

# Study results suggest genetic influence on social outcomes greater in meritocratic than communistic societies

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A team of researchers from the U.K., Australia and the U.S. has found evidence that suggests genetic influence on social outcomes is greater in

meritocratic than in communistic societies. In their paper published in the journal *Nature Human Behavior*, the group describes their study of people living in Estonia before and after the breakup of the Soviet Union and the impact it had on social outcomes.

Everyone knows that genetics plays a role in what becomes of people in various societies—hard-driving, smart people, for example, tend to do well in their careers, whereas those born with less intelligence and drive might not fare so well. But what happens when inheritable traits are compared between different types of societies, such as one based on merit versus one based on communism? The researchers with this new effort theorized that genetics would play a more prominent role in meritocratic societies than in communist ones. This is because people living in a [society](#) based on merit, who inherit skills that lead to success, likely would have more trouble doing so in a society that places more value on group success. To find out if this might be the case, the researchers looked at educational attainment and occupational status of people living in Estonia raised before and after the breakup of the Soviet Union. Prior to the breakup, the people in that country lived under the heavy hand of Soviet communism—after the breakup, the country gained independence and modeled itself on many countries in the West, and became capitalist.

The researchers genotyped 12,500 people living in Estonia and looked at their educational and career achievements—they then compared the group raised under communism with those raised under capitalism. They report that they found a significant difference. They found, for example, that approximately 2 percent of the variance seen in educational success was due to differences in genetic factors during the Soviet era. That number jumped to approximately 6 percent after independence. The researchers contend that such numbers suggest very strongly that their theory was correct—genetics does play a more prominent role in a society where individual success is based on a given person's unique

attributes than in societies where other factors are at play.

**More information:** Kaili Rimfeld et al. Genetic influence on social outcomes during and after the Soviet era in Estonia, *Nature Human Behaviour* (2018). [DOI: 10.1038/s41562-018-0332-5](https://doi.org/10.1038/s41562-018-0332-5)

## Abstract

The aetiology of individual differences in educational attainment and occupational status includes genetic as well as environmental factors and can change as societies change. The extent of genetic influence on these social outcomes can be viewed as an index of success in achieving meritocratic values of equality of opportunity by rewarding talent and hard work, which are to a large extent influenced by genetic factors, rather than rewarding environmentally driven privilege. To the extent that the end of the Soviet Union and the independence of Estonia led to an increase in meritocratic selection of individuals in education and occupation, genetic influence should be higher in the post-Soviet era than in the Soviet era. Here we confirmed this hypothesis: DNA differences (single-nucleotide polymorphisms) explained twice as much variance in educational attainment and occupational status in the post-Soviet era compared with the Soviet era in both polygenic score analyses and single-nucleotide polymorphism heritability analyses of 12,500 Estonians. Our results demonstrate a change in the extent of genetic influence in the same population following a massive and abrupt social change—in this case, the shift from a communist to a capitalist society.

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