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Hazards of space travel require cooperation in times of need

Richard Cullen says 2011 US law that established a bizarre, sweeping obstruction to Sino-US space collaboration was poorly considered

What is it like to be marooned in space? Two NASA astronauts are currently discovering the answer to this question. Barry (Butch) Wilmore and Sunita (Suni) Williams were meant to return to

Earth in mid-June after a planned eight-day mission to the American-supervised International Space Station (ISS). Unfortunately, they now will remain stuck on the ISS until 2025.

The coverage of this story has aptly remained relatively low-key across the Western media. Though it is not hard to imagine the alarmist hullabaloo emanating from those same media outlets had these been Chinese taikonauts stranded at the new Chinese space station.

In any event, according to an Associated Press report, the pivotal problem is that the astronauts' Boeing Starliner space capsule (being used for the first time to carry human passengers) is no longer fit to make the return journey after problems emerged following its voyage to the ISS in early June. It is suffering from a thruster malfunction that is related, we are told, to propulsion-impaired helium leaks. This sort of fault could cause serious difficulties in positioning the capsule for a safe return descent.

Two months later, NASA has still not revealed the root cause of the malfunction. An online discussion, not confirmed by NASA, has speculated that Boeing's outsourcing the manufacture of certain components to India may have resulted in an alternative metal being used instead of titanium in valve elements. Boeing, meanwhile, continues to express confidence in its Starliner space capsule.

NASA is prickly about suggestions that the American astronauts are stuck in space, but a former NASA executive recently said that they were "kind of stuck", though not stranded, as they had ample supplies and work to do.

However, rescue plans are afoot. An Elon Musk SpaceX Dragon, a four-person capsule, is due to leave the United States for the ISS in September. It is now proposed that it will carry only two new astronauts — leaving space for Wilmore and Williams to join the return flight of that capsule, planned for February. Prior to the arrival of that capsule, the Boeing Starliner capsule will need to be cut adrift (and left to float in space) in order to allow docking space for



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Reuters recently reported: "Starliner development has been set back by management issues and numerous engineering problems. It has cost Boeing \$1.6 billion since 2016, including \$125 million from Starliner's current test mission, securities filings show."

In fact, problems were identified with the Boeing capsule's propulsion system before its June takeoff, but it was still judged to be safe to launch.

Several hundred years ago, as European global maritime exploration rapidly advanced, those early international sailors faced extraordinary hazards, given (compared to today) limited navigation aids, reliance on small, wind-driven ships constructed from timber, and new, transoceanic sailing challenges. From this emerged the compelling norm that all ships, especially on the high seas, owed each other a duty of search and rescue.

This maritime tradition — providing assistance to people in distress at sea — became a part of customary international law. It was subsequently recognized in three international conventions, beginning with the Safety of Life at Sea convention of 1974 and ending with the United Nations Convention on the Law of the Sea in 1982.

In sum, these treaties confirm that: "All people in distress at sea must be provided with assistance, regardless of nationality, status or the circumstances in which they are found."

Sailing the high seas is very different from space travel, of course. But the reciprocally advantageous principles underpinning the binding norms to provide unconditional assistance, wherever possible, to anyone in distress at sea, bear thinking about.

In essence, seafaring nations collectively realized that, once at sea, they all shared a mutually beneficial interest in rescuing one another regardless of any other considerations that may apply, unless special circumstances, like any active war zone, precluded this.

This is a very widely observed principle entrenched by continuous practice and subsequently confirmed by codified international law.

The US and China are today's leading space explorers, though the Soviet Union was the original pioneer and remains active under Russia. Additional nations are now joining this enterprise, including India. Space exploration is set to expand more rapidly than ever before.

It follows that all nations involved in or set to be involved in space exploration share a prima facie common interest in working together to address the acute hazards involved in space travel wherever they can.

But are they doing this?

In 2015, Time magazine carried a story explaining The Silly Reason the Chinese Aren't Allowed on the Space Station. The foolish reason referred to in the headline was a law passed by the US Congress in 2011, "prohibiting American contact with the Chinese space program due to concerns about national security." This was an early step in the US foreign policy posture highlighted by Fareed Zakaria in the Washington Post in 2023, which was "forged out of paranoia, hysteria and above all, fears of being branded as soft."

Everyone involved in space travel, not least China (now running its own space station), will feel anxious to see the safe return of Wilmore and Williams from the American-supervised ISS. This episode also provides a graphic reminder to everyone that space travel remains not just very expensive but immensely complex. The risks for those who travel into space are less than they once were, but they remain acute.

Meanwhile, what the maritime tradition outlined above tells us is that sharing that space travel risk across all nations through mutual assistance agreements is one proven way that could help lower that risk.

It is also worth noting that there is no record (as far as I am aware) of any maritime nation passing a law banning high-seas search-and-rescue cooperation with any other nation.

So it is hard to disagree with Jeffrey Kluger, who argued against the 2011 US law banning China from the ISS in that Time magazine article. That law established a bizarre, sweeping American obstruction to Sino-US space cooperation. It was singularly unintelligent.

The views do not necessarily reflect those of China Daily.