

GEOGRAPHIC PSYCHOLOGY

Markus Jokela

markus.jokela@helsinki.fi

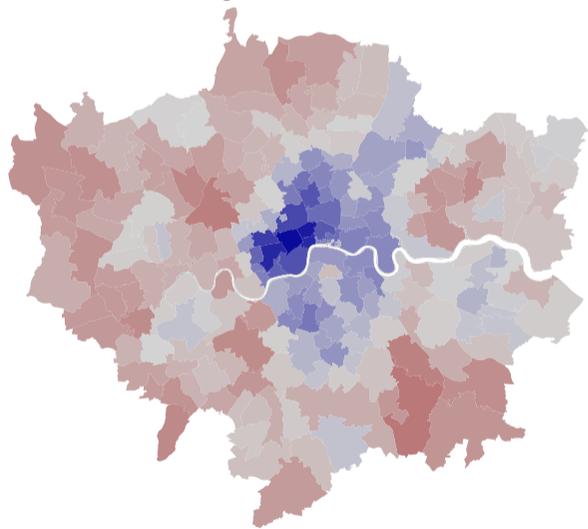
Many demographic characteristics show predictable geographic patterns across regions. Geographic analysis is also an established method in many other fields besides demography, for example, in spatial epidemiology and econometrics. However, the geography of psychological phenomena has received less attention. We have shown that regionally aggregated psychological traits, such as personality traits, are indeed systematically distributed across space, and these distributions are related to underlying sociodemographic factors of the regions.

1. Spatial distribution of personality

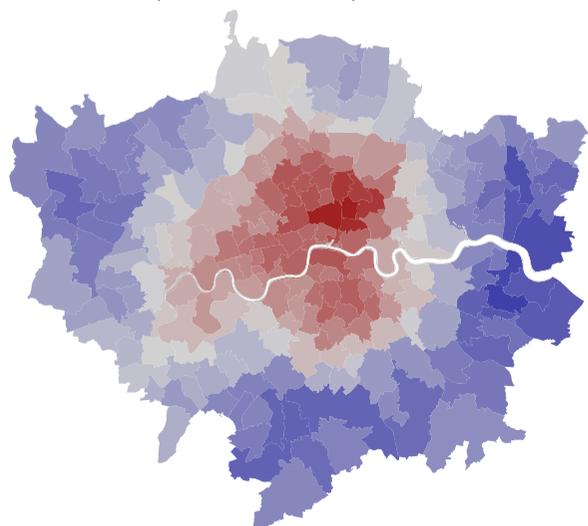
Using data from the United Kingdom and the United States, we have shown systematic geographic patterns in aggregate personality traits across large and small regions.

For example, lowest levels of agreeableness were observed in the Westminster borough where most tourist attractions are found, while high levels of openness were observed in East Central London:

Agreeableness

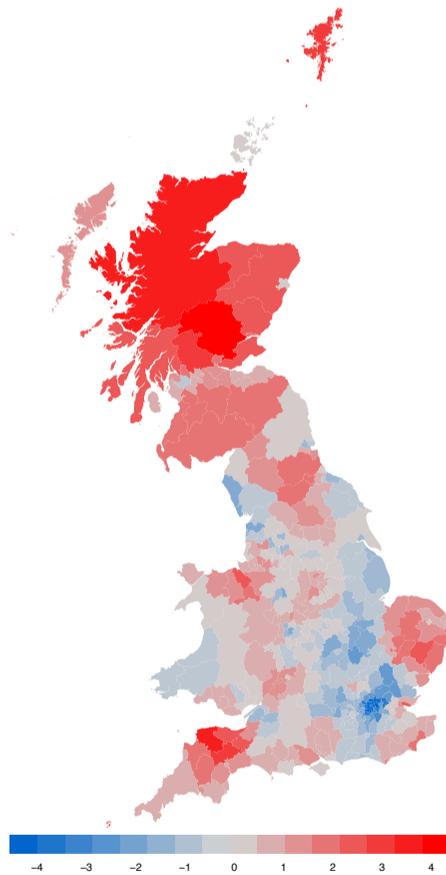


Openness to experience



2. Relevance of regional personality

The regional personality profiles correlate with various social, political, economic, and environmental characteristics of regions. For example, in the United Kingdom high regional conscientiousness was associated with longer life expectancy, political leanings towards Conservatives instead of Labour, and higher proportion of married individuals.



Even more interestingly, our London analysis provided a wealth of information on neighborhood characteristics that amplify or attenuate associations between personality traits and life satisfaction. For example, individuals with high agreeableness achieved greatest level of life satisfaction when they lived in postal districts with more families and children, and with more green space.

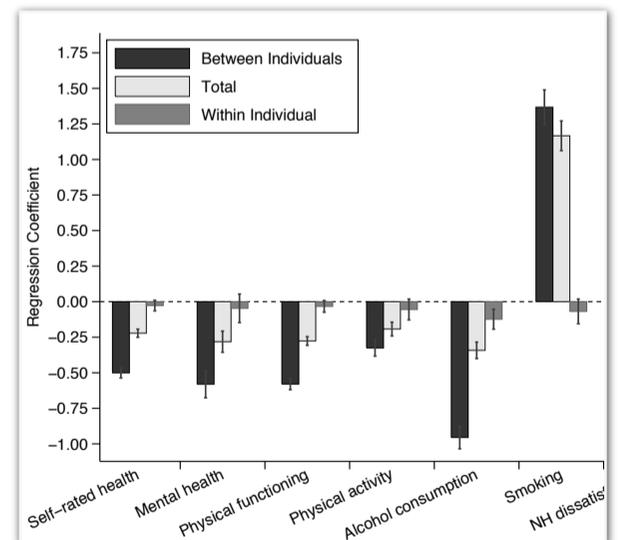
References

159. **Jokela M.** Does neighbourhood deprivation cause poor health? Within-individual analysis of movers in a prospective cohort study. *J Epidemiol Community Health.* 2015;69(9):899-904. doi:10.1136/jech-2014-204513.
153. **Jokela M,** Bleidorn W, Lamb ME, Gosling SD, Rentfrow PJ. Geographically varying associations between personality and life satisfaction in the London metropolitan area. *Proc Natl Acad Sci U S A.* 2015;112(3):725-730. doi:10.1073/pnas.1415800112/-/DCSupplemental.
150. Rentfrow PJ, **Jokela M,** Lamb ME. Regional personality differences in Great Britain. *PLoS One.* 2015;10(3):e0122245. doi:10.1371/journal.pone.0122245.
146. Airaksinen J, Hakulinen C, Elovainio M, Lehtimäki T, Raitakari OT, Keltikangas-Järvinen L, **Jokela M.** Neighborhood effects in depressive symptoms, social support, and mistrust: Longitudinal analysis with repeated measurements. *Soc Sci Med.* 2015;136-137:10-16. doi:10.1016/j.socscimed.2015.04.034.
127. **Jokela M.** Are neighborhood health associations causal? A 10-year prospective cohort study with repeated measurements. *Am J Epidemiol.* 2014;180(8):776-784. doi:10.1093/aje/kwu233.
128. **Jokela M.** Flow of cognitive capital across rural and urban United States. *Intelligence.* 2014;46(1):47-53. doi:10.1016/j.intell.2014.05.003.
108. Halonen JI, Vahtera J, Oksanen T, Pentti J, Virtanen M, **Jokela M,** Diez-Roux A V, Kivimäki M. Socioeconomic characteristics of residential areas and risk of death: is variation in spatial units for analysis a source of heterogeneity in observed associations? *BMJ Open.* 2013;3(4). doi:10.1136/bmjopen-2012-002474.
93. Rentfrow PJ, Gosling SD, **Jokela M,** Stillwell DJ, Kosinski M, Potter J. Divided we stand: three psychological regions of the United States and their political, economic, social, and health correlates. *J Pers Soc Psychol.* 2013;105(6):996-1012. doi:10.1037/a0034434.

3. Social causation and selection

Dozens of studies have examined so-called neighborhood effects in health, assuming that local neighborhood characteristics influence people's health. But very few studies have demonstrated that these associations are causal or whether neighborhood health associations develop because healthy and unhealthy people follow different migration patterns.

Our analysis of Australian and British data showed no change in people's health as they moved across more and less deprived neighborhoods, suggesting not causal effects in adulthood:



By contrast, poorer health and health behaviors did predict selective migration to more deprived areas. This implies that selective migration patterns may help to explain health differences between neighborhoods.

Our other studies have shown selective migration patterns (e.g., urban/rural migration) to be associated with individual characteristics such as temperament, personality, and intelligence.