

PUBLISHER PROUVOST
Only croissants to chew on.

ufacturer, purchased a controlling interest in Figaro. But because he had served briefly in the collaborationist Vichy regime, both Gaullists and leftists opposed letting him assume editorial command. So he signed an agreement with Figaro's noted editor, Pierre Brisson, who had killed off the paper during World War II rather than knuckle under to the Nazis. The agreement gave Brisson and his colleagues complete freedom to direct the paper.

When Brisson died four years ago, Prouvost decided that he wanted more than financial satisfaction from his investment. Though the crusty, 83-year-old industrialist-publisher has refused to negotiate directly with Figaro's staff, his objectives have been clearly announced. "We favor the independence of newspapermen," says one of his underlings, "but the legal owners of Figaro are entitled to run their newspaper as they see fit, which includes the right to fire an editor-in-chief. We are living in a capitalist society, are we not?" To which the head of Figaro's journalists' association heatedly replies: "A newspaper is an enterprise of public interest, not a macaroni factory."

Last week's brief strike was a foretaste of the growing bitterness of the dispute. Prouvost is offering the editorial workers a voice in the management team that he proposes to set up when the old agreement finally lapses next May. Figaro's staff members are opposed because, at best, they would have only a weak, minority voice. They also recall all too well Prouvost's editorial shakeup at *Paris-Match*, France's leading picture magazine (TIME, July 12). With no solution in sight, other Paris newspapermen and publishers are squaring off on the sidelines, in preparation for what may well become a classic confrontation in French journalism.

SPACE

Acrobats in Orbit

As Apollo 7 whirled through orbit after orbit around the earth last week, the growing monotony of the mission was a major measure of its success. Presented with little challenge from the well-functioning spacecraft, Astronauts Wally Schirra, Walter Cunningham and Donn Eisele fought off ennui as they plodded through the humdrum house-keeping and engineering duties necessary to prove their craft moonworthy. They fired and refired the ship's big rocket engine and practiced sighting stars through a sextant; they tested their computers and cooling system, and transmitted to a ground station the same sort of signals a lunar module would send while returning from the surface of the moon. For astronauts and space watchers alike, the high points of the week were the television shows, shot with the 4½-lb slow-scan TV camera developed for Apollo by RCA.

The daily 7-min. to 11-min. *Wally, Walt and Donn Show*, as it was nicknamed, was scheduled once each morning during a 2,000-mile Apollo pass between Corpus Christi, Texas, and Cape Kennedy, the only two ground stations equipped to pick up the transmissions. The astronauts held up crudely lettered signs that read "Hello from the lovely Apollo Room, high atop everything" and "Deke Slayton, are you a turtle?" In accordance with a bar-room tradition that has been adopted by the astronauts, Slayton was required to answer "You bet your sweet ass I am" —or pay the penalty of buying a drink for everyone within earshot. "I have recorded my answer," responded Slayton from the control center, after momentarily switching off his microphone. On

one show, Astronauts Schirra and Cunningham suddenly floated up from behind their seats and swam toward the camera, vividly demonstrating the weightlessness of space flight.

The astronauts also shot some scenes from the spacecraft windows, catching glimpses of clouds and coastlines racing by. They panned Apollo's interior as they described equipment; they demonstrated how loose drops of water are collected with a vacuum hose and how water is added to their dehydrated food.

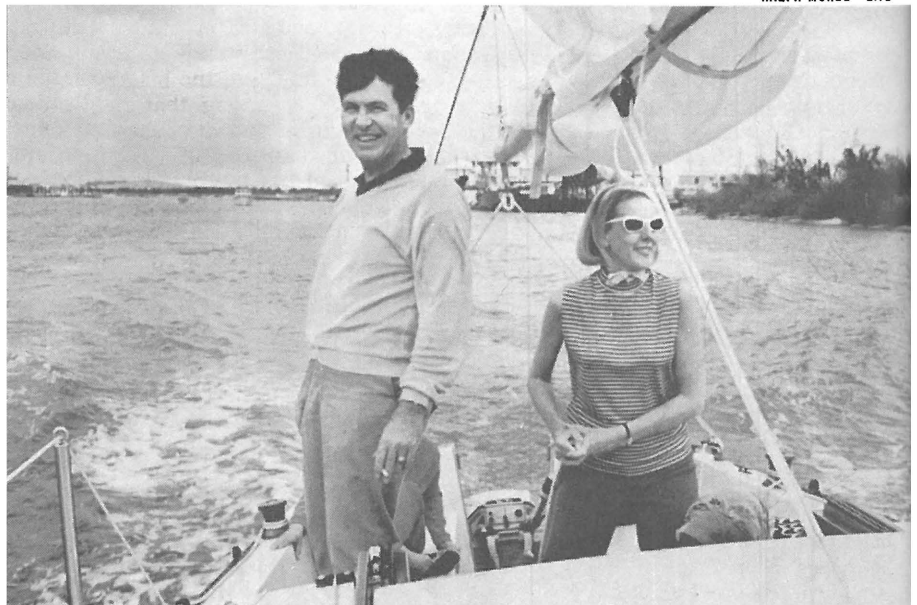
As the flight continued without serious problems, an air of heady optimism began to pervade the Manned Spacecraft Center in Houston. Said NASA's Christopher Kraft: "The performance of the vehicle to date has been very close to perfect." At week's end, officials were hinting that if Apollo 7 continued to perform faultlessly all the way through its splashdown this week, the planned lunar-orbital mission of Apollo 8 might well be advanced by two weeks, to Dec. 5.

The Two Schirras

All three stars of *The Wally, Walt and Donn Show* shared equal billing, but each performance, like the flight itself, really belonged to the spacecraft commander, Wally Schirra. The impressive efficiency of Apollo 7 and its crew was fitting tribute to the 45-year-old veteran who is making his last flight.

By now, everyone who has worked with him is convinced that there are really two Wally Schirras. One will be best remembered for his high jinks in space. On his first mission, he smuggled an unauthorized steak sandwich aboard the spacecraft. In mid-December 1965, during the rendezvous of Gemini 6 and 7, Schirra pulled to within a foot of the other spacecraft and held

RALPH NORSE—LIFE



SCHIRRA & WIFE JOSEPHINE ON THEIR SAILBOAT
Both joker and ace in his hand.

up a sign for Gemini 7's command pilot, West Point Graduate Frank Borman. It read: "Beat Army." Later, on the same flight, he reported that he had sighted "an object" going into polar orbit. "Stand by," said Schirra, "it looks like he's trying to signal us." He then whipped out a harmonica and began to play *Jingle Bells*. The UFO, of course, was Santa Claus.

The other Wally Schirra is a meticulous test pilot and engineer. He is an iron-spined Navy captain who has never hesitated to sound off when he is displeased. Early in the space program, he openly criticized John Glenn's NASA-sponsored public relations tours and argued that they had effectively removed Glenn from the program. When it was rumored that NASA might deny Gordon Cooper a Mercury orbital flight, Wally rescued Cooper by threatening to take the issue to the press.

Plagued by a head cold aboard Apollo 7, Schirra was unusually testy during some of his exchanges with ground controllers. But when problems are crucial, Schirra has always demonstrated remarkable coolness.

Indeed, handling quick decisions aloft is a Schirra family specialty. Wally's father was a World War I fighter pilot who later barnstormed with his wife as wing-walker. Wally himself soloed at 16, and went into naval aviation soon after graduation from Annapolis. He flew 90 combat missions in Korea, shot down one MIG and scored one "possible." On the first unsuccessful attempt to launch Gemini 6, when the Titan booster belched smoke and flames without lifting off, Schirra correctly decided that there was no danger of an explosion. He made a split-second decision not to damage the spacecraft by pulling the seat-ejection ring. A few days later, Gemini 6, still intact, carried him aloft to achieve man's first rendezvous in space.

Schirra's decision to retire from spaceflight will allow him more time for the ground-bound activities he enjoys—parties around the Houston space center, water skiing and sailing with his wife, Josephine, and his children, Walter, 18, and Suzanne, 11. "I've been gone one heck of a lot," he says. "It takes a lot out of you."

NOBEL PRIZE

The Code-Breakers

One of the most remarkable characteristics of living beings is their ability to pass inherited features from one generation to the next. And one of the greatest of man's scientific triumphs has been the discovery of the method by which the genes transmit and translate the message of heredity. Last week, for their ingenious work in breaking the genetic code, U.S. Molecular Biologists Marshall Nirenberg, 41, Har Gobind Khorana, 46, and Robert Holley, 46, were jointly awarded the 1968 Nobel prize for physiology and medicine.

Long before the three new Nobel lau-

reates began their experiments, scientists had learned that the message of heredity is carried by large molecules of deoxyribonucleic acid (DNA) in the chromosomes. Researchers had deduced that somehow DNA directs the cells to assemble amino acids into the proteins that form the basic structural material of all living beings and impart their characteristics. Then, in 1953, James Watson (author of *The Double Helix*) and Francis Crick put together more of the puzzle; they discovered that DNA consists of twin helices that are held together by regularly spaced links similar to the stairs of a spiral staircase.

Three-Letter Words. It was Watson and Crick who clarified the nature of the genetic code. They demonstrated that each stair of the double helix con-

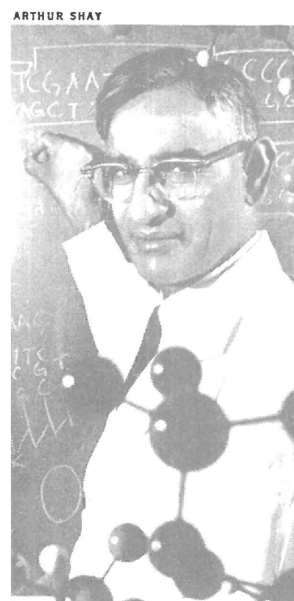
Punched-Tape Message. Nirenberg refined his technique and began to match other three-letter combinations of nucleotides with particular amino acids. The task was also taken up independently by Khorana at the University of Wisconsin. Other scientists pitched in, and by 1965 the genetic code had been largely deciphered. Khorana was also able to determine that each of the three-letter words is always read separately and does not share any of its letters with another word. The words are read off continuously along a strand of DNA, much as a punched-tape message is read by a teletype machine. Among the 64 possible three-letter combinations of the four nucleotides, it was later discovered, there were several that served to direct the cell to



NIRENBERG



HOLLEY



KHORANA

On the spiral staircase of life.

sists of a pair of chemical compounds called nucleotides. There are only four different kinds of nucleotides in DNA, but the order in which they appear along the length of the helix varies considerably, suggesting that they are arranged in a coded sequence. To be able to call up one of the 20 different amino acids using only four nucleotide "letters," scientists decided, each genetic code "word" has to be three letters long. But how to break the code?

In 1961, Nirenberg, then an obscure young scientist at the National Institutes of Health, provided the biological Rosetta stone. After synthesizing a single helix with half-stairs that were the equivalent of only one of DNA's nucleotides—adenine (A)—he added it to a solution containing all 20 amino acids. Only one protein was produced in the solution. It consisted entirely of a chain of amino-acid molecules called phenylalanine. Thus, Nirenberg concluded, a three-letter code word made up of adenine nucleotides (AAA) was nature's instruction to the cell to use phenylalanine in building a protein.

start or stop manufacturing a protein. Nirenberg and Khorana also found some redundancy in the code: some of the amino acids were called up by several different three-letter combinations.

At Cornell, Holley studied both the genetic code and its function in building proteins by analyzing "transfer RNA," a form of ribonucleic acid. RNA collects amino acids floating in the cell and, like a tug towing a barge, pulls them to an assembly site where, in the sequence dictated by the master DNA molecule, they are combined into the appropriate protein. Holley worked out the complete structure of a transfer RNA molecule, demonstrating how it attaches to a particular amino acid and brings it to the growing protein chain at the proper time and place.

By their accomplishments the three new U.S. Nobelmen have not only provided a clearer understanding of the nature of life, they have brought closer the day when molecular biologists will be able to correct genetic defects, control heredity, and perhaps even create life itself.