

and research is likely to diversify to such an extent that this pattern will not really serve.

Donald Griffin, former professor of zoology and chairman of the department of biology at Harvard, has moved to Rockefeller as professor and director of the new institute. Peter Marler, professor of zoology at the University of California, Berkeley, will assume a professorship at Rockefeller this summer. These are joint appointments to the institute and the university, and others are expected in the near future.

The barn of a disused demonstration farm at the zoological park will be converted for experimental work. Griffin is an authority on bird navigation and has done trail-blazing research on bats' use of a kind of sonar for flying in the dark and even catching insects on the wing. He hopes to have a dark-room constructed in the building, where more satisfactory studies can be made of the owl's method of locating its prey by listening for faint sounds. Griffin's interest in bat sonar could

lead to the study of in-flight behavior of bats in a wind tunnel, if engineering problems can be solved successfully. If a flying bat could be kept stationary by means of moving air, studies of in-flight behavior would be greatly simplified.

The institute will have access not only to animals at the Bronx Zoo but to those at the society's aquarium at Coney Island and at a laboratory of tropical biology in Trinidad.

The public is being assured that the agreement does not mean that animals will be transferred from zoo cages to the laboratory. Rather, laboratory scientists will have access to a greater variety of animals, some to be collected on zoological society expeditions, and will also have help and advice from people with experience in caring for animals. (The society also has its own researchers, who will work in the institute.) Perhaps most important, it is hoped that scientists interested in the behavior of animals will have a better chance to observe them in a state which

approaches the natural one. For it is agreed that the behavior of an animal under laboratory conditions may be quite different from its actions in nature. In studies of the behavior of animals or humans, it is important that circumstances be as near normal as possible.

The institute and the whole new venture into behavioral biology at Rockefeller are, as one faculty member said, only in the embryonic stage. Some other institutions are, as a matter of fact, substantially ahead of Rockefeller in this field. Rockefeller University, however, has impressive resources and a policy which, when followed, leaves researchers few excuses, since it approximates most scientists' own prescription for the ideal in science administration. That policy, as Bronk said at the lunch announcing establishment of the institute, is to "choose people who desperately want to do what you desperately want done, back them up, stay out of their way."

—JOHN WALSH

Education: New Commissioner Champions Change and Reform

The appointment of Harold Howe, II, as U.S. Commissioner of Education by President Johnson on 18 December is one of two major changes affecting the development and execution of federal education programs. The second change is that Francis Keppel, who has been commissioner since 1962, will be able to devote his full time to his duties as Assistant Secretary (for education) of the Department of Health, Education, and Welfare (HEW), a new position to which he was appointed in September.

Keppel once observed that the federal government increasingly should act as a "stimulator and supporter of ideas and innovations which appear to contain potential for improving the quality of education." Howe, who will succeed Keppel by 1 February, has been, above all, an experimenter in education and appears well fitted to lead the kind of innovative effort of which Keppel spoke. He was the personal choice of Keppel and John W. Gardner, who as

president of the Carnegie Corporation—and an exponent of educational reform—had known Howe before becoming Secretary of HEW last August.

As assistant secretary, Keppel will be Gardner's principal adviser on education policy; however, Howe will not report to him but will go directly to Gardner. Keppel will coordinate HEW's education programs with those of other federal departments and agencies and, once relieved of the commissionership, will devote his time increasingly to his duties as chairman of the Interagency Committee on Education.* The importance of the committee, which was established in late 1964, probably will depend upon Keppel's effectiveness as chairman, together with the degree of interest Gardner and the President take in its recommendations.

The committee could become a major source of new ideas and policies, not only for education programs but for other programs in which education plays a part. Spending obligations by

the federal government for education and related activities during the current fiscal year are estimated at \$8.7 billion, of which Office of Education programs will account for \$3.1 billion.

Spending by the Defense Department for these purposes is expected to total \$1.8 billion; spending by the Public Health Service (which includes the National Institutes of Health), \$1 billion; and spending by the Office of Economic Opportunity (the antipoverty program), \$708 million. Each of a number of other agencies, such as the National Science Foundation, the National Aeronautics and Space Administration, the Housing and Home Finance Agency, and the Labor Department, will spend between \$100 million and

* In addition to Keppel, committee members are Charles Frankel, Assistant Secretary of State for Educational and Cultural Affairs; Lynn M. Bartlett, Deputy Assistant Secretary of Defense (Education); George L. Mehren, Assistant Secretary of Agriculture; Philip Arnold, Deputy Assistant Secretary for Policy Planning and Research, Labor Department; Henry W. Riecken, Associate Director, National Science Foundation; John G. Paley, Commissioner, Atomic Energy Commission; Willis H. Shapley, Associate Deputy Administrator, National Aeronautics and Space Administration. Observers are William D. Carey, Executive Assistant Director, Bureau of the Budget; Benjamin Okner, staff economist, Council of Economic Advisors; Charles V. Kidd, Executive Secretary, Federal Council for Science and Technology, Office of Science and Technology; Ernest M. Allen, Grants Policies Officer, Public Health Service, National Institutes of Health; Lisle C. Carter, Assistant Director of Interagency Relations, Office of Economic Opportunity; Charles Blitzer, director, Division of Education and Training, Smithsonian.

\$500 million for education and related activities.

The Interagency Committee's mandate has been spelled out, though rather vaguely, by HEW: "Study the effects of federal activities upon state, local, and non-profit educational institutions; assess future trends; develop recommendations for coordination of educational activities and policies while taking into consideration relationships and policies in such fields as manpower development, defense, military manpower, economic growth, and science. Exercise leadership in resolving any differences concerning policy or administrative practices between the federal government and educational institutions. Seek advice and information from other government agencies and establish advisory groups to consider special problems, and exercise initiative in obtaining data that would permit an overall examination of federal educational activities."

Despite some speculation to the contrary, it does not appear that Keppel is being "kicked upstairs," even though it is true that his once extraordinarily good relationship with Congress has begun to turn a bit sour. It is perfectly evident that, even for a man as lively and energetic as Keppel, the new job of Assistant Secretary will demand his undivided attention. If there is any possibility of bureaucratic rivalry developing between him and the new Commissioner of Education, Keppel is doing his best to forestall it. At a news conference Howe was asked what his relationship with Keppel would be. Keppel replied for him, saying that it should follow Anthony Trollope's prescription for relations between members of a family: "Affectionate but disrespectful."

It is traditional to assume that a new man coming to an important government position is entitled to a honeymoon with Congress. Howe begins, at any rate, without having figured in the recent controversies that have intruded upon the connubial bliss that Keppel and Congress used to enjoy. Civil rights problems arising from the implementation of the Civil Rights Act of 1964 have been the principal source of friction.

Chicago's Mayor Daley and the city's congressional delegation were angered when Keppel deferred payment of about \$30 million in federal aid to the city after investigating complaints that some schools followed a policy of racial segregation. Civil rights groups and



Harold Howe

some of their champions in Congress, particularly Congressman Adam Clayton Powell, chairman of the House Education and Labor Committee, were displeased when Keppel, acting at President Johnson's bidding, released the money.

Keppel also has been criticized by civil rights groups for allowing southern school districts the option of adopting "freedom of choice" desegregation plans, which are supposed to give students unrestricted choice of the schools they attend but which sometimes have been used to perpetuate segregation. Questionnaires from the Office of Education were circulated among pupils, teachers, and school administrators in numerous school districts last fall to determine whether equal educational opportunities were available to all children. The survey was required by the Civil Rights Act, but again Keppel was criticized—this time by annoyed school authorities, together with some members of Congress responding to local protests.

The pitfalls of the civil rights issue may yawn just as widely for Howe as they have for Keppel, but at least he has not fallen into any of them yet. The consensus among the newsmen who attended Howe's first press conference seemed to be that he fielded the questions adroitly and with good humor. Asked about the Chicago school problem, Howe replied: "Mr. Keppel is the expert on Chicago." Questioned about his views on national testing, another controversial matter in which Keppel has become embroiled, Howe said that he disliked the term *testing* but that he [as well as Keppel] favored a program of national "assessment" which would use sampling techniques to determine the quality of instruction in the schools and the impact of federal education programs.

Howe, a tall, athletic man of 47 and a native of Hartford, Connecticut, has had a varied career which has included teaching history at prestigious private

schools (Darrow at Lebanon, New York, and Phillips Academy at Andover, Massachusetts), principalships at three high schools (including the Newton, Massachusetts, High School, now noted for its "house" plan), the superintendency of the Scarsdale, New York, school system, and the job of executive director of the Learning Institute of North Carolina, a new agency dedicated to educational experimentation and reform.

At his first press conference, Howe understandably declined to indicate what initiatives he may want to take as commissioner and said that for the next few weeks he will seek from Keppel all the advice he can get. Nevertheless, some of his philosophy came through.

He was asked how much responsibility education bears for correcting the social and economic problems of the day. Howe drew a contrast between Roosevelt's New Deal of the 1930's and Johnson's Great Society of the 1960's with respect to the role given education. He said that the great efforts of the New Deal to improve life for Americans gave comparatively little emphasis to education as an instrument for change. Now, however, domestic welfare programs such as those run by the Office of Economic Opportunity, the Labor Department, and HEW all emphasize educational endeavors, Howe said. "You have to get hold of the children where they are to fit them into the new society, and they happen to be in the schools," he said.

Howe said his job carries a dual responsibility: first, that of running a large, complicated enterprise, often under pressure; second, that of looking ahead with imagination to shape new educational policies. He said that, in education, the federal government is now a junior partner to the states and localities; while he did not know how large the federal role should grow, he felt, from his experience in North Carolina, that present federal programs were being welcomed. Wherever educational standards are low, the government should encourage improvement, he said.

As a contributor to the *Saturday Review*, Howe has been an outspoken critic both of standpattism in education and of certain efforts at change that he has considered misguided. In the 15 May 1965 issue of the *Review*, he took the colleges to task for failing to improve teaching and for trying the patience of many able high school graduates by making them repeat work

already learned. "A paradox of [the revolution in the high schools] is that among the initiators have been college professors whose institutions have changed relatively little in response to the dramatic alterations these professors have sparked in the schools," Howe said. He added that the colleges which have made adjustments by redesigning their programs and by validating work done elsewhere by students, have been those which already had the highest standards, the greatest flexibility, and the largest percentages of very able students.

In the 17 February 1962 *Review*, Howe, who was then superintendent at Scarsdale, criticized the American Association of School Administrators (AASA) for demanding that all new members have two years of graduate study, a requirement which he predicted many states would be quick to write into their own regulations. Howe said that, "like motherhood, graduate study is a good thing," but observed that the most imaginative and successful teachers and school administrators find little stimulation in many required graduate education courses.

He said that while the administrators were still adding up semester hours as the measure of quality in themselves, forward-looking principals and superintendents were attacking the "stultifying effects of that secondary school cousin of the semester hour, the Carnegie Unit."

"If he made such a statement now it would be met with disbelief," commented a man prominent in school administration circles. Criticism coming from the superintendent at Scarsdale may be ignored or tolerated, but coming from the Commissioner of Education it could cause some school administrators to rise up in anger.

Howe's appointment has been well enough received, however, by AASA and other groups such as the National Education Association (NEA). His credentials appear to be deemed adequate, and it is often observed that he has shown a commendable interest in the central issues facing education. Some persons do note that Howe is taking over a \$3-billion-a-year federal agency without any experience at administering a big city school system or other large enterprise. Moreover, some former colleagues feel that in his previous jobs Howe has shown more talent as an innovator and idea man than as an administrator. "He is not a man to

be tied down to a desk," one of them said. But, on the whole, the comment about Howe has been favorable.

A colleague who remembers Howe with unreserved admiration is Richard D. Batchelder, now president of the NEA. Batchelder, a housemaster for one of the six "houses" at Newton High School, was promoted to his present position while Howe was principal of Newton from 1958 to 1960. He says that Howe has a flair for drawing from others their best ideas and synthesizing them to form an excellent plan.

Newton High School has been heavily engaged in activities with Harvard's Graduate School of Education, and is widely known as an institution on the leading edge of educational change. Howe headed the faculty committee whose work led to the adoption of the house plan, which is essentially a scheme to retain the advantages of a large high school (Newton has 2800 students) without sacrificing an intimate association among students, counselors, and school administrators. Each of Newton High's six houses has its own master and program of student services and activities.

Newton, a Boston suburb with a population of 92,000, is on the whole, a wealthy community and spends generously on education. But Newton High draws some students from working-class and Negro neighborhoods as well as from middle-class neighborhoods. However, as superintendent of Scarsdale school district, a high-income suburb of 17,000 inhabitants 20 miles north of New York City, Howe had almost exclusively children from well-to-do homes. One resident of the district was John Gardner, who was then president of the Carnegie Corporation.

During his 4 years in Scarsdale (1960-64), Howe introduced the "new math" and new techniques of reading to the elementary schools on a pilot basis. He initiated a number of other projects, with one of the most important being the planning of a new wing for the district's high school. The wing, which opens soon, contains seminar rooms, seven science laboratories, a library which eventually will have 40,000 volumes, and other facilities to encourage students to do more independent study and learning.

At Newton and Scarsdale, Howe was making his contribution to a tradition of progress and experimentation established by his predecessors. As the first director of the Learning Institute of

North Carolina (LINC), however, Howe has been trying to sow new ideas and new methods in an area whose schools too often have been underfinanced and dominated by conservative and parochial attitudes.

Generously supported from such sources as the U.S. Office of Education, the Carnegie Corporation, and the State of North Carolina, LINC has launched several experimental programs, the largest of which is the North Carolina Advancement School. This is a racially integrated boarding school to provide 11-week sessions of remedial work and counseling for pupils who have failed to perform up to their ability and are potential drop-outs. LINC also initiated a summer institute on desegregation problems for integrated groups of white and Negro teachers. These and other LINC activities, such as its part in a research project to prepare disadvantaged children for school, are too new to be pronounced a success, though they appear promising.

Like Keppel before him, Howe is likely to cause nervousness among the more conservative people in state and local school administration, in the teachers colleges, and in the professional education groups in Washington.

A spokesman for one of the professional groups observed that Howe "fits in nicely with the power structure." He was referring to such ties as those Howe has to Harvard, where, as principal of Newton, he collaborated with Keppel, who at the time was dean of the Graduate School of Education; to Yale, of which he is an alumnus and trustee (Howe has a master's degree, from Columbia, but not a Ph.D.); and to the Carnegie Corporation. In truth, with Howe, Keppel, and Gardner holding the key jobs, the federal education apparatus is coming increasingly under the influence of a triumvirate of well-connected movers and shakers.

—LUTHER J. CARTER

Erratum: In Table 1 of the report "The earliest Primates" by L. Van Valen and R. E. Sloan (5 Nov., p. 743) the section beginning on line 3 under the subheading Insectivora should have been printed as follows:

—Mixodectidae, n. gen. and sp., cf. <i>Elpidophorus</i>	2	3
—Microsyopidae or Mixodectidae, n. gen. and sp.	2	5
Palaeoryctidae, n. gen. and sp., cf. <i>Palaeoryctes</i> (13)	1	3
—cf. <i>Gelastops</i> n. sp.	1	2
about three other species		

Erratum: In the report "Differential classical conditioning: verbalization of stimulus contingencies" by M. J. Fuhrer and P. E. Baer (10 Dec., p. 1479), "microohms" on page 1479, column 3, line 5, should have read "micromhos." On page 1480, column 1, the sixth line of the second paragraph should have read "during the interval 1 to 5 seconds after. . ."