

Spatial D Spinning

By Lt. Clay Shane

Finally, I was an SH-60B helicopter-aircraft commander-at-sea. After spending eight months at homeguard in various ground jobs, I had been given the opportunity to excel on the ship.

A light haze of snow was on the flight deck as we cruised in the Yellow Sea off the Korean coast. We were participating in yet another exercise.

The day's flight schedule had a few minor changes, and our flight was expected to be routine. The other HAC on the detachment had gone med-down for sinus problems, so I was double-bagging tonight.

"Sweet," I thought, "I can use all the nighttime flying at sea I can get."

I would be the HAC, and my OinC would get his NVG currency. Both of us had to requal on night dopplers, which we agreed would be easy. We had a thorough NATOPS brief and a good ORM discussion. We talked about how the zero illumination had caused problems the night before. I felt cocky and confident the inky blackness couldn't scare me. After the brief, I walked onto the flight deck and immediately started tumbling into the darkness of the black hole. It was an overcast night, and the only light was from a few lingering fishing boats. The conditions didn't matter, though, because we would be landing on the boat with NVGs. Vertigo, schmertigo!

As we threw on our dry suits, we discussed the gripes written in the book. One gripe was with the heading trim: "After 20 to 30 minutes, the heading gyro would precess about 30 degrees, knocking off the heading trim." This problem could seriously affect us at lower speeds—but only if it resurfaced. We needed to check the gyros every 10 minutes or so to make sure the system worked. I felt comfortable with the whole scenario. We were talking, briefing our concerns—we were ORM gods.

We found nothing wrong on the preflight, so we were ready to go flying. We hopped in for flight quarters and started the checklists. I found it odd, at the time, that the OinC kept asking me if I had tried the soup at dinner. I assured him that I had, but we should worry about that a little later.

We were airborne on time and without a hitch. I couldn't help but continue to pat myself on the back. We made a few sweeps around the area to make sure when we dropped the smoke, no South Korean fishing vessel would see our action as a sign of aggression. The area relatively was clear, and I remembered to periodically check the gyro—I was on top of things. We rolled through our automatic-approach checklist and threw out the smoke. The scenario was going according to plan.

I shot the first approach to the smoke with no problems. The aircraft did a great job, while I just hung on for the ride. I relinquished the controls to the OinC who did an approach short of the smoke so he could leapfrog closer the second time. We came up well short of the smoke and departed. As the helicopter gained altitude and airspeed, it was apparent we would overshoot the smoke on the second approach. We talked about our situation, and we were fine with shooting the approach into the inky nothingness. We continued to back up each other on the gauges during the second approach. The only mistake I made was to look up to see how dark it was outside. If I had just put my hands over my eyes, there would have been more light, and I would have been more comfortable. We departed without any problems. I finished my last two approaches and felt reassured I was the current guy in the aircraft.

The OinC had one more approach to do, and, again, we agreed to continue leapfrogging. The smoke would be dead soon, anyway. We began the approach, intently watching airspeed, altitude, and all the other instruments. When we were just about to be established in a steady hover, the master-caution light blinded us. We immediately sensed the problem most likely was with the heading trim, which we verified with the AFCS degraded light on the caution panel and by the heading cube on the control panel.

With the light stunning us for a split second, then

throwing my head down to fix the computer, I was amazed to find the Seahawk could fly in an inverted hover. Wait, it just felt like we were upside down—I'm glad I wasn't at the controls. I quickly scanned my instruments and mumbled something over the ICS about my head, jello, and an industrial-sized blender.

When I could focus on the attitude gyro, I saw a lot of white. We were at zero knots and looking up 20 to 25 degrees, with a little left wing down. Remembering to always believe the instruments, I still had to question what I saw. With a glance outside, I saw those few fishing boats we had seen earlier now were crossing the windshield from right to left.

I finally stumbled across coherency and was able to say, "Nose high. Spinning. Spinning."

The OinC quickly said he also was experiencing a bit of spatial disorientation and was pulling power. I agreed, saying, "Good idea."

We increased our separation from the water and flew out of the hover.

The crewman in the back, who also enjoyed the weird sensations of spatial disorientation, said we never had gotten below the 80 feet we had dialed in for the approach. While that information was comforting, it still left a lasting impression that we had lost the bubble for a split second.

In our NATOPS briefs, we routinely hear, "If you are experiencing vertigo or spatial disorientation, 'fess up." It is apparent after this incident, you have to confess to yourself before you can confess it to anyone else. We had covered everything out of the ordinary that had happened while hovering in our NATOPS and ORM brief, so, even if we weren't expecting our whole world to begin spinning, we mentally were prepared once the world started tumbling.

We returned with a good idea of what will happen when you have vertigo or spatial disorientation in a hover, and we'll be prepared if it happens again. Both pilots experienced spatial disorientation heading toward the realm of vertigo, and both pilots went to the instruments. Once we had all the facts, we made decisions that kept us alive, warm and dry. Spatial disorientation is not something to be taken lightly, and crews can do a lot to prepare for it with a good brief. 🛩️

Lt. Shane flies with HSL-51.