

behavior to increase infinitely. Due to the fact that this is neither possible nor plausible a nonlinear model helps to predict the behavior accurately.

PA22 Personality, health, and brain integrity: the Lothian Birth Cohort study 1936

Booth, T., University of Edinburgh, UK
Möttus, R., University of Tartu, Estonia
Royle, N., University of Edinburgh, UK
Murray, C., University of Edinburgh, UK
Valdes Hernandez, M., University of Edinburgh, UK
Munoz Maniega, S., University of Edinburgh, UK
Starr, J., University of Edinburgh, UK
Bastin, M., University of Edinburgh, UK
Wardlaw, J., University of Edinburgh, UK
Deary, I., University of Edinburgh, UK

We investigated the associations between the broad traits of the five factor model (Neuroticism, Extraversion, Openness, Agreeableness and Conscientiousness) and whole brain integrity as measured by atrophy, white matter lesions (WML), and white matter tract (WMT) integrity. Further, we considered whether any such associations were mediated by health related behaviours (Smoking, drinking, diet, physical activity and BMI). Participants ($n=529$ to 565 ; mean age 72.7 years, $SD=0.7$ years) were drawn from the Lothian Birth Cohort 1936, who had completed a self-report personality inventory, a questionnaire on health related behaviours, and underwent an MRI from which the measures of brain integrity were derived. Correlational analyses showed significant associations between Neuroticism and WMT integrity ($r=-0.11$, $p<0.05$); Agreeableness and WMT integrity ($r=0.13$, $p<0.01$) and atrophy ($r=-0.18$, $p<0.001$); and Conscientiousness and WMT integrity ($r=0.20$, $p<0.001$), atrophy ($r=-0.13$, $p<0.01$) and WML ($r=-0.11$, $p<0.01$). Multiple regression controlling for age and sex showed that only Conscientiousness remained as a significant predictor of WMT integrity ($\hat{\alpha}=0.15$, $p<0.001$), atrophy ($\hat{\alpha}=-0.11$, $p<0.01$) and WML ($\hat{\alpha}=-0.12$, $p<0.01$). Mediation analysis suggested that health behaviours mediate some, but not all of the direct effect of Conscientiousness on whole brain integrity. The current study provides evidence of the association between Conscientiousness and the integrity of brain tissue in ageing, an effect which is not fully mediated by major health behaviours known to impact upon the integrity of the brain.

PA2 Do men vary more than women in personality? A study in 51 cultures

Borkenau, P., Martin-Luther-University Halle-Wittenberg, Germany
Terracciano, A., Florida State University, USA
McCrae, R.R., Baltimore, USA

Do men vary more than women in personality? Evolutionary, genetic, and cultural arguments suggest that hypothesis. In this study we tested this hypothesis using 12,156 college student raters from 51 cultures who identified an adult or college-aged man or woman whom they knew well, and described that target person on the 3rd-person version of the Revised NEO Personality Inventory. These ratings were analyzed using hierarchical linear modelling. In most cultures, male targets varied more than female targets in Extraversion, Openness to Experience, Agreeableness, and Conscientiousness, but not in Neuroticism. Moreover, ratings by female informants varied more than descriptions by male informants, which may explain why higher variances for men are found in descriptions by others but not in self-reports of personality. Higher variances were found in more developed countries even if data quality was controlled, and the effects of target sex were stronger in more individualistic societies. That may reflect that more individualistic cultures enable a less restricted expression of personality dispositions resulting in larger variances, and particularly so among men.

PA10 The predisposition to the use of technology: when the past affects the present in user interaction

Borsci, S., Brunel University, UK
Federici, S., University of Perugia, Italy

The user competence in interaction studies is often analyzed as a domain-specific knowledge that is dependent on the system in use: the user's level of expertise in use. We propose a bi-dimensional construct of user interaction competence by providing experimental evidence that not only the expertise is able to affect the interaction, but also the predisposition to the use of the system. With the term predisposition we are referring to those individual skills and attitudes (general knowledge) that are independent from the system under evaluation. It is a cognition grounded in multiple ways (simulations, situated action, and bodily states) which re-enact perceptual, motor, and introspective states acquired during experience with previous technologies stored in memory and characterized by differences in personality. We aimed to measure the effect of the predisposition to use as an independent variable affecting both experts' and novices' interaction, together with their level of expertise. Two experiments were carried out with 180 students. In the first experiment, 50 novice users evaluated a website in free condition and 50 through thinking aloud. In the second experiment, 40 trained and 40 non-trained users evaluated 8 websites with the same method of the first experiment. Our findings show that, independently from the level of expertise in use, the participants relied on their predisposition to use for interacting and evaluating the system. Those results, overcoming a uni-dimensional perspective only based on the expertise in use, demonstrate the validity of a bi-dimensional construct of user competence.

PO2-11 The role of self-criticism and insecure attachment in career indecision