

Supplementary Materials

1.1: Sampling information, participation, criteria for exclusion, Study 1

Of the 1,569 people who received the invitation and clicked on the survey link, 1,055 agreed to participate, and 574 of them completely filled out the questionnaires, representing 37% of the initial volume of potential participants. Of those who filled out the questionnaire completely, 44 were not university students, 92 had majors that included sociology and psychology, 6 students were 29 or older (considered as extreme outliers), and three had very high subjective ratings of knowledge in sociology and/or neuroscience, which also acted as criteria for excluding them from the analysis. Final sample consisted of 429 students.

1.2: Sampling information, participation, criteria for exclusion, Study 2

Of the 1,347 people who received the invitation and clicked on the survey link, 785 agreed to participate, and 492 of them completely filled out the questionnaires, representing 37% of the initial volume of potential participants. Of those who filled out the questionnaire completely, 80 were not university students, 53 had majors that included sociology, psychology, biology, or medicine, three were 29 or older, and 12 had very high subjective ratings of knowledge in sociology, criminology, neuroscience, physiology, and/or genetics, which also acted as criteria for excluding them from the analysis. Final sample included 344 students.

2.1: Complete set of lay summaries used for constructing administered vignettes (translated), Study 1

Neuroscience

Scientists found similarities in gene expression profiles between different mental disorders. They compared gene expression profiles in the cerebral cortex of 700 people who had autism, schizophrenia, depression, bipolar disorder, and alcoholism in their lifetime. It turned out that there were similarities in gene expression profiles between all of the diseases listed above, except alcoholism.¹

Metrics for the original version (in Russian): 46 words, Flesch–Kincaid 26.6.

Sociology

Scientists found a link between tolerance for deviant behavior and different national characteristics. They surveyed residents of 33 countries, evaluating their perceived level of

¹ [«Shared molecular neuropathology across major psychiatric disorders parallels polygenic overlap», <https://science.sciencemag.org/content/359/6376/693>]

[Gandal, M. J., Haney, J. R., Parikshak, N. N., Leppa, V., Ramaswami, G., Hartl, C., Schork, A. J., Appadurai, V., Buil, A., Werge, T. M., Liu, C. (2011) Shared molecular neuropathology across major psychiatric disorders parallels polygenic overlap. *Science*, 359(6376), 693-7.]

tolerance in the country and comparing these perceptions with economic, political, demographic, and environmental indicators. It turned out that the level of perceived tolerance is related to all of the mentioned parameters, except for economic ones.²

Metrics for the original version (in Russian): 53 words, Flesch–Kincaid 30.7.

2.2: Complete set of lay summaries used for constructing administered vignettes (translated), Study 2

Sociology

Scientists found a link between the size of the research team and the type of research. They analyzed an array of published scientific articles, patents, and software packages for the period 1954-2014. It turned out that smaller groups were more likely to propose new scientific ideas and developments, while larger groups tended to develop already existing ideas.³

Metrics for the original version (in Russian): 49 words, Flesch–Kincaid 24.7.

Criminology

Scientists found a link between parental deaths experienced in childhood and future crimes. They analyzed national registry data on citizens born between 1983 and 1993. It turned out that parental deaths from external causes (suicides, accidents, and homicides) were associated with an increased risk of violent crime between the ages of 15 and 30.⁴

Metrics for the original version (in Russian): 47 words, Flesch–Kincaid 22.4.

Neuroscience

Scientists found a link between emotions and the ability to remember faces. They analyzed the brain activity of people arising in response to images of faces previously presented under different sound stimuli. It turned out that faces associated with an emotional experience that accompanied exposure to an unpleasant sound stimulus elicited a more pronounced brain

² [«Shared molecular neuropathology across major psychiatric disorders parallels polygenic overlap», <https://science.sciencemag.org/content/332/6033/1100>]

Gelfand, M. J., Raver, J. L., Nishii, L., Leslie, L. M., Lun, J., Lim, B. C., ... Yamaguchi, S. (2011). Differences between tight and loose cultures: A 33-nation study. *science*, 332(6033), 1100-1104.

³ [«Large teams develop and small teams disrupt science and technology», <https://www.nature.com/articles/s41586-019-0941-9>]

[Wu, L., Wang, D., Evans, J. A. (2019). Large teams develop and small teams disrupt science and technology. *Nature*, 566(7744), 378-382.]

⁴ [«Parental death during childhood and violent crime in late adolescence to early adulthood: a Swedish national cohort study», <https://www.nature.com/articles/s41599-019-0285-y>]

[Berg, L., Rostila, M., Arat, A., & Hjern, A. (2019). Parental death during childhood and violent crime in late adolescence to early adulthood: a Swedish national cohort study. *Palgrave Communications*, 5(1), 1-8.]

response.⁵

Metrics for the original version (in Russian): 46 words, Flesch–Kincaid 28.6.

Genetics

Scientists found a link between autism and suicidal tendencies. They analyzed the polygenic and behavioral indicators of people stored in the national biobank database. It turned out that genetic predisposition to autism was positively related to the tendency to self-harm (both in the form of ideas and at the level of behavior and attempts to harm oneself).⁶

Metrics for the original version (in Russian): 48 words, Flesch–Kincaid 25.8.

Physiology

Scientists found a link between artificial light and sleepiness. They analyzed some individual indicators of people under different conditions of artificial light in the evening. It turned out that under bright artificial light in the evening, the level of melatonin, which is responsible for sleep regulation, and subjectively perceived drowsiness are lower compared to those under dimmer light.⁷

Metrics for the original version (in Russian): 48 words, Flesch–Kincaid 26.8.

3.1: Pilot study, Study 1

As part of the pilot study, we set the task of testing the experimental material — the factor vignettes used in the study. We needed to determine the applicability of the selected material in terms of the perceived complexity of the vignettes used, since simpler statements are known to evoke more positive evaluations of acceptance (Scharrer 2012). For this purpose, we conducted a preliminary online survey using a subjective comprehensibility scale in relation to the two descriptions (vignettes). The sample consisted of 32 university students who fully completed the survey. Respondents were asked to answer the following question about each vignette, rating them on the scale from 1 to 7: How comprehensible was the text to you? (rate on a scale from 1 - "Very incomprehensible" to 7 - "Very comprehensible"). We then used the

⁵ [«Emotional learning promotes perceptual predictions by remodeling stimulus representation in visual cortex», <https://www.nature.com/articles/s41598-019-52615-6>]

[Meaux, E., Sterpenich, V., Vuilleumier, P. (2019). Emotional learning promotes perceptual predictions by remodeling stimulus representation in visual cortex. *Scientific reports*, 9(1), 1-14.]

⁶ [«Genetic correlations between pain phenotypes and depression and neuroticism», <https://www.nature.com/articles/s41431-019-0530-2>]

[Meng, W., Adams, M. J., Reel, P., Rajendrakumar, A., Huang, Y., Deary, I. J., Palmer, C. N., McIntosh, A. M., Smith, B. H. (2020). Genetic correlations between pain phenotypes and depression and neuroticism. *European Journal of Human Genetics*, 28(3), 358-366.]

⁷ [«Early evening light mitigates sleep compromising physiological and alerting responses to subsequent late evening light», <https://www.nature.com/articles/s41598-019-52352-w>]

[Meaux, E., Sterpenich, V., Vuilleumier, P. (2019). Emotional learning promotes perceptual predictions by remodeling stimulus representation in visual cortex. *Scientific reports*, 9(1), 1-14.]

Wilcoxon signed-rank test to conduct paired comparisons to assess whether mean ranks differ between texts. The mean ranks scores of the subjective comprehensibility are presented in Table 1.

Table 1

Mean ranks, test statistics for Wilcoxon signed-rank test

| Pair tested | Negative Ranks | | | Positive Ranks | | | Test Statistics | | |
|--------------------------|----------------|-----------|--------------|----------------|-----------|--------------|-----------------|-------|------|
| | N | Mean Rank | Sum of Ranks | N | Mean Rank | Sum of Ranks | Ties | Z | p |
| Sociology - Neuroscience | 13 | 12.46 | 162 | 11 | 12.55 | 138 | 8 | -.347 | .729 |

3.2: Pilot study, Study 2

As part of the second pilot study, we also set the task of testing the vignettes we had developed. We conducted a preliminary online survey using a subjective comprehensibility scale in relation to the 10 brief descriptions of different research from the fields of sociology, criminology, neuroscience, genetics and physiology (vignettes). We tested two sets of vignettes for each scientific field in order to choose one for the main study. The sample consisted of 61 university students who fully completed the survey. Respondents were asked to answer the following question about each vignette, rating them on the scale from 1 to 7: How comprehensible was the text to you? (rate on a scale from 1 - "Very incomprehensible" to 7 - "Very comprehensible"). We then used the Wilcoxon signed-rank test to conduct paired comparisons to assess whether mean ranks differ between texts. The mean ranks scores of the subjective comprehensibility for the final sample of vignettes we chose (based on these results) are presented in Table 2.

Table 2

Mean ranks, test statistics for Wilcoxon signed-rank test

| Pair tested | Negative Ranks | | | Positive Ranks | | | Test Statistics* | | |
|----------------------------|----------------|-----------|--------------|----------------|-----------|--------------|------------------|--------|------|
| | N | Mean Rank | Sum of Ranks | N | Mean Rank | Sum of Ranks | Ties | Z | P |
| Sociology - Criminology | 18 | 13.81 | 248.5 | 13 | 19.04 | 247.5 | 30 | -.010 | .992 |
| Sociology - Neuroscience | 15 | 16.97 | 254.5 | 20 | 18.78 | 375.5 | 26 | -1.009 | .313 |
| Sociology - Genetics | 10 | 23.6 | 236 | 26 | 16.54 | 430 | 25 | -1.546 | .122 |
| Sociology - Physiology | 17 | 18.26 | 310.5 | 18 | 17.75 | 319.5 | 26 | -.076 | .940 |
| Criminology - Neuroscience | 14 | 19.82 | 277.5 | 21 | 16.79 | 352.5 | 26 | -.629 | .529 |
| Criminology - Genetics | 10 | 21.75 | 217.5 | 24 | 15.73 | 377.5 | 27 | -1.395 | .163 |
| Criminology - Physiology | 13 | 17.65 | 229.5 | 17 | 13.85 | 235.5 | 31 | -.064 | .949 |
| Neuroscience - Genetics | 17 | 19.68 | 334.5 | 23 | 21.11 | 485.5 | 21 | -1.047 | .295 |

| Pair tested | Negative Ranks | | | Positive Ranks | | | Test Statistics* | | |
|---------------------------|----------------|-----------|--------------|----------------|-----------|--------------|------------------|--------|------|
| | N | Mean Rank | Sum of Ranks | N | Mean Rank | Sum of Ranks | Ties | Z | P |
| Neuroscience - Physiology | 22 | 18.59 | 409 | 15 | 19.6 | 294 | 24 | -.907 | .364 |
| Genetics - Physiology | 23 | 16.11 | 370.5 | 10 | 19.05 | 190.5 | 28 | -1.633 | .102 |

*Bonferroni adjusted significance level $p < 0.005$

We also conducted a separate pre-test in order to check whether manipulation with mentioning specific universities had the intended effect as an information cue defining the prestige factor levels. For this purpose, we conducted a separate online survey using a perceived prestige ranking scale in relation to 6 universities from the higher part on the first and the third quartiles of the ranking⁸, including ones used in our main study. We tested whether students actually react and differentiate universities in terms of their prestige and recognize the different levels of the prestige factor. The sample consisted of 91 university students who fully completed the survey. Respondents were asked to rank 6 universities with the following question about them, rating them on the scale from 1 to 6: How prestigious are the universities below? Rank the six universities according to how prestigious they are (where 1 is the least prestigious university, 6 is the most prestigious one). We then used the Wilcoxon signed-rank test to conduct paired comparisons to assess whether mean ranks differ between universities. The mean ranks scores of the perceived prestige for the set of universities are presented below (tables 3 and 4).

Table 3

Mean ranks and median scores*

| University Ranked | Mean | Median | Official ranking based rank ⁸ |
|--------------------------|------|--------|--|
| Harvard University | 5,53 | 6 | 6 |
| Stanford University | 5,13 | 5 | 5 |
| Berkley University | 3,75 | 4 | 4 |
| Lander University | 2,79 | 3 | 2 |
| University of Montevallo | 2,44 | 2 | 3 |
| Grambling University | 2,42 | 2 | 1 |

*Correlation between mean subjective and ranking based ranks: Spearman's $\rho = .94$

⁸ Source: [https:// www.webometrics.info/en/Americas/USA](https://www.webometrics.info/en/Americas/USA)

Table 4

Mean ranks, test statistics for Wilcoxon signed-rank test

| Pair tested | Negative Ranks | | | Positive Ranks | | | Test Statistics* | | |
|---|----------------|-----------|--------------|----------------|-----------|--------------|------------------|--------|------|
| | N | Mean Rank | Sum of Ranks | N | Mean Rank | Sum of Ranks | Ties | Z | P |
| Harvard University - Stanford University | 24 | 40.94 | 982.5 | 57 | 41.03 | 2338.5 | 10 | -3.541 | .000 |
| Harvard University - Grambling University | 3 | 50.33 | 151 | 88 | 45.85 | 4035 | 0 | -7.751 | .000 |
| Harvard University - Berkley University | 5 | 42.90 | 214.5 | 85 | 45.65 | 3880.5 | 1 | -7.576 | .000 |
| Harvard University - Lander University | 4 | 35.63 | 142.5 | 86 | 45.96 | 3952.5 | 1 | -7.726 | .000 |
| Harvard University - University of Montevallo | 5 | 31.10 | 155.5 | 85 | 46.35 | 3939.5 | 1 | -7.674 | .000 |
| Stanford University - Grambling University | 3 | 40.33 | 121 | 86 | 45.16 | 3884 | 2 | -7.758 | .000 |
| Stanford University - Berkley University | 8 | 31.19 | 249.5 | 79 | 45.30 | 3578.5 | 4 | -7.218 | .000 |
| Stanford University - Lander University | 5 | 36.90 | 184.5 | 85 | 46.01 | 3910.5 | 1 | -7.556 | .000 |
| Stanford University - University of Montevallo | 4 | 39.25 | 157 | 83 | 44.23 | 3671 | 4 | -7.498 | .000 |
| Grambling University - Berkley University | 72 | 43.49 | 3131 | 12 | 36.58 | 439 | 7 | -6.084 | .000 |
| Grambling University - Lander University | 49 | 40.04 | 1962 | 29 | 38.59 | 1119 | 13 | -2.165 | .030 |
| Grambling University - University of Montevallo | 40 | 40.10 | 1604 | 40 | 40.90 | 1636 | 11 | -.080 | .937 |
| Berkley University - Lander University | 19 | 40.82 | 775.5 | 67 | 44.26 | 2965.5 | 5 | -4.804 | .000 |
| Berkley University - University of Montevallo | 13 | 37.92 | 493 | 74 | 45.07 | 3335 | 4 | -6.108 | .000 |
| Lander University - University of Montevallo | 32 | 37.47 | 1199 | 48 | 42.52 | 2041 | 11 | -2.076 | .038 |

*Bonferroni adjusted significance level $p < 0.0033$

We also tried to replicate our main study on a smaller scale to provide an additional manipulation check. We used two universities as a between-subject factors and tested it using two of the vignettes from the main study (sociology and criminology ones) asking our participants (a separate group of university students, N=91), after they completed the perceived plausibility evaluation, to rate the universities mentioned in the vignettes. Universities [mentioned](#) were from the first and the third quartiles of the ranking, similar to the design of the main study, and were different from the actual universities we used in our main study. Respondents were asked to answer the following question about each vignette, rating them on the scale from 0 to 10: How prestigious is the university where the research was done? (rate on a scale from 0 - "Absolutely unprestigious" to 10 - "Absolutely prestigious").

Table 5

Descriptive statistics of perceived prestige of university mentioned depending on the scientific field and university rank

| Group | University rank | Scientific field | |
|-------|---------------------------------|------------------|------------------|
| | | Sociology | Criminology |
| 1 | Lower ranked university (N=47) | M=5.51 (SD=1.73) | M=5.47 (SD=1.92) |
| 2 | Higher ranked university (N=44) | M=8.20 (SD=2.00) | M=8.45 (SD=1.65) |

With no significant effect of research field ($F_{1, 89} = .354, p = .554$), there was a significant main effect of university ($F_{1, 89} = 69.069, p < .001, \eta_p^2 = 0.437$ as a measure of effect size) with higher ranked university perceived significantly more prestigious than the lower ranked university (EMM diff = 2.84, $p < .001$).

4.1: Data access and variable description, Study 1

The dataset for the study is placed at the OSF data repository and can be opened upon request.

Data access:

Raw ratings for 12 vignettes from 429 subjects (each rated 4 vignettes).

File name: data_study_1.sav. Access: <https://osf.io/smu98/>

Variables description:

know_s – respondent's self-assessment of knowledge in sociology (on the scale from 1 – “know nothing about it” to 5 – “know almost everything about it”)

know_n – respondent's self-assessment of knowledge in neuroscience (on the scale from 1 – “know nothing about it” to 5 – “know almost everything about it”)

A1B0 – plausibility rating, vignette A1B0 (sociological research, prestige not mentioned) (on the scale from 0 – “absolutely implausible” to 10 – “absolutely plausible”)

A1B1 – plausibility rating, vignette A1B1 (sociological research, high prestige) (on the scale from 0 – “absolutely implausible” to 10 – “absolutely plausible”)

A2B0 – plausibility rating, vignette A1B0 (neuroscience research, prestige not mentioned) (on the scale from 0 – “absolutely implausible” to 10 – “absolutely plausible”)

A2B1 – plausibility rating, vignette A1B1 (neuroscience research, high prestige) (on the scale from 0 – “absolutely implausible” to 10 – “absolutely plausible”)

C – level of the funding factor (0 – not mentioned; 1 – low; 2 – high)

sex – respondent's sex (1 – female; 2 – male)

age – respondent's age

lvl – the level of education the respondent is currently getting (1, BA; 2, Specialist; 3, MA; 4, PhD)

year – respondent's year of study

year_rec – total number of years spent by a respondent on higher education (computed based on the level/year information)

major – respondent's academic major (1 – humanities; 2 – mathematics and computer science; 3 – natural sciences; 4 – engineering and technology; 5 – medicine; 6 – other)

4.2: Data access and variable description, Study 2

The dataset for the study is placed at the OSF data repository and can be opened upon request.

Data access:

Raw ratings for 45 vignettes from 344 subjects (each rated 5 vignettes).

File name: data_study_2.sav. Access: <https://osf.io/cgebz/>

Variables description:

A1 – plausibility rating, vignette A1 (sociological research) (on the scale from 0 – “absolutely implausible” to 10 – “absolutely plausible”)

A2 – plausibility rating, vignette A2 (criminological research) (on the scale from 0 – “absolutely implausible” to 10 – “absolutely plausible”)

A3 – plausibility rating, vignette A3 (neuroscience research) (on the scale from 0 – “absolutely implausible” to 10 – “absolutely plausible”)

A4 – plausibility rating, vignette A4 (genetics research) (on the scale from 0 – “absolutely implausible” to 10 – “absolutely plausible”)

A5 – plausibility rating, vignette A5 (physiology research) (on the scale from 0 – “absolutely implausible” to 10 – “absolutely plausible”)

B – level of the prestige factor (0 – not mentioned; 1 – low; 2 – high)

C – level of the funding factor (0 – not mentioned; 1 – low; 2 – high)

know_s - respondent's self-assessment of knowledge in sociology (on the scale from 1 – “know nothing about it” to 5 – “know almost everything about it”)

know_c - respondent's self-assessment of knowledge in criminology (on the scale from 1 – “know nothing about it” to 5 – “know almost everything about it”)

know_n - respondent's self-assessment of knowledge in neuroscience (on the scale from 1 – “know nothing about it” to 5 – “know almost everything about it”)

know_g - respondent's self-assessment of knowledge in genetics (on the scale from 1 – “know nothing about it” to 5 – “know almost everything about it”)

know_p - respondent's self-assessment of knowledge in physiology (on the scale from 1 – “know nothing about it” to 5 – “know almost everything about it”)

sex – respondent's sex (1 – female, 2 – male)

age – respondent's age

lvl – the level of education a respondent is currently getting (1, BA; 2, Specialist; 3, MA; 4, PhD)

year – respondent's year of study

year_rec – total number of years spent by a respondent on higher education (computed based on the level/year information)

major – respondent's academic major (1 – humanities; 2 – mathematics and computer science; 3 – natural sciences; 4 – engineering and technology; 5 – other)