

One of the ethical elements of aviation professionalism is the right of a well thought out risk. A risk in this occupation is not only the performance, but also the conditions allowing to improve professional mastery. However, risk is an instrument to overcome the natural human weakness before a danger. In this case, risk is the conscious psychological, protective action suppressing subconscious fear, and unpleasant sensations; it is the maturity test of the professional. It also means to be temporarily a 'Superman', an 'extraterrestrial', and this is the cosmogonic secret of the flying profession.

This state of the spirit, a lifting force of professionalism, is attained, mainly, by self-improvement, self-discipline, and self-development. On earth it is difficult to estimate the state of man in flight, and to render him aid. There follows, the importance of the role of inner culture of the professional when his above board behavioural norms are based on the awareness of his capabilities. This gives him the inner right to a personal initiative and planning the degree of complexity and the dynamics of acquired flying manoeuvres.

Actually, this quality, i.e., the spiritual autonomy, is an additional professionalism – psychophysiological readiness to vital activity in an unusual environment. This means that precise knowledge of aviation laws and rules of flying an aircraft, of the automated skills, of the physical strength of the body are still sufficient to assure professionalism. One needs healthy organs for a proper adaptation of the body to G changes, new estimation of time and space, for instant recovery from a faulty perception of spatial attitude, and to work under exposure of a hardy discernible noise from a useful signal. In other words, we need not only to teach man the required professional ingenuity, but also to constantly re-train him. Thus, to achieve a high-level professionalism, is necessary to be in ‘professional’ health, i.e., to maintain to sustained performance under exposure to frequent extreme factors, as those pilots face only in a specific flight environment. It should be noted that 12 to 18 percent of the aircrews experience severe obsessive illusions of ‘invested flight’ when flying in the clouds; more than 40 percent become familiar with a phenomenon of perceiving stars as aircraft navigational lights, and, at least 25 percent, the illusion of time-flow stopping, ‘stiffening’ of space, ‘puffiness’ of the horizon, etc.

For example, ability to sustain increased G forces during aerobatic manoeuvres, blood shifting to the lower extremities, and systolic blood pressure rising to 250 mm Hg are hemodynamic changes brought about by a normal physiological reaction of the cardiovascular system, but not essential hypertension.

When flying in a highly manoeuvrable aircraft, man sees the earth 'above' and sky 'below', and at the same time, being of sound mind, he feels that his pelvis is in the usual place. His overloaded consciousness must translate this quasi world into a real world. It is hard to imagine how a 90-ton aircraft may be landed on a runway, a speed of 350 km/hr, without awakening the passengers.