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The intelligence and personality of Finland's Swedish-speaking minority

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ABSTRACT

There is evidence that Finland's Swedish-speaking minority (Finland-Swedes) may have a distinct intelligence–personality profile from the Finnish-speaking Finns (Finns). We test this through an examination of the two groups' PISA (Programme of International Student Assessment) scores (which assesses representative samples of 15 year olds from OECD countries) and their personality scores, drawing upon a representative Finnish sample. We found Finland-Swedes to have slightly lower average intelligence. However, when controlling for gender and age, the Finland-Swedes score significantly higher on Conscientiousness, Extraversion and Emotional Stability. Overall, we found a Jensen Effect whereby most of the personality differences between the two groups could be attributed to the General Factor of Personality (GFP), which reflects the shared variance of lower-order personality traits. The GFP is assumed to reflect general social effectiveness.

1. Introduction

Swedish-speaking Finns (Finland-Swedes) constitute a minority of 265,000, corresponding to 5.4% of the population of Finland (Statistics Finland, 2012). Until the twentieth century, they dominated the country's ruling class and even today 50% of Finland's nobility are Finland-Swedes (Dutton, 2009). There is evidence that the Finland-Swedes are culturally and socioeconomically distinct. Participant observation fieldwork has found that the Finns often regard the Finland-Swedes as the Finnish 'upper class,' as more 'aesthetic,' and as more 'confident' than the Finns. Finland-Swedes concur regarding aestheticism and confidence (Dutton, 2009, 2010). Reuter (1889, pp.61-66) reported Finland-Swedes to be more 'lively' and 'versatile' but less 'meditative' and 'profound' than Finns. Finland-Swedes were considered 'irreligious,' 'educated,' 'rich,' 'active' and 'conservative' while Finns were 'strong' and 'educated' in a survey of university students' attitudes (Kivistö & Makelä, 1967). McCrae et al. (1999) found that Finns were much more likely than Finland-Swedes display very high levels of loyalty to the communities of which they are a part, such as 'ethnic group.'

Moving beyond surveys, there are data to substantiate some of the perceived differences between the language groups. In 2011, 24% of board members of the 50 largest Finnish companies were Finland-Swedes (Jansson, 2011). Given that they are only around five and half percent of the population, this implies a significant ($\chi^2 = 60.06$, $df = 1$, $p < .0001$) over-representation. They are also over-represented in Finnish arts prizes. When estimating the average Finland-Swede population during the last century at around 9.15%, which would be a fairly liberal estimate, it can be observed that Finland-Swedes won relatively many prizes in this area. The Finlandia Award has been given every year to the best novel written by a Finnish citizen. Between 1984 and 2013 the award has been given 30 times. Six (20%) of the recipients were Finland-Swedes whereas the expected number would be 2.75($\chi^2 = 4.24$, $df = 1$, $p = .04$). Over this period, there have been 217 nominees (including those nominated more than once) of which 40 have been Finland-Swedes (18%). This represents a significant overrepresentation of Finland-Swedes ($\chi^2 = 22.5$, $df = 1$, $p < .001$). The Runeberg Prize is awarded each year to the best literary work by a Finnish citizen. Between its establishment in 1987 and 2014 it has been awarded 28 times, in 6 cases (21%) to Finland-Swedes. This was significant according to a Chi-square test ($\chi^2 = 5.08$, $df = 1$, $p = .024$) (<.05). The 'Dancing Bear Award' is given to the best work of poetry by a Finnish citizen in a given year. Between 1994 and 2014 it has been awarded 24 times (due to joint winners), in 5 cases (20%) to Finland-Swedes ($\chi^2 = 3.94$, $df = 1$, $p < .05$).

Finland-Swedes do relatively well, on average, on socioeconomic measures. In 2009, 10.3% of Finland-Swedes over the age of 15 had a Master's degree compared to 8.1% of Finns (Statistics Finland, 2010). Finland-Swedes have a higher life expectancy: 77.9 for males in 1996 compared to 73 for Finnish males (Hyyppä & Mäki, 2001) and are higher on measures of social capital. This term is generally used to mean having

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an active social life and specifically one which involves participating in organized social groups or civic activity. Social capital has been found to have a positive effect on health and has been argued to partly explain superior health among Finland-Swedes (Nyqvist, Finnäs, Jakobsson, & Koskinen, 2008). Also, the Finland-Swede crime rate, age-controlled, is half that of the Finnish one (Oikeuspolittisen Tutkimuslaitoksen Tutkimuksia, 2014).

There are several possible (and not mutually exclusive) explanations for these average status differences between Finland-Swedes and Finns. One is that this effect can be explained by sociological and historical processes that posed an advantage for Finland-Swedes. For example, Finland operates policies of positive discrimination which ensure that Finland-Swedes are over-represented at universities and over-represented in key (high status) professions, such that services can be guaranteed in Swedish in bilingual communes. Between the years 2000 and 2006, 30% of Finnish-speakers who applied to university were accepted but it was 50% of Swedish-speakers (WERA, 2010). Another possibility is that there may be genuine psychological differences between Finland-Swedes and Finns. In the present study we test whether Finland-Swedes and Finns differ in two likely candidate psychological constructs that may underlie the above-mentioned differences, namely intelligence and personality. It has now been well-established that intelligence is one of the strongest predictors for major life areas such as occupational status (Schmidt & Hunter, 1998), educational attainment (Jensen, 1981), health, and longevity (Gottfredson & Deary, 2004). Personality has also been identified as a consistent predictor of job performance and occupational status (Barrick & Mount, 1991) and health and longevity (Friedman et al., 1993).

In line with the above, it would be informative to compare the Finland-Swedes and Finns on these individual difference measures. A recent study has examined Finnish intelligence and personality and found that Finns have relatively high intelligence by European standards, as well as high Agreeableness and Conscientiousness based on proxy evidence (Dutton, te Nijenhuis, & Roivainen, 2014). However, to the best of our knowledge no previous study has specifically looked at the personality of the Finland-Swedes in comparison to the Finns and no international study has specifically examined their intelligence in relation to the Finns, though Brink, Nissinen, and Vettenranta (2013) have noted differences in PISA score in a study published in Finnish and Swedish. As such, the present study contributes to understanding the potential role of individual differences between Finland-Swedes and Finns.

2. Method

The present study examines two datasets. These contain proxies for intelligence and direct measures of personality and a number of other individual differences.

2.1. Participants and measures of sample 1

The first dataset contains Finland's PISA scores between the year 2000 and 2012. The PISA (Programme of International Student Assessment) test is organized by the OECD, and is taken by representative samples of 15-year-olds in 65 different countries from different parts of the world. The most recent, 2012, cohort drew upon results from 510,000 students aged between 15 years and 3 months and 16 years and 2 months. PISA tests reading literacy, mathematical literacy and science literacy. In 2012, it also tested Creative Problem Solving (CPS). The present dataset, based on data for 5 years, is composed of 26,041 Finnish speakers and 4683 Finland-Swedes. The Finland-Swedes, at 15.2% of the sample, are heavily over-sampled, reflecting strong over-sampling in particular PISA assessment years. These data were obtained from Brink et al. (2013) and allow us to estimate intelligence differences between Finns and Finland-Swedes. PISA is widely acknowledged to be strongly correlated with estimated national IQ scores. Rindermann (2007) estimated that the average correlation, though this includes PISA and TIMSS, is 0.82 between these results and Lynn and Vanhanen's estimates of national IQ scores. Lynn and Vanhanen (2012) have compiled average IQs for all of the OECD countries. We found that the mean correlation between IQ and PISA scores was .94 for the original inhabitants of the country (native-born), whereas it was .92 for non-native students. Native students are defined as those whose native language was Finnish or Swedish and who were born in Finland to two Finnish parents (i.e. both of their parents were born in Finland). All others are 'non-native.' It has been suggested that Lynn and Vanhanen's IQ estimates may have some validity problems (e.g. Hunt & Sternberg, 2006). However, it has been shown that these data strongly correlate with numerous outcome measures of intelligence at a national level and thus can be considered as good indicators of actual mean intelligence levels (see Lynn & Vanhanen, 2012). Lynn and Vanhanen's national IQs can be described as a continually updated set of estimates that should be valid across many countries because they strongly correlate with other national measures of cognitive ability, such as productivity, scientific activity, economic status. As a proxy for intelligence, we compared the Finnish and Finland-Swede scores on the PISA tests, only using the scores of 'native inhabitants' of Finland.

2.2. Participants and measures of sample 2

The second dataset contains data on personality and is part of the Finn-Kin study (Albrecht, Antfolk, Lieberman, et al., 2014). The part of the dataset which we will examine has not previously been published. For the Finn-Kin study, the surveyors decided to invite 16,000 (8000 males and 8000 females) Finnish people to participate in the study. The criteria for selection included a minimum age of 18 and having a living opposite-sex parent or child. The surveyors also put an upper age limit at 49 years, as older people were considered less likely to have access to the internet, which could both decrease and bias participation. Both the survey and the invitation letter were written in Finnish and Swedish. The eventual sample consisted of 3127 participants (response rate 21%) and was representative of the population. The Finnish sample consisted of 2918 people with a mean age of 38.68 years ($SD = 9.03$). It was 65.5% female. The Finland-Swedes sample consisted of 209 people with a mean age of 34.11 years ($SD = 8.97$), and 73.3% was female. The sample contains a range of individual differences variables. For the present study, we used the personality measure. In this sample, personality was measured with the Ten Item Personality Inventory (TIPI) assessing the well-known Big Five dimensions; Openness to experience (O), Conscientiousness (C), Extraversion (E), Agreeableness (A), and Emotional Stability (ES). TIPI was unofficially translated into Finnish and Swedish and back-translated to be included in the first data collection for the Genetics of Sex and Aggression study (Johansson, Jern, Santtila, et al., 2013) in Finland. Participants rated themselves on a Likert scale (from 1 to 7) on 10 statements (Gosling, Rentfrow, & Swann, 2003). The reliabilities were: Extraversion: 0.71, Conscientiousness: 0.46, Agreeableness: 0.35, Emotional Stability: 0.43, and Openness: 0.41.

Concern might be expressed about the reliability of TIPI. However, Gosling (2015) has countered that the TIPI was 'designed using criteria that almost guarantee it will perform poorly in terms of alpha and Confirmatory Factor Analysis (CFA) or Exploratory Factor Analysis (EFA) indices. It is almost impossible to get high alphas and good fit indices in instruments like the TIPI, which are designed to measure very broad domains with only two items per dimension and using items at both the positive and negative poles. For this reason some researchers have pointed out that alphas are misleading when calculated on scales with small numbers of items.' Researchers who reached this conclusion include Kline (2000) and Wood and Hampson (2005).

In sample 2 we also tested for Finland-Swedes-Finns differences in income when gender and age were controlled for. In addition, as the sample contains the Big Five measures it also allowed us to test for