

EMOTIONAL INTELLIGENCE AND COGNITIVE ABILITIES

– a study on navy personnel –

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Abstract: *The present research is part of an ample project which laid the foundation of our Phd thesis (The Incidence of the Emotional Intelligence on the cristalisation of the personologic profile of the navy officer, 2007).*

The study deals with the interaction between a set of constitutive variables of emotional intelligence and another set of variables in the area of cognitive abilities (of general intelligence) with their structural function in the whole personological profile.

1. ARGUMENT

During the last two decades, two conceptions had a great impact in scientific work related to cognitive abilities: H. Gardner's theory about multiple intelligences (1983) and R. Bar-On's theory about emotional intelligences (1996).

Gardner's main criterion consists in the real existence of seven classes of human activities which confirm seven types of intelligence: linguistic, musical, spatial, logical – mathematics, kinesthetic, inter-personal and enter-personal intelligences.

Bar-On's main criterion consists in the real existence of three classes of process of psychic working: cognitive, affective and volitive. The connection between the two key-notions is very closed, both intelligent resolution (H. Gardner) and emotional intelligence (Bar-On), involve an aptitude functional structure of the processual nature: rationality and emphatetical experience.

We stated in a *synthesis* the results of two micro-researches on emotional intelligence.

An essential aspect has not deliberately been tackled until now. In the light of an investigation perspective mostly or almost totally oriented towards the *structure psi* as far as its consistency is concerned, the risk of being frozen in the project or the absolutization of the consistency aspect was very close. Therefore, we tried to find a way, even if indirectly, to combine the structural procedure with the evolutionary one. A methodological discussion followed by a concrete „solution” related to this requirement belongs to M. Golu (2004, p. 29-35). We believe that we have been helped in this undertaking, first and foremost, by a complex quality such as the research lots. In our case, it happens that during an average time period, university preparation/education (in the Naval Academy), training, specialty and civic education/instruction, the social and moral integration, taking into account the important results obtained in time, have the power to form high level specialists, strong and enduring characters and personalities with a high integration coefficient. We would also like to add the virtues of the not sufficiently emphasized entrance examination with highly psycho-pedagogical and psycho-social valences through which the formative process of expected competences is facilitated by an essentially scientific selection. On these grounds we tried to confer a verisimilitude coefficient to the methodological hypothesis according to which the three sample subjects, two of navy students, the former being in their first year of university study – hardly involved in a semester of university activity, the latter *graduates* of the Naval Academy and a third sample comprising *officer-instructors*, can constitute three state references, in three essential or crucial time sequences – the undergraduate period, the graduation and the embarking upon the officer profession. The fact that the officers can represent a reference – a developmental/formation model, „product” of high quality in the military (navy) life is undoubtedly true; the fact that the junior students represent the beginner partrait as a result of the entrance examination selection is also obvious, the fact that the best graduate students could represent the level-image of half way – could be sustained less by evidence arguments but

more by risk centring (however, the evidence would gain a greater significance if we knew the percentage of “failures” on a longer term).

From the point of view of the researcher aware of the fact that the successive states investigated are not belonging to the same subjects scrutinized longitudinally, there remains the subjective belief that they are to find, in the end, that the three samples have a set of essential common traits/features, and a set of specific traits wholly justified in accordance with each other's „statute”. The confirmation of this hypothesis is meant to confer to this methodological coordinate the touch of verisimilitude. This is not a personal invention. The procedure has already been employed by the Psychology Institute, with three similar „step” samples of age/qualification, as for instance junior and senior students at polytechnics compared to inventors (Beatrice Balgiu, 2003, in a creativity research); pupils in the final year at the pedagogical high school, fourth year students at pedagogy/psychology faculty compared with school advisers/counsellors (Rodica Buruian, 2000, in a research on counselling competence) or with selected teachers (A. Harrati, 2001, in a research on didactic competence). In all cases there have been obtained the most convincing results. It goes without saying, that the only fact that things developed „in favour” of the researcher might place this procedure in its own right. On the other hand, we have not found another chance to obtain a number of results under the sign of the possible if not the probable. We reiterate the fact that the choice/trial is tightly/strictly dependent on at least one main exceptional quality of reference samples in each research.

Proceeding in this manner, as we have already seen, in the primary analysis, we started the research project, we cautiously followed the first part of the results analysis and we have kept our optimism for the validating moment (corner stone) through factorial analysis confirmation.

2. EMOTIONAL INTELLIGENCE AND COGNITIVE ABILITIES

Considered in the most general way, the dates emphasize, incidentally, the fact that the number of significant corelations for each of the three lots is equal with 33, only the senior students achieve only 32, that means the same proportion each (namely 82,50%, 80.00% respectively). We believe that the ratio/proportion is higher than the expected results. We could explain this fact through the common nature of the two dimensions intercorrelated under the proportion of the cognitive component, in spite of the difference in nature: expressive in the general intelligence and impressive in the emotional intelligence.

Still on a general view, with the same data, but shifting the focus on the ratio between the number of mean and weak/low significant correlations we have the following results:

➤ the junior students display 12 correlation coefficients with higher significance against the double number of coefficients with low significance (which prevails)

➤ the senior students present a reverse image – 19 mean correlation coefficients (including two high ones) and 13 low correlation coefficients;

➤ officer-instructors, on the other hand, present an image with sub-proportions of significant coefficients almost equal – 17 and, 16 respectively.

An undoubted rationality seems to impose step by step in the issue of the equilibrium “formulae” between the intercorrelation proportions: from a proportion of prevalence of low correlations (junior students) to a one of changed prevalence, namely the prevalence of average and high correlations (senior students) to an equality proportion, seemingly optimum (officer-instructors). It is undoubtedly clear that this table of cognitive and attitudinal-emotional dimensions intercorrelations is shaped during the process of instruction-education-professional activity. From a table of relative weak/low and diffuse intercorrelations to a more explosive one, with reversed „poles” – expression more than probable of an optimistic mode of maximization of the interactionist cognitive potential and of the individual and group responsibilities for self-development, self-modelling, a final mode of exploring the data is the double view from the perspective of the general intelligence variables and of the emotional intelligence ones.

➤ for *junior students* we „read” the fact that the abilities of general intelligence are „equal” (8 correlations for verbal, figure and numerical ability; an increasing tendency is recorded for the intellectual vivacity, by 9 intercorrelation coefficients. We tend to interpret the result as suggesting a global state of interactional disponibility, a diffuse and slightly differentiated one, also taking into account the prevalence of low significant coefficients. This may be the dispositional field which prones to be modelled in a certain way, in the direction beneficial to/for the human and professional formation. We should not forget that the IQ level is considerably high;

➤ for *senior students* on the grounds of the high proportion of significant intercorrelations, the proportion of numerical factor tends to decrease (7 significant correlations), the rest being under the sign of equilibrium;

➤ for *officer-instructors* an image easily qualifyable as optimaum and in compliance with the significant results of the primary analysis can be established. Namely, a hierarchical order of intelligence abilities in accordance with the weight of significant correlations which imposes a consistency irrespective of the analysis procedure – primary or secondary – namely, verbal intelligence (=9), figure intelligence (=8), numerical intelligence (=6) and, finally, intellectual vivacity (=10). Once again, the sign of the equilibrium and of the model design of general intelligence variables is represented by the officers.

The first look from the perspective of the general intelligence abilities offered more clear cut differentiations since each variable could be positively connected, theoretically, with other ten emotional intelligence variables. This second look, from the perspective of the emotional intelligence components reveal a less discriminating image, each variable being able to correlate with maximum four general intelligence abilities. However, we can realise some more „hidden” aspects of incidence:

At the top with 4 significant correlations, but simultaneously present in all three classifications are the following QE components: *empathy A* („test” Bar-On), *empathy B* („test” Segal) and *socialization*. Let us try a rounding off like: **the sine qua non condition of designating empathy as a specific trait of emotional intelligence is socialization**. It is very possible that this fundamental relation should be correct because the lack of a high degree of socialization of the personality implies an emotional participation in the different circumstances of human interactions, of too high intensity and too low stability.

The fact that this conclusion has its degree of verisimilitude is proved by the context of variables intensely interactionist within

which there are present the three variables common for each research sample.

➤ For the junior students other components are added to the top: emotion awareness, emotional (self)control, and social ability, to which two other possible components of emotional intelligence can be added realism and optimism with a lower number of intercorrelations with the general intelligence variables. The interactionist context in this case includes, first and foremost, two variables belonging to the psychological mechanism (awareness and selfcontrol) and one variable referring to social abilities. The interactionist context annexes two variables of secondary plan the nature of which send us explicitly to the process abilities – the one, realism, which structures cognitive direction (capacity of objective appraisal), and the other, optimism, which structures attitudinal-affective direction. We could say that at this moment of configuration of cognitive vocation at the junior students there takes place a firm process for the basis of the emotional intelligence. We have to take into account that here the low intercorrelations prevail.

➤ For the *senior students*, graduates of the Naval Academy, we can find at the top of the cognitive interactivity, with maximum possible intercorrelations, together with the three common variables, other four ones – *realism* and *optimism*, *awareness* and *emotional control*, raising to five the number of top common variables from a narrower point of view – the one of comparing the groups of students among them; *the emotional control*, with 3 significant interactions, therefore, coming from the secondary plan, is attached to the „complete” top variables offering what we have previously qualified as a fact of „explosive” disponibility for intercorrelational organisation of the special cognitive vocation which is the emotional intelligence. It is certain that this vocation shows – for the senior students – the functioning of the configuration process which includes within the context governed by the two variants of empathy and socialization, the components related to the cognitive and attitudinal-affective orientation (realism and optimism), as well as the mechanism of awareness and emotional control. We cannot overlook the fact that in this case the mean high and very high intercorrelations prevail.

➤ For *officer-instructors*, apart from the QE components common to all the three groups – two *variants of empathy* and *socialization* – two more having the maximum possible significant intercorrelations – *realism* and *optimism*, all five being common from the narrow point of view of comparison with the group of senior students. Coming from the second plan, with three significant correlations, *awareness*, *emotional control* and *social ability*, admitting *anxiety* as well (with the same number of intercorrelations, but with a low level of significance) completes the compact set of emotional intelligence component in a whole in which, to the core components (common to all groups) process components (cognitive and attitudinal-affective orientation, that is realism and optimism) are added with maximum of significant intercorrelations, these being in the secondary plan for the junior students, but integrated in the foreground for the senior students, with which the officer-instructors share more top comparative components with the other group. We feel that we have obtained for the officers a more rationally structured configuration, more logically articulated and more flexible since it „accepts” the presence with low level significance of „positive” anxiety as well.

For all the lots *motivation* does not integrate in „good configuration” towards which it seems to tend the process of crystalization of the emotional intelligence components from junior students to officers; this appears in all cases with a single significant intercorrelation, of low level, having a doubtful sense with the student groups (correlative with the numerical intelligence of the first group and with the figure intelligence of the second group), but with the sense of field

affinity for the officers (with intellectual vivacity). On the whole, this confirms the statement we reached in our primary analysis (motivation is almost impossible to grasp in its essence only through three items). Finally, *anxiety* is „rejected” by students in its capacity of „legitimate” component of emotional intelligence, in spite of the permissiveness exposed by the officer-instructors.

To sum up, the incidence of *emotional intelligence – general intelligence*, substantiated as follows:

- Their common fundamental factor, namely their cognitive essence, expressed in propositions enhanced by significant intercorrelations;
- The probability demonstrated enough (if not the certitude) of a process of configuration from the genuine portrait of junior students, through the „explosive” stage of the senior students, towards the most probable state of organization - more balanced, hierarchically levelled and

open (guaranteed attributes of efficiency and effectiveness) for officer-instructors;

➤ The particular affinity of the emotional intelligence component with two and the most characteristic abilities of the general intelligence – verbal intelligence and intellectual vivacity, under which the structural function of cognition in the more general domain of personality is enhanced;

➤ The elevated consonance, as latent disponibility (for junior students) between the two variants (variables, components) of empathy – one for each emotional intelligence „test” - and the abilities of the general intelligence mentioned above, consonance consolidated for the senior students and particularly for the officer-instructors, as elective affinity or complementarity within the inner plan and determined by the degree of socialization on the formation plan.

➤ The effect of the psychological incidence studied here appears as one of reciprocal „enhancement” of the interactional „vocation” significant insertion in the area of the personological profile of the subjects.

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