

DECEMBER 1999

Tilt your head (Wright State University, Dayton, OH; Naval Aerospace Medical Research Laboratory, NAS Pensacola, FL; Air Force Research Laboratory, Wright-Patterson AFB, OH): “Recent studies have shown that while flying under visual meteorological conditions (VMC) pilots tilt their head to keep the horizon stabilized on their fovea. This reflex, referred to as Opto-Kinetic Cervical Reflex (OKCR), may improve spatial awareness by establishing the horizon retinal image as a stabilized primary visual-spatial cue ... Pilots exhibit the OKCR under all tested levels of [field of view] and also make head yaw movements in order to keep the way point in sight during banking maneuvers. Pilots demonstrated stick reversal errors when transitioning from following a lead aircraft under both VMC and IMC conditions.”¹

CRM failures (U.S. Naval Safety Center, Norfolk, VA): “[O]ver 75% of both TACAIR and rotary wing [Class A] mishaps [1990-1996] were attributable, at least in part, to some form of human error of which 70% were associated with aircrew human factors. Of these aircrew-related mishaps, approximately 56% involved at least one CRM failure ... A larger percentage of CRM failures occurred during non-routine or extremis flight situations when TACAIR mishaps were considered. In contrast, a larger percentage of rotary wing CRM mishaps involved failures that occurred during routine flight operations. These findings illustrate the complex etiology of CRM failures within Naval aviation and support the need for ACT programs tailored to the unique problems faced by specific communities in the fleet.”²

DECEMBER 1974

Remembering Stan Mohler (society awards): The December 1974 issue contained no scientific articles. It consisted of an index to the year's articles and a compendium of details about the society, including a list of members of council, past presidents, fellows (including honorary), and affiliate and constituent organizations, among other details. One item of personal interest stood out, and that was the 1974 recipient of the Moseley Award, which was “established in memory of Col. Harry G. Moseley, USAF, MC, in recognition of his material contributions to flight safety. It is given annually for the most outstanding contribution to flight safety. Sponsored by the Lockheed Aircraft Corporation.”³ That 1974 recipient was Stanley R. Mohler, M.D. Stan was a colleague, friend, and mentor to me, particularly as many-time chair of our society's History and Archives Committee. It has been just over 10 yr and a month since Stan took his last flight (died September 15, 2014). Born in Amarillo, TX, on September 30, 1927, he served 2 yr in the Army, and after graduating from the University of Texas Medical Branch in Galveston in 1956, went on to work at the National Institutes of Health and was prominent in the development and support of civil aviation regulatory medicine. He served as director of the FAA's Civil Aeromedical Institute, chief of the FAA's Aeromedical Applications Division, and director of Wright State University's Aerospace Medicine Residency Program. He was a

member of the Aircraft Owner and Pilots' Association Medical Advisory Board and the medical panel of the Experimental Aircraft Association and served on NASA's Aerospace Medicine Advisory Committee. He was an airline transport pilot, flight instructor, and author, including the book *Medication and Flying: A Pilot's Guide*. Coming across his award was incentive for me to reflect on how he humbly led by example in our society, and how thankful I am to have known him and to have personally benefited from his friendship and mentorship.

DECEMBER 1949

The parachute (presented at the 20th Annual Scientific Meeting, New York, NY): “It has been apparent that we have interested ourselves more with the problem of safe escape from aircraft, using such devices as the ejection seats, and have forgotten that an aviator will always ultimately have to descend from disabled and uncontrolled aircraft with the parachute.

“We realize that the safe parachute descent problem is being reviewed, but it is likely to lapse into an inactive state because it is a less colorful problem. Let us not let it receive a low priority. The aviator will be needing a more dependable and comfortable descent via the parachute for many years to come.”⁴

Future of control (presented at the 20th Annual Scientific Meeting, New York, NY): “A major function of the science of aviation medicine has been and will always be that of predicting and solving the human problems associated with the expansion of flight into areas in which there is no corollary in human experience. In the past, our areas of study for the most part had some sort of boundary definition. In the early days, there was the altitude barrier imposed by anoxia. This barrier was soon pushed outward by use of supplementary oxygen. Later, another barrier was interposed by decompression sickness. This was surmounted by pressurization. Then the sonic barrier came along to limit our thinking and our study, as we were of the impression that this was a limitation of speed beyond which carriers could not travel. New methods of propulsion and new air-foil designs rather quickly pushed this obstacle aside. Now vast new areas are suddenly opened, and the challenge presented to us, in my opinion, and I am certain in the opinion of many others, this challenge will have to be met, not by selection or alteration of man, but by altering his position in the control chain. Rather than leave him in his position as activator of the controls, he will be relegated to a primary position of control and maintaining the control devices which ultimately determine the operation of the carrier. This change of position in the control chain will necessitate many revisions of our attitudes toward the operation personnel, especially in the realm of selection.”⁵

This column is prepared each month by Walter Dalitsch III, M.D., M.P.H. Most of the articles mentioned here were printed over the years in the official journal of the Aerospace Medical Association. These and other articles are available for download through the link found on <https://www.asma.org/journal/read-the-journal>.

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