

PLENARY LECTURES

OPEN SCIENCE AS A FRAMEWORK FOR PSYCHOLOGICAL RESEARCH

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Open science has become the most important goal in contemporary scientific community, whose achievements would contribute to the visibility of scientific results, significant social and economic benefits, as well as to supporting the development of new research. Psychology provides a significant boost to the development of open science, with a large number of researchers participating in replicability studies, pre-registering their research plans, sharing datasets and creating new scientific research frameworks, such as “citizen science”. Serbian Open Science Platform, adopted by the Ministry of Education, Science and Technological Development, requires that Open Access is mandatory for all publications resulting from publicly funded research. The Platform recommends that primary research data should be deposited in open data repositories. Adequate preparation of research data for reuse assumes that the data is findable, accessible, interoperable and reusable. These requirements are known as FAIR data principles. Existing repositories, such as Mendeley, Open Science Framework (OSF), as well as search engines, such as Google Dataset Search or Elsevier Data Search, are enabling open data management. A behavioral genetics cross-cultural study can illustrate the usefulness of open data in psychological research. The main objective of this study was to examine the contribution of genetic and environmental factors to the Five-Factors Model personality traits across three cultures – Croatian, German and Serbian. German dataset is deposit at GESIS Data Catalogue repository. After signing of the contract about rules for using these data, a license was obtained, and their database was included in the cross-cultural study. Croatian dataset was obtained by personal contact. Participants were 1006 monozygotic (MZ) and 710 dizygotic (DZ) volunteer general-population twin pairs from Croatia, Germany and Serbia. Multivariate twin modelling was used to explore the nature of the phenotypic associations between personality traits in three cultures. Results showed that the relative contributions of additive genetic and nonshared environmental factors to the variance of

all FFM dimensions have almost identical pattern in the German, Croatian and Serbian samples, confirming the heritable basis of the personality traits, which are consistent with previous results of behavioral genetic studies. The most important result of this study points to different patterns of common and specific genetic and environmental effects on personality traits as well as different patterns of genetic correlations across the three cultures. This study demonstrates several key principles of open science, such as “citizen science”, reproducibility and data sharing.