary, the University Circle is backed by a bluff, where Cleveland Heights, the first of the suburbs, begins. On the city sides of the Circle are older neighborhoods including Cleveland's "little Italy" and the Hough area, where there has been some racial trouble.

The University Circle Development Foundation has a 20-year plan which is designed not to wall off the Circle from its surroundings but, rather, to serve as a kind of good-neighbor policy to help reverse the progress of urban blight in areas where it has set in. The foundation on occasion has offended its neighbors by some of its moves and some of its plans for expansion through the use of urban renewal projects, but the atmosphere so far seems to be less tense than in similar situations in some other cities.

In store for the educational institutions in the Circle is the new challenge of public higher education in Cleveland. A 2-year community college financed by the county is already in operation, and establishment of a university in the Cleveland area in the near future is highly likely (*Science*, 17 July, p. 253). The private institutions of higher education in Cleveland—there are a dozen, including Case and Reserve—therefore, face a new era of competition so far as local students are concerned.

But at Case and Reserve, despite those local factors, there seem to be fairly strong feelings on the part of faculty and administration that momentum has been established, that the flow of federal funds into research is not likely to be turned off, and that, as part of the University Circle complex, they are in the right place at the right time.—JOHN WALSH

Negro Colleges: Long Ignored, Southern Schools Now Courted by Major Universities and Foundations

America's Negro colleges, long shunned as the ugly ducklings of this country's system of higher education, are now being courted as if their transformation into swans were expected momentarily. The Negro colleges are benefiting not only from pressures that can specifically be called "civil rights" but from the increased attention being given the problems of the "culturally deprived" in general, and from the accumulated wisdom and expertise of the educational reformers who have been active since Sputnik. The debate on whether Negro institutions should ultimately disappear continues, but it has been quieted by the realization that for the present the country ought to develop all the educational resources it can muster, and that the Negro colleges reach a socially increasingly important segment of the population. The programs being developed to aid the Negro colleges vary in motivation as well as in objective, but behind all of them lies the fact that, for the first time, a community of interest has been recognized between the leaders in American education and the institutions that were so far behind that even "following" had become impossible.

The only adequate generalization one can make about the 116 Negro colleges is that they are uniformly worse off than their white counterparts. Several of the larger institutions—Howard University in Washington, D.C., Hampton Institute in Hampton, Virginia, Fisk University in Nashville, Tennessee, and a few others—have not fared badly in attracting the most talented of the Negro high school graduates or in building up, with the aid of the comparatively affluent alumni and donors, comparatively well prepared faculties. These universities are recognizably members of the same species as other U.S. universities, and they are giving as much as they are receiving in the current atmosphere. But the fact that many of the talented faculty members and administrators of these schools are nearly exhausted from the demands now being made on their experience,