$(R^2=0.253;\beta=0.484)$  along with the number of glucose controls  $(\Delta R^2=0.198;\beta=-0.446)$  accounted for 44% of the variance of HbA1c. *Conclusion:* Rebellious style, might difficult to adhere to the doctors strict control program and thus modulate Glycosylated Hemoglobin variations in adults with type 1 diabetes. These findings support an individual differences approach to better understand the differences in medical treatment outcomes of type 1 diabetes and could help to identify and develop interventions programs for those more rebellious

patients in order to gain metabolic control adherence.

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## The International Cognitive Ability Resource: The case for its broader use and collaborative development

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A prominent goal of individual differences research is the development and testing of models which predict important life outcomes. Prior work suggests that the most predictive models for many outcomes integrate multiple dimensions of individual differences and that three of the most informative dimensions are temperament, cognitive abilities and interests. Of these three, largescale assessment of cognitive abilities has been the most problematic due to methodological constraints. Recent and ongoing development of the public-domain International Cognitive Ability Resource is intended to address these constraints. In this talk, we will describe the procedures being used to develop this resource and summarize progress to date. Then, using online data collected with synthetic aperture personality assessment ("SAPA") methods (sapa-project.org), we compare the predictive utility of integrated individual difference models against those which use only the independent dimensions (of temperament or interests or ability) in the context of academic, occupational and health outcomes.

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# The inverse problem in factor analysis – Implications for personality research

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Factor analysis is an important tool in personality research which aims at identifying the latent factors that generate the covariance structure of observed data. The "correct" number of these factors is usually derived from the vector of eigenvalues of the observed correlation matrix. This type of inference aims at solving the "inverse problem" of factor analysis, which is the attempt to infer a correct factor model from this correlation matrix. The aim of the present study was to analyze this problem with simulated data. It can be shown that different factor models may imply the identical correlation matrix, thus there is no unique solution to the inverse problem. Consequences for the interpretation of factors in personality research are discussed.

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#### The Personal Sovereignty as a boundaries phenomenon

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The purposes are to substantiate the concept "Personal Sovereignty" (PS), present a new questionnaire to measure it, and show

system of connections of PS. The Personal Sovereignty is an agency's ability to keep and save boundaries of his/her psychological space. This concept seems to be very heuristic in describing everyday life because it references to environmental languages used by everybody. Theory of PS discovers evolutional and social meaning of PS. To measure the sovereignty level there was a "Personal Sovereignty Questionnaire-2010" (PSQ-2010) developed. Content validity, divergent validity, and consistency are tested on the sample of N=1073 respondents, Mage = 23. The questionnaire has been standardized, profile forms have been developed. The PSQ-2010 was meaningfully related to the Big Five, positively connected with personal belief in a just world and self-trust. There was also proved the difference between successful and adverse, criminal and law-abiding persons in some of PSQ-2010 subscales.

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## The psychosemantic approach to the NEO-PI personality traits

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The purpose is to describe the psychosemantic approach to personality traits, which is based on the meaning system. Meaning is defined as cognitive contents focused on an input, assessed by the Meaning Test. The psychosemantic approach is based on analyzing the relations between trait assessments by questionnaire and the meaning profiles based on the Meaning Test. The study deals with applying the psychosemantic approach to the assessment of the five major traits of the NEO-PI. The participants were 450 undergraduates who were administered the NEO-PI and the meaning test. Analyzing the relations between the meaning profiles and the trait scores yielded five profiles of the traits in terms of meaning variables. The trait profiles are distinct but indicate more similarity between some of the traits than others. The study illustrates major methodological and theoretical advantages of the psychosemantic approach to traits which could complement the standard assessment method.

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### The relationship between intelligence and creativity: New support for the threshold hypothesis by means of empirical breakpoint detection

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The threshold hypothesis is a prominent notion concerning the interplay between intelligence and creativity. It assumes that above-average intelligence represents a necessary condition for high-level creativity. The threshold hypothesis is commonly investigated by splitting a sample at a given threshold (e.g., 120 IQ points) and estimating separate correlations for lower and upper IQ ranges. However, there is no compelling reason why the threshold should be fixed at an IQ of 120, and to date, no attempts have been made to detect the threshold empirically. Thus, this study examined the threshold hypothesis by means of continuous breakpoint detection. In a sample of 297 participants, we found thresholds for measures of creative potential but not for creative achievement. The height of the intelligence-threshold depended on the measure of creative potential: the more demanding the criterion, the higher the threshold. The results help to explain some of the discrepancies in previous research.

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