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First Flights

It took a special brand of courage for early "aviators" to defy gravity.

One afternoon in 875 A.D., before less than a dozen people gathered on a hill in Andalusia, Spain, history was in the making. In an attempt to "ascend like the birds," a man jumped from a wall built high over a valley. The resultant flight may very well have been man's first.

According to the notes of some of the scholars who witnessed it, this is what took place:

The tiny group had been called together by Abdul Qasim 'Abbas ibn Firnas. Most of those present were his friends, and by 875 they were used to being startled by the Muslim physician who practiced at the court in Cordoba. This day, however, one of them wrote, "We thought ibn Firnas certainly mad ... and we feared for his life!"

Ibn Firnas had met his friends in a suit of feathers, with the actual wings of two large birds attached to his arms and legs. After being helped to the top of a wall, which was later described as "several times the height of a man," he addressed the spectators below:

"Presently, I shall take leave of you. By guiding these wings up and down, I should ascend like the birds. If all goes well, after soaring for a time I should be able to return safely to your side."

Then, when a favoring wind appeared, ibn Firnas jumped from the wall. The onlookers gasped. They were certain the doctor would fall straight to the floor of the valley below.

Ibn Firnas did fall. But only for a spell.

Manipulating the two sets of wings in movements he had worked out on paper days before, he quickly checked his descent. Then he flailed his way to an altitude higher than the point from which he had taken off. Gliding for several hundred feet, he turned, then soared back. Exactly as he had promised, ibn Firnas landed on the wall.

"He flew a considerable distance as if he had been a bird," recorded one of the witnesses, "but in alighting again on the place where he started from, his back was very much hurt. For, not knowing that birds when they alight come down upon their tails, he forgot to provide himself with one."

Despite the accident at the end (which did not prove serious), the performance had been extraordinary. But then, ibn Firnas was no ordinary man. In the best traditions of his period, he brilliantly spanned the worlds of art and science.

In addition to his medical duties at the Cordoba court, Firnas was a poet of fair accomplishment, a scientist of note, a student of music and the inventor of a simple metronome. In his home he had built a room in which, thanks to mechanisms hidden in the basement, spectators saw stars and clouds, and were astounded by thunder and lightning. The attempt to fly was only one of ibn Firnas' experiments. After he had successfully demonstrated his theory, he quickly turned to other quests.

For a time, the excited conversations and writings of those who had seen the flight made ibn Firnas a famous man. One of these, the minor court poet, M'umin ibn Said, resented ibn Firnas. He criticized his metaphors and disapproved of his artificial thunder. But in 886 he wrote of the doctor (in a poem which scholars today regard as important scientific evidence):

He flew faster than the phoenix in his flight.

When he dressed his body in the feathers of a vulture.

Not long after the deaths of those who had seen the flight, ibn Firnas quietly dropped out of history. The noted Moroccan historian, al-Maqqari, would collect and publish most of the evidence of Firnas' rare accomplishments in the 17th century, but Maqqari's work went untranslated for over 200 years. The result is, even today, remarkably few historians have ever even heard of the versatile Muslim scientist.

There was something about flight which has always piqued man's imagination. Certainly thousands of men before ibn Firnas had dared to have the same dream—if not actually try it. Ibn Firnas, too, recognized that it was not an easy dream to catch and hold—even for a few exhilarating moments. "What man-made machine will ever achieve the complete perfection of even the goose's wing?" he once asked himself in a personal ledger. Indeed, it should be noted that even the gods themselves were not permitted to take the power of flight for granted.

Mexico's "Gods of the Air" were prone to falling into volcanoes. Crete's famed Icarus tried to go too high with his feather and waxen wings—and crashed. The egg of the fabulous roc that carried Sindbad, mortals are warned again and again, was the symbol of "something unattainable" to gods and mortals alike.

If preceding ibn Firnas into the skies were only such assorted and ill-fated creatures from mythology, many of the mortals who followed him proved to be equally unlucky.

After ibn Firnas, the next recorded attempt to fly was made in 1003 by the great Iranian student of Arabic philology, al-Jauhari. He met his death attempting to fly with the aid of an unknown apparatus from the roof of the old mosque of Nishapur in Khorosan. In 1010 came the flight of Eilmer of Malmesbury, a British Benedictine monk. Eilmer's first—and last—flight featured a set of rigid wings he had built of an unknown substance. After jumping out of a high tower, he reportedly glided 600 feet to a disastrous landing in which he broke both his legs. Like ibn Firnas, Eilmer had lacked a stabilizing tail structure such as that found on modern aircraft.

Next came a tragic Saracen, who stood in 1162 on a column in the Hippodrome of Constantinople equipped with a sail-like cloak. He gathered the air for flight and jumped only to crash to his death. There followed Father John Dampier, an Englishman who is said by a contemporary to have taken off from the walls of Sterling Castle "on hens feathers without fatal consequences." Kaspar Mohr, the flying priest of Wurttemberg, also flew, but no one is sure of how he came out of it.

Marco Polo wrote of man-carrying kites he had seen in east Asia. His story set many in the Middle Ages to pondering the secret of human flight with kites and similar apparatus, none of which worked. It remained for Leonardo da Vinci, in the sixteenth century, to lead scientific thought around that particular impasse and back to the sounder thinking of ibn Firnas. Like ibn Firnas, da Vinci felt the answer was locked in the mystery of birds. Although he did not attempt to fly himself, the Italian genius did spend a number of years studying and dissecting various fowl, and on paper at least he invented a bird-winged machine designed to be strapped to a man's back.

Perhaps the most glorious moment in the history of human flight by machine came in December 1903, when on another hill far away from Andalusia two American brothers named Wright contrived to stay up in the air in their machine for 12 seconds and fly 120 feet. Their's was a fitting link in the chain of airborne courage pioneered by an inquisitive Muslim doctor in 875 A.D.

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