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Ra II: Redesign for a second try.

AFRICA TO AMERICA

Once again for Ra

Last year, as the Apollo 11 astronauts were about to become the first men to land on the moon, a seven-man international crew was abandoning a disabled boat made of papyrus that in two months had taken them 2,700 miles westward in the Atlantic toward Mexico (SN: 7/26, p. 79). The explorers were disappointed that the ship, the Ra, constructed with the same materials used by the ancient Egyptians, could not safely take them the remaining 540 miles to the coast of South America. Nevertheless explorer-anthropologist Thor Heyerdahl, designer and pilot of the Ra, refused to admit defeat.

During the past two months, another vessel, the Ra II, has been under construction at Safi, Morocco. Late this week, Heyerdahl and his crew were awaiting suitable weather to set off on a second attempt at an Atlantic crossing.

The scientific goal is the same: to demonstrate the possibility that the Egyptians could have navigated the Atlantic in papyrus boats and made contact with pre-Columbian Latin America (SN: 5/31/69, p. 524).

Heyerdahl believes the errors in construction and steering that brought last year's voyage to a premature end have been corrected. As was its predecessor, the Ra II is built with papyrus from the

Lake Tana region of Ethiopia. But construction followed the design of the totora reed boats of Lake Titicaca in the Andes mountains of South America, rather than the Lake Chad design of central Africa. The African design proved to lack buoyancy in the stern.

Four Aymará Indian craftsmen from Lake Titicaca in Bolivia were taken to Morocco to build the craft instead of the Buduma tribesmen from Lake Chad, who built the first Ra. The Aymará are fishermen who still use reed boats on the lake to earn their livelihood. Their boatbuilding skills were passed down from their ancestors.

The Ra II, at 39 feet, is about nine feet shorter than its predecessor. There will be an eighth crew member, a Japanese photographer, in addition to the seven who took part in last year's voy-

age: an American navigator, a Russian medical officer, a Mexican anthropologist, an Italian photographer, an Egyptian underwater expert, a Chadien carpenter and papyrus expert, and Heyerdahl, a Norwegian. The vessel will carry but one flag, the United Nations'. Like Ra I, the expedition is entirely financed by Heyerdahl.

"As before," says Heyerdahl, "our expedition is not an attempt to establish a record, demonstrate human endurance or find sport in a risky way to cross the Atlantic. The object is to investigate the sea-going qualities of an ancient type of Egyptian water craft unfamiliar to modern man, known only from wall drawings in tombs, and to determine if it could have played a role in the growth and spread of human culture."

TWO YEARS' LABOR

A Senate health care report

Because the organization of health services has not kept pace with advances in science or changes in society itself, the Subcommittee on Executive Reorganization of the Senate Committee on Government Operations began hearings in April 1968 to determine what role if any the Federal Government is, or ought to be, playing in health.

The subcommittee—chaired by Sen. Abraham A. Ribicoff (D-Conn.)—last week submitted its report, entitled "Federal Role in Health," concluding that there is no national health policy to provide form and direction to Federal health programs and expenditures.

The subcommittee found that of the Government's 24 separate departments and agencies, which are expected to spend an estimated \$20.6 billion a year by fiscal year 1971, "No central body or group exists that is responsible for developing Federal health policy and evaluating health programs in light of that policy."

In essence, the subcommittee found that Federal agencies were either unable or unwilling to judge their programs by meaningful or measurable standards. Each program and agency was an island unto itself. Findings were that Federal programs have not come to grips with rising costs or limited care.

Of the agencies with the largest budgets, the Defense Department will spend \$2 billion for health in fiscal year 1970, or 10.8 percent of the Federal health budget; Health, Education and Welfare will spend 71.5 percent, and the Veterans' Administration will account for 9.6 percent. Even the nation's top health officer, HEW's Roger O. Egeberg, Assistant Secretary for Health and Scientific Affairs, controls just 22 percent of his health budget.

The subcommittee recommended that a council of health advisers be established to formulate a national health policy. A spokesman for the committee says that HEW should be reorganized to include an under secretary for health with assistant secretaries in charge of budget and planning, science manpower and education and health care services.

MANPOWER

Engineering jobs

Shifts in the nation's scientific and engineering emphases are affecting the job market. But the effect on specific disciplines does not show up in the overall figures.

Most new engineering graduates, for instance, can expect to find jobs this year but the choices will not be as great as in previous years. This is the conclusion of the Engineering Manpower Commission of the Engineers Joint Council after a survey of 430 employers.

Results confirm a slowdown during 1970 and 1971 in the long-term growth of engineering employment. Most notably hit are the aerospace, research and development and machinery-manufacturing industries. All industries except aerospace, however, expect growth to resume in 1972 and continue through 1975. The aerospace industry this year expects to hire only 62 percent as many engineers as it did last year. Even by 1975 it expects its engineering employment to be only 73 percent of the 1969 figure.

An exception to this year's slowdown is the construction industry, which plans to hire 37 percent more engineers than it did last year. □