

## Reporting Summary

Nature Portfolio wishes to improve the reproducibility of the work that we publish. This form provides structure for consistency and transparency in reporting. For further information on Nature Portfolio policies, see our [Editorial Policies](#) and the [Editorial Policy Checklist](#).

### Statistics

For all statistical analyses, confirm that the following items are present in the figure legend, table legend, main text, or Methods section.

n/a Confirmed

- |                                     |                                     |  |
|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | The exact sample size ( $n$ ) for each experimental group/condition, given as a discrete number and unit of measurement  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | A statement on whether measurements were taken from distinct samples or whether the same sample was measured repeatedly  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | The statistical test(s) used AND whether they are one- or two-sided<br><i>Only common tests should be described solely by name; describe more complex techniques in the Methods section.</i>   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | A description of all covariates tested   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | A description of any assumptions or corrections, such as tests of normality and adjustment for multiple comparisons  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | A full description of the statistical parameters including central tendency (e.g. means) or other basic estimates (e.g. regression coefficient) AND variation (e.g. standard deviation) or associated estimates of uncertainty (e.g. confidence intervals) |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | For null hypothesis testing, the test statistic (e.g. $F$ , $t$ , $r$ ) with confidence intervals, effect sizes, degrees of freedom and $P$ value noted<br><i>Give <math>P</math> values as exact values whenever suitable.</i>                            |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | For Bayesian analysis, information on the choice of priors and Markov chain Monte Carlo settings   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | For hierarchical and complex designs, identification of the appropriate level for tests and full reporting of outcomes   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Estimates of effect sizes (e.g. Cohen's $d$ , Pearson's $r$ ), indicating how they were calculated   |

*Our web collection on [statistics for biologists](#) contains articles on many of the points above.*

### Software and code

Policy information about [availability of computer code](#)

Data collection

Data analysis

For manuscripts utilizing custom algorithms or software that are central to the research but not yet described in published literature, software must be made available to editors and reviewers. We strongly encourage code deposition in a community repository (e.g. GitHub). See the Nature Portfolio [guidelines for submitting code & software](#) for further information.

### Data

Policy information about [availability of data](#)

All manuscripts must include a [data availability statement](#). This statement should provide the following information, where applicable:

- Accession codes, unique identifiers, or web links for publicly available datasets
- A description of any restrictions on data availability
- For clinical datasets or third party data, please ensure that the statement adheres to our [policy](#)

## Research involving human participants, their data, or biological material

Policy information about studies with [human participants or human data](#). See also policy information about [sex, gender \(identity/presentation\), and sexual orientation](#) and [race, ethnicity and racism](#).

Reporting on sex and gender	Gender information, based on self-report (options: man, woman, other) was collected to describe the sample. The sample included 50.3% men, 49.5% women, 0.2% participants who indicated other gender.
Reporting on race, ethnicity, or other socially relevant groupings	We did not collect any data on race, ethnicity or other groupings.
Population characteristics	We ensured a diverse sample in terms of gender (50.3% men, 49.5% women, 0.2% participants who indicated other gender), age (M = 41.98; SD = 16.1), and education (6.3% did not complete high school; 28.8% completed high school; 14.5% were undergraduate students; 26.1% completed undergraduate degree; 3.2% were postgraduate students; 21.0% had a postgraduate degree)
Recruitment	Participants were recruited using CINT recruitment company (project SF-488456), which compensated participants per their policies (amount is not disclosed to researchers).
Ethics oversight	Ethics approval for pilot studies (SP-15169 and FMG-1665) and the main study (FMG-8652) was obtained from the Institutional Review Board at the University of Amsterdam.

Note that full information on the approval of the study protocol must also be provided in the manuscript.

## Field-specific reporting

Please select the one below that is the best fit for your research. If you are not sure, read the appropriate sections before making your selection.

Life sciences  Behavioural & social sciences  Ecological, evolutionary & environmental sciences

For a reference copy of the document with all sections, see [nature.com/documents/nr-reporting-summary-flat.pdf](https://nature.com/documents/nr-reporting-summary-flat.pdf)

## Behavioural & social sciences study design

All studies must disclose on these points even when the disclosure is negative.

Study description	The current study was a quantitative survey experiment that a) investigated relationship between political ideology and trust in scientists and b) comprehensively tested five theoretically grounded intervention strategies to improve conservatives' trust in scientists.
Research sample	We ensured a diverse sample (N = 7 800) in terms of gender (50.3% men, 49.5% women, 0.2% participants who indicated other gender), age (M = 41.98; SD = 16.1), and education (6.3% did not complete high school; 28.8% completed high school; 14.5% were undergraduate students; 26.1% completed undergraduate degree; 3.2% were postgraduate students; 21.0% had a postgraduate degree) (a representative sample was not possible because the majority of the participants were conservatives).
Sampling strategy	We recruited 7 800 participants from the US, using Cint recruitment company. For correlations to stabilize, 250 observations per occupation are needed <sup>69</sup> . Given that we measured trust in 35 different scientific occupations, we needed 8750 observations (=250*35). Each participant rated four scientific occupations, thus we needed 2188 participants (8750:4 = 2187.5) to ensure stable correlations between political ideology and trust for all occupations. This number of 2188 participants was required for liberals and conservatives combined. Therefore, we aimed to recruit 1094 liberal participants. We planned to recruit 6564 conservative participants because we had six conditions for conservative participants (control and five strategies to increase trust; 6 x 1094 = 6564). In total, this required 7658 participants. We planned to oversample by recruiting a total of N = 7 800, to account for the possibility of a mismatch between the selection filter for recruitment and self-reported ideology in the study. The resulting sample size allowed us to detect an effect size of $d = .15$ , with 95% power and $\alpha = .05$ , for each of the interventions.
Data collection	Data collection was conducted by CINT company (project SF-488456) who distributed Qualtrics link to potential participants. Data was collected online so no researcher was present during data collection.
Timing	Between 28th May and 14th June
Data exclusions	n = 421 responses were excluded because they were flagged as bot responses (Q_RecaptchaScore < 0.5) n = 1074 were excluded because they failed the attention check These exclusions were pre-registered and did not count to the planned total N
Non-participation	n = 20 participants withdrew their data, which were permanently deleted
Randomization	In the main study, conservative participants were randomly assigned to one of the conditions (one of the five experimental conditions or the control condition)

# Reporting for specific materials, systems and methods

We require information from authors about some types of materials, experimental systems and methods used in many studies. Here, indicate whether each material, system or method listed is relevant to your study. If you are not sure if a list item applies to your research, read the appropriate section before selecting a response.

## Materials & experimental systems

n/a	Involvement in the study
<input checked="" type="checkbox"/>	<input type="checkbox"/> Antibodies
<input checked="" type="checkbox"/>	<input type="checkbox"/> Eukaryotic cell lines
<input checked="" type="checkbox"/>	<input type="checkbox"/> Palaeontology and archaeology
<input checked="" type="checkbox"/>	<input type="checkbox"/> Animals and other organisms
<input checked="" type="checkbox"/>	<input type="checkbox"/> Clinical data
<input checked="" type="checkbox"/>	<input type="checkbox"/> Dual use research of concern
<input checked="" type="checkbox"/>	<input type="checkbox"/> Plants

## Methods

n/a	Involvement in the study
<input checked="" type="checkbox"/>	<input type="checkbox"/> ChIP-seq
<input checked="" type="checkbox"/>	<input type="checkbox"/> Flow cytometry
<input checked="" type="checkbox"/>	<input type="checkbox"/> MRI-based neuroimaging

## Plants

### Seed stocks

Report on the source of all seed stocks or other plant material used. If applicable, state the seed stock centre and catalogue number. If plant specimens were collected from the field, describe the collection location, date and sampling procedures.

### Novel plant genotypes

Describe the methods by which all novel plant genotypes were produced. This includes those generated by transgenic approaches, gene editing, chemical/radiation-based mutagenesis and hybridization. For transgenic lines, describe the transformation method, the number of independent lines analyzed and the generation upon which experiments were performed. For gene-edited lines, describe the editor used, the endogenous sequence targeted for editing, the targeting guide RNA sequence (if applicable) and how the editor was applied.

### Authentication

Describe any authentication procedures for each seed stock used or novel genotype generated. Describe any experiments used to assess the effect of a mutation and, where applicable, how potential secondary effects (e.g. second site T-DNA insertions, mosaicism, off-target gene editing) were examined.