Book Review

Melvin Croft and John Youskauskas, Come Fly with Us: NASA's Payload Specialist Program, Lincoln: University of Nebraska Press, 2019 (paperback 2024) ISBN: 978-1496238627 xviii+430 pp. $46.95 hardcover, $29.95 paperback.

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Melvin Croft and John Youskauskas have written a useful study of NASA's payload specialist program which was created as part of the transition to the Space Shuttle, a partially reusable vehicle for taking objects into space, both for the government and potentially for commercial purposes. The payload specialist was to be a non-astronaut who would travel into space alongside the commander, pilot, and mission specialists. Since these payload specialists would receive only minimal training it was important that the Space Shuttle was a safe way to travel into space. With the introduction of the space toilet, it allowed for females as well as males to travel into the heavens. Many well-trained astronauts questioned the idea of non-professional specialists traveling with the crew. They wondered how they would perform in an emergency, although payload specialists' responsibilities were limited. They did not need to know how to fly the spacecraft or how to handle the hundreds possible of situations that might occur. In most cases their training was sufficient since they were more like passengers than actual crew.

The book details the experiences of several early payload specialists and their work in the shuttle program. Many of the payload specialists were from foreign counties, including Germany, Canada, and Australia. Some of them had applied to become astronauts but had been rejected. The introduction of these non-astronaut passengers enhanced the visibility of the Space Shuttle program, and it also promoted the idea of a wider variety of possible individuals who might become a part of the program, rather than the previous group of astronauts which was limited to test pilots. Most of those who were payload specialists were Ph.D. scientists who were going to do scientific experiments in space. These scientific specialists included physicists, geologists, and oceanographers. They worked in the various Spacelabs that were launched by the shuttle. They also performed experiments on the effects of space on the human body. In addition to human experiments, rats that were brought along on one flight were later dissected to see how space travel affected their organs.

In April 1985, United States Senator Jake Garn flew as a payload specialist. Garn was a skilled pilot with over 10,000 hours of flight time, but in this instance, he was a passenger. The technical reason for Garn's presence was that of Congressional oversight since he wanted to see if the shuttle was worth its cost. In earlier years, it would not have been possible for a non-astronaut to travel into space, but Garn paved the way for other payload specialists who were not trained scientists. Later, Congressman Bill Nelson of Florida was interested in also flying on the shuttle He grew up around the area of Cape Canaveral and was fascinated by the space program. He became a committee chairman specifically because of his interest in space flight. In advance of his trip, Nelson went through extensive safety training. He was reasonably well prepared for an emergency, but he would need to follow the orders of the shuttle commander and the astronaut crew.

The Challenger disaster in January1986 was a reminder that space travel is inherently dangerous, and that

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even a small problem can have disastrous consequences. Among those on the shuttle was Krista McAuliffe, who was a schoolteacher from New Hampshire. She was dubbed the first "citizen in space." The assumption was that space travel was now safe enough for a lightly trained civilian to come along. She was chosen from thousands of applicants to highlight the importance of teachers in the nation's future. But the Challenger flew for only 73 seconds before being engulfed in a ball of orange flame. It would be three years before there was another shuttle flight, as NASA investigated the cause of the deadly explosion.

The book has very detailed descriptions of many of those who served as payload specialists, and they provide thorough background about their experiences. While a lot of this detail is useful, the work could use a stronger argument to hold it all together. Such an argument could emphasize the goals of the program and whether those were met. Yet even without a strong guiding thesis, the book has a plethora of information for readers. It would be useful for advanced undergraduates and those interested in the space program, especially the early years of the Space Shuttle.