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REPORT FROM THE 32ND CONFERENCE ORGANIZED BY THE EUROPEAN ASSOCIATION FOR AVIATION PSYCHOLOGY (EAAP) TOOK PLACE IN CASCAIS (PORTUGAL), SEPTEMBER 26-30, 2016

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The leading subject of this year's conference was - Thinking High AND Low: Cognition and Decision Making in Aviation.

The conference organized by EAAP is a unique opportunity to gain new knowledge form the field of aviation psychology. The conferences that are organized by EAAP gather experts whose theoretical and practical interests are focused on minimizing the influence of the human factor. Besides aviation psychologists, there are also physicians, engineers, pilots and air traffic controllers among the speakers. The presented papers are therefore often interdisciplinary and have a broad perspective. Moreover, there were also experts form outside Europe; for instance, from the USA, Asia, Africa and Australia. This year's EAAP conference was a huge success and it was attended by over 230 participants from over 40 countries.

During the conference, a total of 14 sessions took place (most of them simultaneously) along with two discussion panels (Aviation Mental Health and Collaborative Decision Making). During the session on "Cognition and decision making", a number of presentations were given that dealt with the influence of psychological traits on decision-making during performance of aviation tasks; moreover, the topic of decision-making, as viewed from the perspectives of the group and the individual, was also discussed. Presentations that were part of the "Design" session focused on individual as well as on external factors influencing information processing in the complex environment of an aircraft cockpit (ATC). The UAV session was particularly well-attended, as it presented the factors influencing the effectiveness of UAV

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operators and the psychological consequences of such operations.

During the conference, the work carried out by researchers from the Institute of Aviation Medicine (Biernacki, Zieliński, Górska) entitled "Temperamental traits as predictors of performance in multitasking psychomotor task" was presented. This work met with a substantial interest, as it dealt with problems that can arise during selection of pilots and prediction of their performance based on self-descriptive variables.

The aim of our study was to assess the relationship between temperamental traits and human performance in a complex motor task that requires resistance to stress and the ability to switch between tasks. The results of our study indicate that low briskness (BR) and endurance (EN) with high perseveration (PE) (what in fact indicates a poor ability to switch between tasks and the tendency to maintain the reaction) are related to a less flexible behavior. People characterized by low BR and EN with high PE act more impulsively. They commit more errors, act more quickly and have fever correct responses. Such a configuration of these temperamental traits may cause problems with acting in and adaptation to highly complex environments

The subject of pilot selection was also brought up in other presentations. For instance, Odegaard, Land-Ree and Martinuseen in their presentation entitled "Personality assessment and pilot selection to the Royal Norwegian Air Force" described psychological assessments carried out in the Norwegian Air Force. They sought to identify personality profiles of successful candidates for pilots. Moreover, they also assessed the personality differences between candidates assigned for different types of aircraft (jet, helicopter, multi). The primary goal was to assess the possibility of predicting successful pilot training based on the personality traits differentiated by the Big Five model. There were 270 participants included in the study who were at the beginning of their basic aviation training. In comparison to fighter pilots, pilot candidates had higher scores on the scales of extraversion and conscientiousness and lower scores in agreeableness. In turn, fighter pilots were characterized by lower scores on the scales of agreeableness as compared to helicopter pilots and multi crew members. In conclusion, no significant relationship was determined between personality traits differentiated by the Big Five model and the effectiveness of aviation training. However, this study showed that the effectiveness of aviation training depends on many aspects that cannot be easily reduced to single factors. A similar topic, focusing on the prediction of aviation training outcomes, was also presented by Jamal, Pereira and Valente - "Performance prediction and characterization of the psychological profile".

As regards experimental studies, the study presented by Li, Lin, Braithwaite and Greaves (" The development of Eye Tracking in Aviation (ETA) Technique to investigate pilots' cognitive processes of attention and decision making") is worth mentioning. The aim of the study was to "develop a cost-efficient eye tracking technique in order to facilitate scientific research of cognition and decision-making in aviation". The results indicate that parameters associated with fixation (number and duration) are especially important when evaluating the processes of attention and decision-making in the cockpit. The analysis of eye movements can be helpful not only in assessing the utility of individual technical solutions but also in identifying potential threats and improving decision-making during the flight by providing important information and increasing the situational awareness.