SUMMARY

of MSc in Biological Regeneration Piotr Makarowski's doctoral dissertation:

Selected psychological variables of functioning in command post in maritime transport

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The doctoral dissertation raises the problem which is the impact of the human factor on the efficiency and accident rate in navigating sea vessels. The human factor was narrowed to the features of the Big Five, stress and risk.

It consists of an introduction, two chapters and 27 sub-chapters, a bibliography and an English-language summary.

Problem:

The problem raised at thesis relates to the issue of optimizing the operation of seafarers, mainly commanders, in various complex, difficult situations caused mainly by weather, and different factors such as atmospheric, geographical, economic, etc ..

Research, as indicated in the theoretical part of the thesis, suggests that the human factor plays the significant role in the process of performing complex tasks, especially in non-standard conditions, such as sea cruises, expeditions, air transport.

Therefore, the questions regarding the optimal selection of people who perform specific tasks in complex often unpredictable conditions, are justified. From a psychological perspective it is essential to ask about the personality profile, a constellation of subjective characteristics (personality, temperamental, cognitive, emotional). All of the information received, gives a greater guarantee for responsible, even optimal performance of complex tasks

The analysis of literature points out how important it is to continue the research, where personality traits, coping with stress as well as the tendency to risky behaviors are taken into account. In this thesis a specific research challenge was undertaken

with the conviction, that it would bring new reasons regarding the importance of the broadly understood human factor in the quality of performing complex tasks in marine conditions. In other words, it is about creating the personality profile of a person experienced at work, on command position (captains), who performs their tasks most effectively on simulators. Moreover, the examination undertaken may indicate such "profiles" of captains, who in natural conditions can make decisions which result in serious collisions or even catastrophes

As far as the difficulty of the profession is concerned, the question of selection of nautical art adepts is reasonable here. Is it possible, at the level of recruitment to maritime universities, to use some psychological criteria in order to eliminate people, who may ineffectively function in command positions in the future, and to promote those, who present potential to become a good commander of a vessel. The results of undertaken research project may also be useful to improve or enrich the strategy and educational process of future commanders by linking the effects of education and work on their personality.

The purpose of the research was to check what personality traits, stress and risk (taken separately and in the mutual constellation) are related to the quality of performing specific tasks during exercises on the maneuvering and navigating simulator. The legitimacy of placing such a problem, and then verification of the relevant hypotheses, has its justification in the research presented in the theoretical part indicating the role of personality traits included in the Big Five model in the predictiveness of the quality of work at sea (simulators). It was also assumed that the "enrichment" of the subjective variables model (the Big Five) with risk and stress factor (which also has its theoretical justification) can increase the predictivity of work quality on simulato (job quality is operationalized by measuring the number of errors on the maneuvering and navigating simulator), and thus the quality of tasks performed in real conditions.

Results:

1.

Master mariners and navigation students making fewer mistakes on the maneuvering
and navigating simulator have a resilient type of personality.

2.

Master mariners and navigation students making fewer mistakes on the maneuvering
and navigating simulator have low level of emotional tension, external stress
and intrapsychic stress.

3.

Master mariners and navigation students making fewer mistakes on the maneuvering
and navigating simulator are characterized by an average level of instrumental risk
and a low level of stimulus risk.

4.

Lower level of extraversion and neuroticism and the higher level of conscientiousness
are important predictors on the basis of which we can predict, that the navigation student
may become in the future the captain who commits fewer navigating error on the
maneuvering and navigational simulator.

5.

Too high level of conscientiousness (10 sten) for master mariners may result
in interpersonal conflicts during the cruise and the so-called effect of captanosis.

Discussion of results:

The obtained results make it possible to correct errors made on the maneuvering and navigational simulator by drawing attention to the personality traits, stress and risk, and what constellations of these features influence the final result during maneuvers. In the maritime transport, trainings on Multi Crew Cooperation should also be conducted.