

COMMENTARY

**On the methodological problems related to the research
on the guessing of test responses**

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Research articles on the topic of guessing of test responses (which were considerably numerous in last seven decades) disclose findings that probably only partly satisfy their authors, as well as those psychologists and psychometricians who deal with this problem for a longer period of time. As a first, relationships between some personality characteristics or „traits“ and a variable, usually termed in literature as „guessing proneness“ or „risk proneness“, *are never high*. Besides, practically every author reports on a relationship with some other personality characteristic. Certainly, a reason for this can also be the fact that each author uses specific personality tests. However, if there existed some „massive“ or striking phenomenon, then different tests should indicate a *similar* trend, at the least - but they scarcely show that; moreover, relationships have been found even with some characteristics for which one could hardly give theoretical grounds (e.g. with psychoticism). A need for the *cross-validation* inevitably comes out of this fact, i.e. an evaluation of obtained coefficients on two independent samples, in order to check out whether it is really just an artefact or, nevertheless, some real although poorly expressed characteristic. To my knowledge, only one research of this kind has been conducted thus far (still unpublished), where it was found that there are high correlations between different indicators, obtained in two occasions and with different groups of subjects (regardless of whether those indices actually show something named the „risk proneness“), and that indicators themselves were also considerably reliable measures of their object (whatever it was), since split-half coefficients for some verified indexes (even items - odd items) were very high (0.91-0.97).

It seems that the research of this kind is still accompanied by several important *methodological* problems:

(a) What is the best *criterion* for the „guessing proneness“? Authors use different criteria, and in one study even seven criteria have been used, where - each of them, taken separately - could be appraised as sufficiently logical and justifiable, but, among those criteria, intercorrelations „of every kind“ (high, moderate, low and zero) have been found. Since many of these criteria take into account false responses, one can put a question whether subjects should, or should not, previously be cautioned that false responses will be penal-

ized. If it was, in fact, a certain form of risk taking, then the risk taking would probably be better manifested in situations where subjects are cautioned not to try guessing „at random“. If we assume that a personality characteristic, termed so far as „guessing proneness“ or „risk proneness“ actually exist (although many authors consider that „guessing“ or „risk proneness“ on tests has nothing in common with risk taking in some other situations!), thorough studying on the problem of *criteria* still remains a necessity. In my opinion, among other things one more parameter should by all means be included, in addition to indexes in use, namely, the parameter of the *level of subjective confidence* (suggested by Z. Bujas on one professional meeting). Although existing findings on the relationships between confidence level and different risk taking indexes are not particularly encouraging, in my view, as a criterion of risk taking we should employ only those false responses that subjects actually give (i.e. items that have not been omitted) *in spite of their low level of confidence regarding correctness of an answer*. Of course, it should previously be examined isn't there a certain general characteristic of subjects related to high or low level of confidence (what has been suggested by some research findings), i.e. are there, possibly, persons with predominantly high estimates of confidence in every decision they make, and also, those with predominantly low confidence level. If this proved to be true, neither „confidence level“ would be a useful novelty in the criteria of risk taking. A fact which, to a certain degree, also speaks in behalf of a doubt regarding the level of confidence, refers to the findings on relatively low (0.35) correlation between the level of subject's certainty in his own answers, and his actual knowledge (assessed through the complete test). (Unpublished results).

Namely, an evidence on *general* differences in subjects' confidence level sounds disturbing, i.e. subjects high in confidence at true responses are also high in confidence at false responses, and subjects whose confidence level is low, are low in confidence as at true, so at false responses! (Unpublished study).

(b) An *opportunity* for guessing is inversely related to subject's actual knowledge: the less one knows the subject-matter that test is related to, the greater are his chances for guessing; on the contrary, a subject whose knowledge is excellent, practically has no chance for guessing at all. It follows that test items should be selected in such a way that chances for risk taking are approximately equal for all sub-

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jects. In other words, items should be equally unknown to each subject (what is hard to achieve in the construction of achievement tests). In one of studies this was partly evaded since all items were really unsolvable, but it still seems to me that knowledge (and intelligence in this case) caused that subjects had unequal opportunities for guessing.

In my opinion, the most serious problem relates to the question: *What is actually meant by a concept of „guessing proneness“ or „risk proneness“?* If we define risk taking as taking an action where, one who undertakes it, is not sure will that action succeed, but is aware that success will have positive, and failure negative effects, then one can put a question to what extent the problem of „guessing in tests of knowledge“ *is indeed related to risk taking*: from my extensive experience with tests of knowledge of „true-false“ type (where very large interindividual differences in „guessing proneness“ can be found), I can affirm that subjects with large number of omitted items (with an explanation that they want to put an answer only if they feel sure) *have many false responses, too.*

It has also been found that many subjects at their *false* responses have *maximum* degree of confidence (100%). Therefore, it seems possible that here we deal with some phenomenon other than „guessing proneness“, i.e. that maybe this is not at all a question of a *personality* characteristic (in its narrow sense), but of *some cognitive* characteristic, i.e. a *subject's perception of his own knowledge*: a subject who is certain that he *knows* an answer to the question, *does not risk at all while answering!* That answer can, of course, be false, and since false responses are contained in many of applied „guessing“ indexes, it follows that, within an index, we use an information which is in no way associated to something like guessing or risk *proneness*. Rather, it just reflects a subject's incorrect appraisal of his own knowledge.

These few suggested ideas show me that those of us, who were somewhat more interested and engaged in this problem, still have not a full understanding on the *nature* of the phenomenon when speaking of the „guessing proneness“ or the „risk proneness“ in test situations.