SUPPLEMENTARY MATERIAL

# Less Human Than Human: Threat, Language, and Relative Dehumanization

Shane P. Singh
University of Georgia

Jaroslav Tir
University of Colorado Boulder

## Contents

# 1 Numerical Results

Table SM1: Estimated Effects of Language on Muslim Dehumanization

|  | (1) Hindus | (2) Muslims | (3) Hindus rel. Muslims | (4) Hindus | (5) Muslims | (6) Hindus rel. Muslims |
|---|---|---|---|---|---|---|
| Hindi | 4.437 | -3.281 | 7.717 | 4.740 | -4.298 | 9.038 |
|  | (1.394) | (1.958) | (2.144) | (1.353) | (1.925) | (2.091) |
| Woman |  |  |  | -1.253 | 6.875 | -8.128 |
|  |  |  |  | (1.389) | (1.976) | (2.147) |
| Age |  |  |  | -2.595 | -5.293 | 2.699 |
|  |  |  |  | (0.753) | (1.072) | (1.164) |
| Income |  |  |  | -0.278 | 0.269 | -0.547 |
|  |  |  |  | (0.220) | (0.313) | (0.340) |
| Education |  |  |  | 3.056 | -0.978 | 4.034 |
|  |  |  |  | (0.429) | (0.610) | (0.663) |
| Constant | 81.217 | 61.987 | 19.230 | 68.613 | 83.989 | -15.377 |
|  | (0.963) | (1.352) | (1.481) | (4.687) | (6.670) | (7.247) |
| Observations | 879 | 879 | 879 | 879 | 879 | 879 |
| $R^2$ | 0.011 | 0.003 | 0.015 | 0.082 | 0.050 | 0.075 |

Note: standard errors in parentheses

Table SM2: Estimated Effects of Language on Chinese Dehumanization

|  | (1) Indians | (2) Chinese | (3) Indians rel. Chinese | (4) Indians | (5) Chinese | (6) Indians rel. Chinese |
|---|---|---|---|---|---|---|
| Hindi | 0.437 | 1.705 | -1.269 | 1.948 | 2.059 | -0.111 |
|  | (1.107) | (1.478) | (1.570) | (1.096) | (1.495) | (1.578) |
| Woman |  |  |  | 0.108 | 4.401 | -4.293 |
|  |  |  |  | (1.090) | (1.488) | (1.570) |
| Age |  |  |  | -1.487 | -1.587 | 0.100 |
|  |  |  |  | (0.626) | (0.854) | (0.902) |
| Income |  |  |  | -0.117 | 0.391 | -0.508 |
|  |  |  |  | (0.190) | (0.259) | (0.274) |
| Education |  |  |  | 2.111 | 0.307 | 1.804 |
|  |  |  |  | (0.248) | (0.338) | (0.357) |
| Constant | 82.011 | 65.596 | 16.415 | 71.772 | 62.967 | 8.805 |
|  | (0.780) | (1.042) | (1.106) | (3.388) | (4.623) | (4.880) |
| Observations | 1569 | 1569 | 1569 | 1569 | 1569 | 1569 |
| $R^2$ | 0.000 | 0.001 | 0.000 | 0.053 | 0.012 | 0.023 |

Note: standard errors in parentheses

## Table SM3: Estimated Effects of Vignette Assignment on Perceptions of Threat

| | (1)<br>China Threat Biggest Problem | (2)<br>Terror Threat Biggest Problem |
|---|---|---|
| China Condition | 0.040<br>(0.023) | |
| Pulwama Condition | | 0.071<br>(0.027) |
| Constant | 0.140<br>(0.016) | 0.221<br>(0.019) |
| Observations | 1033 | 1038 |
| $R^2$ | 0.003 | 0.007 |

Note: standard errors in parentheses

## Table SM4: Estimated Effects of Threat on Muslim Dehumanization (ITT Effects)

| | (1)<br>Hindus | (2)<br>Muslims | (3)<br>Hindus rel. Muslims | (4)<br>Hindus | (5)<br>Muslims | (6)<br>Hindus rel. Muslims |
|---|---|---|---|---|---|---|
| Pulwama Condition | -1.166<br>(0.914) | 0.940<br>(1.121) | -2.081<br>(1.504) | -1.167<br>(0.916) | 1.083<br>(1.127) | -2.289<br>(1.511) |
| Hindus (pre-treatment) | 0.863<br>(0.022) | | | 0.849<br>(0.022) | | |
| Muslims (pre-treatment) | | 0.845<br>(0.019) | | | 0.838<br>(0.020) | |
| Hindus rel. Muslims (pre-treatment) | | | 0.798<br>(0.024) | | | 0.786<br>(0.025) |
| Woman | | | | -0.865<br>(0.938) | -0.253<br>(1.162) | -1.037<br>(1.561) |
| Age | | | | -0.912<br>(0.521) | -1.390<br>(0.643) | 0.558<br>(0.856) |
| Income | | | | -0.096<br>(0.152) | -0.014<br>(0.186) | -0.103<br>(0.251) |
| Education | | | | 0.453<br>(0.273) | -0.309<br>(0.327) | 0.967<br>(0.446) |
| Constant | 12.432<br>(1.893) | 9.111<br>(1.395) | 5.869<br>(1.187) | 14.455<br>(3.396) | 17.079<br>(3.974) | -2.117<br>(4.941) |
| Observations | 566 | 566 | 566 | 566 | 566 | 566 |
| $R^2$ | 0.738 | 0.774 | 0.663 | 0.742 | 0.776 | 0.667 |

Note: standard errors in parentheses

## Table SM5: Estimated Effects of Threat on Muslim Dehumanization (CACEs)

| | (1)<br>Hindus | (2)<br>Muslims | (3)<br>Hindus rel. Muslims | (4)<br>Hindus | (5)<br>Muslims | (6)<br>Hindus rel. Muslims |
|---|---|---|---|---|---|---|
| Passed FMC (instrumented) | -2.388<br>(1.880) | 1.919<br>(2.284) | -4.237<br>(3.074) | -2.396<br>(1.882) | 2.221<br>(2.300) | -4.687<br>(3.098) |
| Hindus (pre-treatment) | 0.866<br>(0.022) | | | 0.851<br>(0.023) | | |
| Muslims (pre-treatment) | | 0.844<br>(0.019) | | | 0.838<br>(0.020) | |
| Hindus rel. Muslims (pre-treatment) | | | 0.799<br>(0.024) | | | 0.787<br>(0.025) |
| Woman | | | | -0.858<br>(0.938) | -0.255<br>(1.157) | -1.019<br>(1.562) |
| Age | | | | -1.057<br>(0.532) | -1.253<br>(0.655) | 0.264<br>(0.878) |
| Income | | | | -0.088<br>(0.152) | -0.021<br>(0.186) | -0.088<br>(0.252) |
| Education | | | | 0.484<br>(0.275) | -0.342<br>(0.329) | 1.034<br>(0.451) |
| Constant | 12.167<br>(1.873) | 9.159<br>(1.373) | 5.845<br>(1.180) | 14.496<br>(3.398) | 16.941<br>(3.968) | -1.774<br>(4.968) |
| Observations | 566 | 566 | 566 | 566 | 566 | 566 |
| $R^2$ | 0.734 | 0.773 | 0.659 | 0.738 | 0.775 | 0.662 |

Note: standard errors in parentheses

## Table SM6: Estimated Effects of Threat on Chinese Dehumanization (ITT Effects)

| | (1) Indians | (2) Chinese | (3) Indians rel. Chinese | (4) Indians | (5) Chinese | (6) Indians rel. Chinese |
|---|---|---|---|---|---|---|
| China Condition | 0.357 | -1.736 | 2.135 | 0.414 | -1.828 | 2.282 |
| | (0.789) | (0.960) | (1.227) | (0.792) | (0.964) | (1.230) |
| Indians (pre-treatment) | 0.790 | | | 0.787 | | |
| | (0.018) | | | (0.018) | | |
| Chinese (pre-treatment) | | 0.841 | | | 0.838 | |
| | | (0.017) | | | (0.017) | |
| Indians rel. Chinese (pre-treatment) | | | 0.773 | | | 0.771 |
| | | | (0.020) | | | (0.020) |
| Woman | | | | -0.762 | 0.470 | -1.596 |
| | | | | (0.795) | (0.972) | (1.239) |
| Age | | | | 0.042 | -0.678 | 0.819 |
| | | | | (0.459) | (0.558) | (0.711) |
| Income | | | | -0.246 | 0.157 | -0.441 |
| | | | | (0.139) | (0.170) | (0.217) |
| Education | | | | 0.143 | 0.283 | -0.108 |
| | | | | (0.181) | (0.216) | (0.279) |
| Constant | 17.568 | 10.597 | 3.865 | 19.211 | 9.505 | 6.541 |
| | (1.575) | (1.288) | (0.920) | (2.778) | (3.134) | (3.756) |
| Observations | 1021 | 1021 | 1021 | 1021 | 1021 | 1021 |
| $R^2$ | 0.657 | 0.718 | 0.606 | 0.658 | 0.719 | 0.609 |

Note: standard errors in parentheses

## Table SM7: Estimated Effects of Threat on Chinese Dehumanization (CACEs)

| | (1) Indians | (2) Chinese | (3) Indians rel. Chinese | (4) Indians | (5) Chinese | (6) Indians rel. Chinese |
|---|---|---|---|---|---|---|
| Passed FMC (instrumented) | 0.885 | -4.319 | 5.301 | 1.038 | -4.597 | 5.728 |
| | (1.949) | (2.382) | (3.029) | (1.976) | (2.411) | (3.062) |
| Indians (pre-treatment) | 0.789 | | | 0.787 | | |
| | (0.018) | | | (0.018) | | |
| Chinese (pre-treatment) | | 0.839 | | | 0.836 | |
| | | (0.017) | | | (0.017) | |
| Indians rel. Chinese (pre-treatment) | | | 0.769 | | | 0.768 |
| | | | (0.020) | | | (0.020) |
| Woman | | | | -0.697 | 0.195 | -1.257 |
| | | | | (0.802) | (0.979) | (1.245) |
| Age | | | | 0.059 | -0.762 | 0.920 |
| | | | | (0.457) | (0.556) | (0.706) |
| Income | | | | -0.248 | 0.165 | -0.452 |
| | | | | (0.139) | (0.169) | (0.216) |
| Education | | | | 0.126 | 0.362 | -0.200 |
| | | | | (0.185) | (0.221) | (0.283) |
| Constant | 17.632 | 10.712 | 3.931 | 19.292 | 9.410 | 6.824 |
| | (1.538) | (1.310) | (0.890) | (2.754) | (3.113) | (3.714) |
| Observations | 1021 | 1021 | 1021 | 1021 | 1021 | 1021 |
| $R^2$ | 0.658 | 0.719 | 0.609 | 0.659 | 0.720 | 0.612 |

Note: standard errors in parentheses

Table SM8: Estimated Effects of Threat on Muslim Dehumanization by Language (ITT Effects)

| | (1) Hindus | (2) Muslims | (3) Hindus rel. Muslims | (4) Hindus | (5) Muslims | (6) Hindus rel. Muslims |
|---|---|---|---|---|---|---|
| Pulwama Condition | -0.748 | 1.260 | -1.867 | -0.828 | 1.488 | -2.293 |
| | (1.264) | (1.552) | (2.080) | (1.267) | (1.558) | (2.087) |
| Hindi | 1.339 | -0.157 | 2.116 | 1.447 | -0.349 | 2.523 |
| | (1.288) | (1.579) | (2.128) | (1.287) | (1.580) | (2.132) |
| Pulwama Condition × Hindi | -0.822 | -0.692 | -0.362 | -0.663 | -0.862 | 0.068 |
| | (1.829) | (2.248) | (3.014) | (1.826) | (2.248) | (3.012) |
| Hindus (pre-treatment) | 0.861 | | | 0.845 | | |
| | (0.022) | | | (0.023) | | |
| Muslims (pre-treatment) | | 0.845 | | | 0.837 | |
| | | (0.019) | | | (0.020) | |
| Hindus rel. Muslims (pre-treatment) | | | 0.794 | | | 0.779 |
| | | | (0.024) | | | (0.025) |
| Woman | | | | -0.955 | -0.167 | -1.313 |
| | | | | (0.943) | (1.169) | (1.569) |
| Age | | | | -0.888 | -1.425 | 0.659 |
| | | | | (0.522) | (0.646) | (0.857) |
| Income | | | | -0.099 | -0.011 | -0.111 |
| | | | | (0.152) | (0.187) | (0.250) |
| Education | | | | 0.487 | -0.335 | 1.055 |
| | | | | (0.275) | (0.329) | (0.449) |
| Constant | 11.998 | 9.213 | 4.934 | 13.760 | 17.593 | -4.057 |
| | (1.953) | (1.631) | (1.535) | (3.445) | (4.121) | (5.103) |
| Observations | 566 | 566 | 566 | 566 | 566 | 566 |
| $R^2$ | 0.739 | 0.774 | 0.664 | 0.742 | 0.776 | 0.668 |

Note: standard errors in parentheses

Table SM9: Estimated Effects of Threat on Muslim Dehumanization by Language (CACEs)

| | (1) Hindus | (2) Muslims | (3) Hindus rel. Muslims | (4) Hindus | (5) Muslims | (6) Hindus rel. Muslims |
|---|---|---|---|---|---|---|
| Passed FMC (instrumented) | -1.399 | 2.418 | -3.896 | -0.994 | 2.777 | -3.790 |
| | (2.765) | (3.198) | (4.455) | (2.649) | (3.071) | (4.312) |
| Hindi | 1.465 | -0.291 | 2.182 | 1.870 | -0.540 | 3.100 |
| | (1.545) | (1.506) | (2.172) | (1.501) | (1.511) | (2.196) |
| Hindi × Passed FMC (instrumented) | -1.959 | -1.094 | -0.528 | -2.842 | -1.205 | -1.758 |
| | (3.846) | (4.220) | (6.189) | (3.673) | (4.107) | (5.995) |
| Hindus (pre-treatment) | 0.863 | | | 0.846 | | |
| | (0.031) | | | (0.032) | | |
| Muslims (pre-treatment) | | 0.844 | | | 0.837 | |
| | | (0.019) | | | (0.020) | |
| Hindus rel. Muslims (pre-treatment) | | | 0.795 | | | 0.779 |
| | | | (0.032) | | | (0.032) |
| Woman | | | | -0.963 | -0.175 | -1.309 |
| | | | | (1.047) | (1.340) | (1.754) |
| Age | | | | -1.046 | -1.298 | 0.359 |
| | | | | (0.457) | (0.815) | (0.960) |
| Income | | | | -0.090 | -0.018 | -0.094 |
| | | | | (0.155) | (0.172) | (0.248) |
| Education | | | | 0.523 | -0.365 | 1.124 |
| | | | | (0.318) | (0.404) | (0.577) |
| Constant | 11.717 | 9.338 | 4.887 | 13.706 | 17.567 | -3.970 |
| | (3.005) | (1.701) | (1.686) | (4.247) | (5.483) | (6.326) |
| Observations | 566 | 566 | 566 | 566 | 566 | 566 |
| $R^2$ | 0.739 | 0.774 | 0.664 | 0.743 | 0.776 | 0.668 |

Note: standard errors in parentheses

Table SM10: Estimated Effects of Threat on Chinese Dehumanization by Language (ITT Effects)

| | (1) Indians | (2) Chinese | (3) Indians rel. Chinese | (4) Indians | (5) Chinese | (6) Indians rel. Chinese |
|---|---|---|---|---|---|---|
| China Condition | -0.384 (1.116) | -1.513 (1.359) | 1.267 (1.736) | -0.304 (1.118) | -1.674 (1.361) | 1.533 (1.736) |
| Hindi | -0.849 (1.112) | 0.374 (1.354) | -1.307 (1.731) | -0.780 (1.119) | 0.543 (1.363) | -1.386 (1.739) |
| China Condition × Hindi | 1.484 (1.578) | -0.449 (1.923) | 1.744 (2.456) | 1.441 (1.582) | -0.318 (1.927) | 1.520 (2.458) |
| Indians (pre-treatment) | 0.790 (0.018) | | | 0.787 (0.018) | | |
| Chinese (pre-treatment) | | 0.841 (0.017) | | | 0.837 (0.017) | |
| Indians rel. Chinese (pre-treatment) | | | 0.773 (0.020) | | | 0.771 (0.020) |
| Woman | | | | -0.724 (0.798) | 0.487 (0.977) | -1.594 (1.245) |
| Age | | | | 0.024 (0.460) | -0.670 (0.559) | 0.794 (0.713) |
| Income | | | | -0.247 (0.140) | 0.155 (0.170) | -0.439 (0.217) |
| Education | | | | 0.140 (0.184) | 0.296 (0.218) | -0.130 (0.282) |
| Constant | 18.022 (1.682) | 10.412 (1.449) | 4.517 (1.265) | 19.706 (2.883) | 9.131 (3.268) | 7.468 (3.943) |
| Observations | 1021 | 1021 | 1021 | 1021 | 1021 | 1021 |
| $R^2$ | 0.657 | 0.718 | 0.606 | 0.659 | 0.719 | 0.609 |

Note: standard errors in parentheses

Table SM11: Estimated Effects of Threat on Chinese Dehumanization by Language (CACEs)

| | (1) Indians | (2) Chinese | (3) Indians rel. Chinese | (4) Indians | (5) Chinese | (6) Indians rel. Chinese |
|---|---|---|---|---|---|---|
| Passed FMC (instrumented) | -0.849 (2.909) | -3.711 (3.125) | 3.650 (4.274) | -0.467 (2.939) | -4.057 (3.077) | 4.410 (4.282) |
| Hindi | -0.845 (1.232) | 0.595 (1.323) | -1.358 (1.743) | -0.730 (1.238) | 0.864 (1.266) | -1.491 (1.716) |
| Hindi × Passed FMC (instrumented) | 3.465 (3.858) | -1.231 (4.917) | 3.332 (6.308) | 3.016 (3.830) | -1.125 (4.583) | 2.701 (6.109) |
| Indians (pre-treatment) | 0.789 (0.026) | | | 0.786 (0.027) | | |
| Chinese (pre-treatment) | | 0.839 (0.018) | | | 0.836 (0.018) | |
| Indians rel. Chinese (pre-treatment) | | | 0.769 (0.024) | | | 0.768 (0.024) |
| Woman | | | | -0.669 (0.825) | 0.223 (1.002) | -1.285 (1.278) |
| Age | | | | 0.051 (0.477) | -0.753 (0.605) | 0.902 (0.625) |
| Income | | | | -0.248 (0.140) | 0.162 (0.174) | -0.447 (0.216) |
| Education | | | | 0.110 (0.197) | 0.388 (0.242) | -0.242 (0.298) |
| Constant | 18.055 (2.511) | 10.440 (1.547) | 4.573 (1.131) | 19.768 (3.226) | 8.805 (3.444) | 7.886 (4.051) |
| Observations | 1021 | 1021 | 1021 | 1021 | 1021 | 1021 |
| $R^2$ | 0.657 | 0.718 | 0.606 | 0.659 | 0.719 | 0.609 |

Note: standard errors in parentheses

## 2 Chinese Dehumanization Models Restricted to Hindus

Per our pre-registration, in the analyses in the main text in which the dependent variable captured (relative) Muslim humanness, we restricted the sample to Hindus. Here, we show results from models of (relative) Chinese dehumanization that are also restricted to Hindus. Results are shown in Figures SM1, SM2, and SM3. Sample sizes drop due to the exclusion of non-Hindus, and confidence intervals widen accordingly. However, substantive conclusions are unaltered.
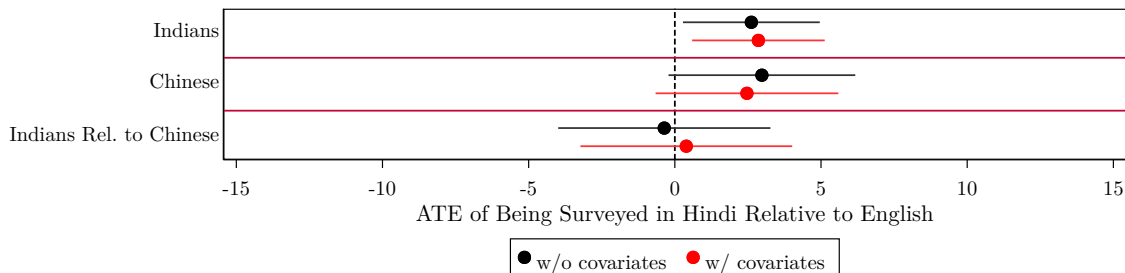


Figure SM1: Estimated Effects of Language on Chinese Dehumanization, Hindus Only

Note: Point estimates represent the average treatment effect of being assigned to the Hindi language condition relative to assignment to the English condition. The covariate-adjusted models control for a binary female/male gender variable, age in years, income on a 13-point ordinal scale, and education on a nine-point ordinal scale. Horizontal lines indicate 90 percent confidence intervals. The number of observations in the underlying models is 875. Data are from an original survey experiment conducted in India.
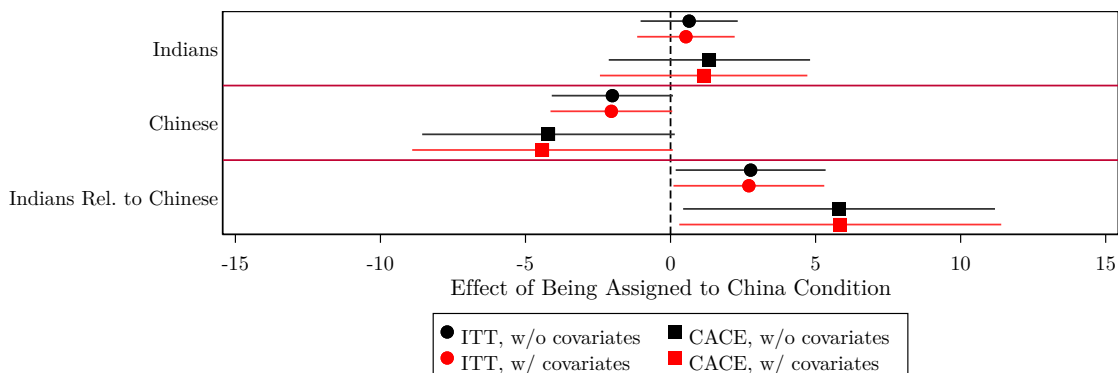


Figure SM2: Estimated Effects of Threat on Chinese Dehumanization, Hindus Only

Note: Point estimates represent either intention to treat (ITT) effects or complier average causal effects (CACEs) relative to the control condition. All estimates are adjusted by the pre-treatment level of the dependent variable. The covariate-adjusted models control for a binary female/male gender variable, age in years, income on a 13-point ordinal scale, and education on a nine-point ordinal scale. Horizontal lines indicate 90 percent confidence intervals. The number of observations in the underlying models is 577. Data are from an original survey experiment conducted in India.
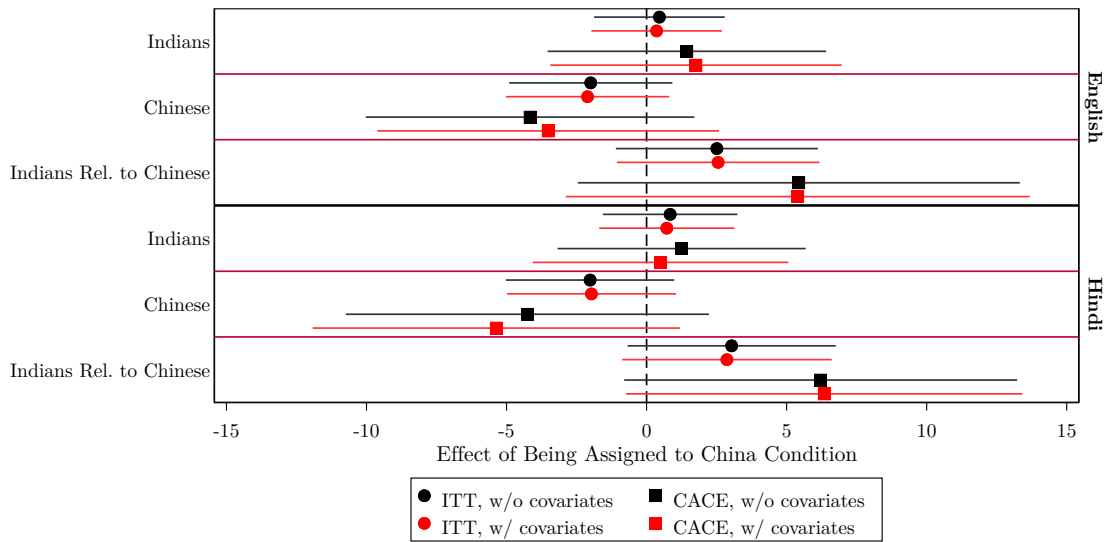
Figure SM3: Estimated Effects of Threat on Chinese Dehumanization by Language, Hindus Only

Note: Point estimates represent either intention to treat (ITT) effects or complier average causal effects (CACEs) relative to the control condition. All estimates are adjusted by the pre-treatment level of the dependent variable. The covariate-adjusted models control for a binary female/male gender variable, age in years, income on a 13-point ordinal scale, and education on a nine-point ordinal scale. Horizontal lines indicate 90 percent confidence intervals. The number of observations in the underlying models is 577. Data are from an original survey experiment conducted in India.

# 3 Effects of Treatment on Nationalism

We argue in the main text that communicated threat drives dehumanization by generating us-versus-them perceptions and thus negative attitudes about ethnic others. A competing mechanism is nationalism, which could also engender negative attitudes about an ethnic outgroup.

We are able to test this by leveraging a post-treatment item included in our survey that directly asked respondents whether being an Indian is personally important to them. The resulting measure ranges from 0 to 10, with higher values meaning one sees being Indian as more important. If nationalism drives the link between threat communication and dehumanization, the terror and Chinese militarization treatments should lead respondents to express more nationalistic sentiment. To test this, we use the same approach described in the main text, estimating both ITT effects and CACEs of the treatments on responses to the question, with and without covariate adjustment. As shown in Figures SM4 and SM5, we find no evidence of this. The estimated ITT effects and CACEs are substantively and statistically insignificant.
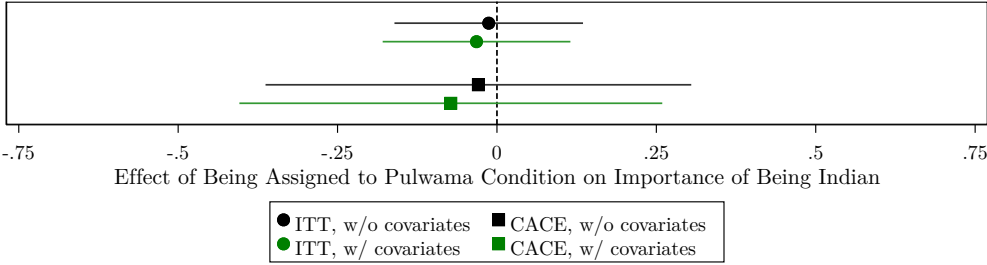


Figure SM4: Estimated Effects of Threat on Nationalist Sentiment, Pulwama Condition

Note: Point estimates represent either intention to treat (ITT) effects or complier average causal effects (CACEs) relative to the control condition. All estimates are adjusted by the pre-treatment level of the dependent variable. The covariate-adjusted models control for a binary female/male gender variable, age in years, income on a 13-point ordinal scale, and education on a nine-point ordinal scale. Horizontal lines indicate 90 percent confidence intervals. The number of observations in the underlying models is 1,060. Data are from an original survey experiment conducted in India.
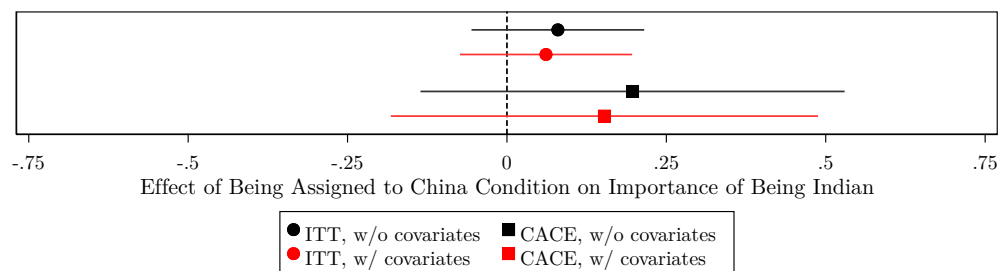
Figure SM5: Estimated Effects of Threat on Nationalist Sentiment, China Condition

Note: Point estimates represent either intention to treat (ITT) effects or complier average causal effects (CACEs) relative to the control condition. All estimates are adjusted by the pre-treatment level of the dependent variable. The covariate-adjusted models control for a binary female/male gender variable, age in years, income on a 13-point ordinal scale, and education on a nine-point ordinal scale. Horizontal lines indicate 90 percent confidence intervals. The number of observations in the underlying models is 1,045. Data are from an original survey experiment conducted in India.

# 4    Effects of Threat from China on Dehumanization of Taiwanese

To further probe the plausibility of the alternate nationalism mechanism, we consider that national-
ist logic would expect dehumanizing attitudes to extend to groups beyond the source of the threat.
Utilizing the China threat treatment, we are able to test this by focusing on dehumanization of
Taiwanese people, who largely share an ethnicity with Chinese.

We use the same approach described in the main text, estimating both ITT effects and CACEs
of the treatments on Taiwanese dehumanization, with and without covariate adjustment. As shown
in Figure SM6, we find no evidence that threat from China prompts the (relative) dehumanization of
Taiwanese people. In line with our theory, this suggests that threat prompts dehumanizing attitudes
toward specific ethnic others with whom it is associated but does not generate a broader sense of
nationalism via which dehumanizing attitudes should be observable more generally.
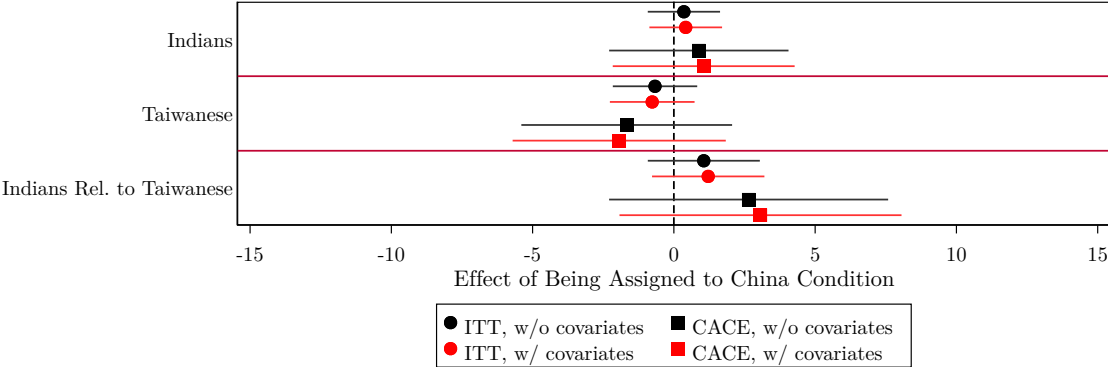


Figure SM6: Estimated Effects of Threat on Taiwanese Dehumanization

Note: Point estimates represent either intention to treat (ITT) effects or complier average causal effects (CACEs)
relative to the control condition. All estimates are adjusted by the pre-treatment level of the dependent variable.
The covariate-adjusted models control for a binary female/male gender variable, age in years, income on a
13-point ordinal scale, and education on a nine-point ordinal scale. Horizontal lines indicate 90 percent confidence
intervals. The number of observations in the underlying models is 1,022. Data are from an original survey
experiment conducted in India.

# 5  Covariate Balance

Our experiment has two stages. In the initial stage, respondents were randomly assigned to either an English- or Hindi-language setting. In the second stage, they were randomly assigned to a condition in which they were asked to read a news vignette about a terror attack in Pulwama, India; a condition in which they were asked to read about recent militarized threat toward India from China; or an innocuous control condition about ship recycling. Given randomization, we do not expect respondent characteristics to correlate with treatment assignment.

Still, differential attrition can bias estimates by introducing a systematic correlation between respondent characteristics and the treatment condition to which they are assigned—and remained in or dropped out of (see De Keulenaer 2008). In our design, it is possible that some respondents, although bilingual, may feel more comfortable with either English or Hindi, and their level of comfort could correlate with their aptness to continue with the study after survey language was assigned. Anticipating this, we pre-registered an intention to control for several observed covariates.

In Figure SM7, we show the associations between gender, age, income, education and the survey language in which a respondent completed the pre-treatment survey. More educated people are less likely to take the survey in Hindi. At the same time, wealthier people are no more likely to take it in one language than another. Thus, it reassuringly does not seem that members of the upper class in India, among whom English is more prominent, are systematically more likely to complete the study in English. There is also no evidence that gender or age correlate with survey language. And, importantly, as shown in the main text, results are unchanged when we adjust for covariate imbalance.

In Figures SM8 and SM9, we illustrate covariate balance across the Pulwama and China vignettes, relative to the control condition. We find evidence of imbalance at the 90 percent confidence level in one out of eight tests, which is not far from what would be expected by random chance. Thus, we have little reason to suspect a flaw with the randomization process. Moreover, any imbalances in treatment assignment due to "bad luck" are reflected in $p$-values (Mutz and Pemantle 2015). And, again, results in the main text are robust to covariate adjustment.
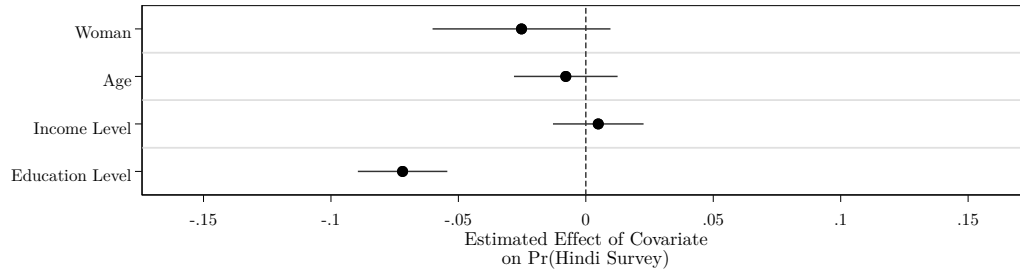
Figure SM7: Balance of Demographic Covariates, Language Assignment

Note: Point estimates represent the difference in the probability of taking the survey in Hindi associated with a standard deviation change in a covariate, or the difference between men and women for the gender variable. On their original metrics, age is measured in years, income on a 13-point ordinal scale, and education on a nine-point ordinal scale. The number of observations in the analyses is: gender, 2,244; age, 1,641; income, 2,147; education, 2,155. Data are from an original survey experiment conducted in India.
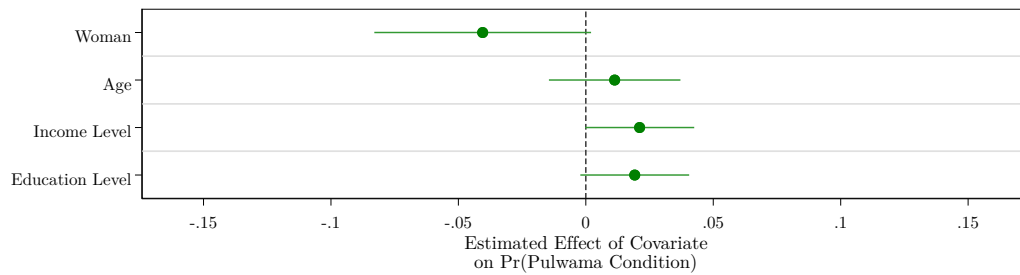


Figure SM8: Balance of Demographic Covariates, Assignment to Pulwama Condition

Note: Point estimates represent the difference in the probability of being assigned to the Pulwama vignette rather than the control condition associated with a standard deviation change in a covariate, or the difference between men and women for the gender variable. On their original metrics, age is measured in years, income on a 13-point ordinal scale, and education on a nine-point ordinal scale. The number of observations in the analyses is: gender, 1,484; age, 1,089; income, 1,421; education, 1,422. Data are from an original survey experiment conducted in India.
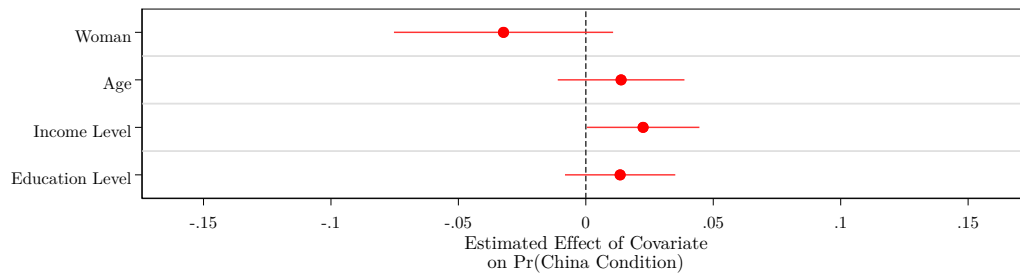


Figure SM9: Balance of Demographic Covariates, Assignment to China Condition

Note: Point estimates represent the difference in the probability of being assigned to the China vignette rather than the control condition associated with a standard deviation change in a covariate, or the difference between men and women for the gender variable. On their original metrics, age is measured in years, income on a 13-point ordinal scale, and education on a nine-point ordinal scale. The number of observations in the analyses is: gender,1,514; age, 1,101; income, 1,447; education, 1,456. Data are from an original survey experiment conducted in India.

# 6   Survey Questions and Vignettes

This section provides the wording of the survey questions used in the construction of the variables used in the main text and the nationalism variable used in this appendix. It also provides the vignettes that were embedded in the survey. Content here is displayed in English, though respondents in our study were randomized to see content in either English or Hindi (written in Devanagari script).

**Questions Asked Before Vignette Assignment**

**Gender**: "What is your gender?"
- Man
- Woman
- Other
- Prefer not to say

This is coded as a binary variable. We coded those who selected "Other" or "Prefer not to say" as missing.

**Age**: "What is your age in years?"

This is coded in years.

**Income**: "What is your total monthly household income in rupees—putting together the income of all members of the household?"
1. Less than ₹5,000
2. ₹5,000 to ₹9,999
3. ₹10,000 to ₹14,999
4. ₹15,000 to ₹19,999
5. ₹20,000 to ₹24,999
6. ₹25,000 to ₹29,999
7. ₹30,000 to ₹34,999
8. ₹35,000 to ₹39,999
9. ₹40,000 to ₹44,999
10. ₹45,000 to ₹49,999
11. ₹50,000 to ₹54,999
12. ₹55,000 to ₹59,999
13. ₹60,000 or more
14. Prefer not to say

This is coded as a 13-point ordinal scale. We coded those who selected "Prefer not to say" as missing.

**Education**: "What is the highest level of education you have successfully completed??"
1. No formal education
2. Incomplete primary school

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3. Completed primary school
4. Middle pass
5. 10th pass
6. 11th pass, not completed intermediate
7. 12th pass/Intermediate
8. Undergraduate, still in college
9. B.A. and Higher degrees
10. Prefer not to say

This is coded as a nine-point ordinal scale. We coded those who selected "Prefer not to say" as missing.

**Religion**: "What is your religion?"

- Jainism

- Islam

- Christianity

- Buddhism/Neo Buddhism

- Sikhism

- Hinduism

- No denomination

- No religion

- Prefer not to say

- Other (please specify)

We coded this as a multinomial variable with separate categories for each response option.

**Instructional Manipulation Check**: "You probably have a favourite colour. But we are more interested in making sure you're doing the survey carefully, so please just select the colour purple here."

- Orange

- Blue

- Green

- Purple

- Red
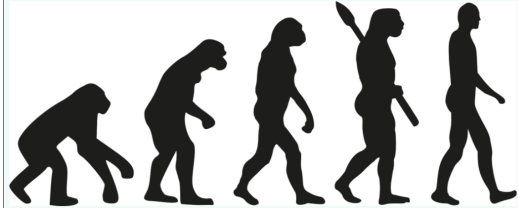
Those who failed this item were prevented by Dynata, the survey firm, from continuing the study.

## Questions Asked Before and After Vignette Assignment

**Nationalism**: "How important is being an Indian to you? Please answer using a score of 0 to 10, where 0 means not at all important and 10 means it is the most important thing in your life." This is coded as an 11-point ordinal scale. We coded those who selected "Don't know" or "Prefer not to say" as missing.

**Dehumanization**: We provided the below task, sourced from Kteily et al. (2015), to respondents. Absolute dehumanization is the score provided to a particular group. Relative dehumanization was calculated as the score given to a target group subtracted from that given to one's own. We coded those who did not rate a group necessary for a particular measure as missing.

**Questions Asked After Vignette Assignment**

**Subjective Manipulation Check**: "Which of the following do you see as the biggest problem facing India?"

- Military threat from China
- Terrorism
- Ship disposal
- Poverty
- Climate change
- Something else (please specify)
- Don't know

We created separate binary variables for each response option. We coded those who selected "Don't know" as missing.

**Treatment-Relevant Factual Manipulation Check**: "If you do not know the answer to the following question, it is perfectly acceptable to respond with 'don't know.' What was discussed in the news story that we asked you to read?"

- Threat from China
- A terror attack
- Ship recycling
- Panchayat health care delivery
- Wildlife sanctuaries
- Don't know

This is coded as a binary variable. We coded those who selected the correct response for the group to which they were assigned as having passed, with others coded as failures.

## Vignettes

Here we display the content of the treatment and control conditions to which participants were randomly assigned. Those in the Pulwama treatment group saw the following vignette:

**Before you continue answering questions, we would like you to please carefully read this short news story:**

India has been facing an escalating threat from terrorism. Terrorist groups continue to operate and engage in provocative actions. This has sometimes resulted in the killing of and injury to Indian troops and civilians. For example, an incident occurred in February of 2019 when 40 Central Reserve Police Force personnel were killed by the Jaish-e-Mohammed group at Lethpora, in the Pulwama district of Jammu and Kashmir. Such actions put the country and society at grave risk.



**Please click the arrow to continue.**

Those in the China treatment group saw the following vignette:

**Before you continue answering questions, we would like you to please carefully read this short news story:**

India's territory has been facing an escalating threat from China. Chinese forces have been amassing near the common border and engaging in provocative actions, such as repeatedly attempting to seize Indian territory. This has sometimes resulted in the killing of and injury to Indian troops and civilians. For example, an incident occurred in June of 2020 when 20 Indian soldiers were killed by Chinese troops in Galwan Valley, in the mountainous region of Ladakh. Such attempts to seize Indian land put the country and society at grave risk.



Source: Daily Mail India

**Please click the arrow to continue.**

Those in the shipping control group saw the following vignette:

**Before you continue answering questions, we would like you to please carefully read this short news story:**

On December 9, 2019, Parliament passed the "Recycling of Ships Bill, 2019." The Bill, upon becoming Act, will regulate the recycling process of ships and the protection of yard workers. Ships to be recycled in India will need to obtain a "Ready for Recycling Certificate" in accordance with international agreements. Existing facilities need to apply for authorisation within 60 days of the commencement of the Act.



**Please click the arrow to continue.**

# 7 Anonymized Pre-Registration

(/registries/osf/discover) ▾   ✚(/registries/osf/new)   ▤(/registries/my-registrations)   ▒▓▒ ▾

# Violent Threat, Language, and Perceptions of Humanness

Embargoed registration ▾   Updates ▾                          ⌥  🔖  ◄

☰                                                              **Metadata**

## Study Information

### Hypotheses

1. Violent threat causes people to view members of groups other than their own as less human.
2. Communication in a native official language rather than a non-native language causes people to view members of groups other than their own as less human.
3. Violent threat causes people to view members people to view members of groups other than their own as less human, especially if the threat is communicated in a native official language rather than a non-native language.

## Design Plan

### Study type

Experiment - A researcher randomly assigns treatments to study subjects, this includes field or lab experiments. This is also known as an intervention experiment and includes randomized controlled trials.

### Blinding

For studies that involve human subjects, they will not know the treatment group to which they have

been assigned.

**Is there any additional blinding in this study?**

**Study design**

This study uses a six-group, between subjects design.

To assess whether violent threat and language impact our dependent variables, we will randomly assign respondents to a condition in which they are asked to read a news vignette about a terror attack in India; a condition in which they are asked to read a news vignette about threat toward India's territorial integrity from China; or a condition in which they are asked to read a news vignette about ship recycling. Each condition will have an accompanying photo.

Respondents will also be randomly assigned to complete the survey experiment in either English or Hindi.

*No files selected*

**Randomization**

The assignment to the linguistic and vignette conditions will be fully randomized. Simple randomization will be done using Qualtrics survey software.

# Sampling Plan

**Existing Data**

Registration prior to creation of data

**Explanation of existing data**

*No response*

**Data collection procedures**

Subjects will be recruited by Dynata.

The target population is 18+ adults who can speak English in the predominantly Hindi-speaking states/territories of: Bihar, Chhattisgarh, Haryana, Himachal Pradesh, Jharkhand, Madhya Pradesh, Rajasthan, Uttar Pradesh, Uttarakhand, Union Territory of Chandigarh, and the National Capital Territory of Delhi.

*No files selected*

**Sample size**

The target sample size is 333 per experimental group, for a total of about 2,000 respondents.

**Sample size rationale**

Assuming smallish effect sizes (Cohen's d = 0.25) after covariate adjustment and pooled sample standard deviations equal to 1.0 (or, equivalently, effect sizes of 0.25 standard deviations), about 200 observations per group are needed to detect an effect at the 10 percent significance level with a power level of 80 percent. We will conservatively target 333 subjects per experimental group, given that we will employ exclusion rules (see below).

**Stopping rule**

*No response*

# Variables

**Manipulated variables**

We will manipulate whether participants are shown the baseline shipping vignette or one of the vignettes meant to prime violent threat. We will also manipulate whether the surveys are taken in English or Hindi.

*No files selected*

**Measured variables**

The dependent variables will be measured with the attached visual task. They will be measured both pre- and post-treatment.

The pre-treatment covariates will be measured with the following questions:

Gender: What is your gender?
Male
Female
Other
Prefer not to say

Education: What is the highest level of education you have successfully completed?
No formal education
Incomplete primary school
Completed primary school
Middle pass
10th pass
11th pass, not completed intermediate
12th pass/Intermediate
Undergraduate, still in college
B.A. and Higher degrees
Prefer not to say

Prefer not to say

Income: What is your total monthly household income in rupees—putting together the income of all members of the household?
Less than ₹5,000
₹5,000 to ₹9,999
₹10,000 to ₹14,999
₹15,000 to ₹19,999
₹20,000 to ₹24,999
₹25,000 to ₹29,999
₹30,000 to ₹34,999
₹35,000 to ₹39,999
₹40,000 to ₹44,999
₹45,000 to ₹49,999
₹50,000 to ₹54,999
₹55,000 to ₹59,999
₹60,000 or more
Prefer not to say


Age: What is your age in years?

Ideology: In politics people sometimes talk of left and right. Where would you place yourself on a scale from 0 to 10, where 0 means the left and 10 means the right?
0 (left)    1    2    3    4    5    6    7    8    9    10 (right)
Don't know
Prefer not to say



The manipulation checks will be measured with the following questions:

Instructional Manipulation Check: You probably have a favourite colour. But we are more interested in making sure you're doing the survey carefully, so please just select the colour purple here.
Orange
Blue
Green
Purple
Red

Factual Manipulation Check (post-treatment): What was discussed in the news story that we asked you to read?
Threat from China
A terror attack
Ship recycling
Panchayat health care delivery
Wildlife sanctuaries
Don't know

- India_Dehumanization.jpeg

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(https://osf.io/project/t2z5c/files/osfstorage/61bcec84d4108a0144c0154f)

**Indices**

*No response*

*No files selected*

# Analysis Plan

**Statistical models**

We will use OLS linear regression to estimate the effect of assignment to the Hindi vs. English language conditions on the measures of the dependent variables taken before assignment to the violent threat and control conditions. We will estimate covariate unadjusted and covariate adjusted models. In the latter, we will adjust for the following covariates: gender, age, income, and education.

We will use OLS linear regression to estimate the effect of assignment to each of the violent threat conditions on the dependent variables, relative to the baseline shipping condition. We will control for the pre-treatment measure of the relevant dependent variable. We will estimate covariate unadjusted and covariate adjusted models. In the latter, we will adjust for the following pre-treatment covariates: gender, age, income, and education.

We will also use two-stage least squares regression to assess whether violent threat treatment effects are different for those who correctly answered the factual manipulation check (see above). Specifically, we will estimate two-stage least squares regressions of the dependent variables on passage of the factual manipulation check, using randomization into the violent threat treatment groups as an instrument for passage. We will control for the pre-treatment measure of the relevant dependent variable. We will estimate covariate unadjusted and covariate adjusted models. In the latter, we will adjust for the following pre-treatment covariates: gender, age, income, and education.

We will use interaction terms to compare the effects of the threat treatments, relative to the shipping condition, across languages.

For models that will use the absolute or relative humanness of Muslims as the dependent variable, the analysis will be restricted to those who report being Hindu.

*No files selected*

**Transformations**

We will measure perceptions of the humanness of members of various groups (see the Measured variables section) and do so in both absolute and relative terms. Absolute perceptions of humanness will be determined with respondents' 0-100 ratings of the level of evolution of members of the various groups. Relative perceptions of humanness will be measured by subtracting respondents' ratings of the various groups from that of a baseline. For ratings of citizens of other countries, the baseline will be Indians. For ratings of Muslims in India, the baseline will be Hindus.

Gender will be coded as dichotomous; those who select "other" will be listwise deleted.

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**Inference criteria**

We will report 90% confidence intervals, using upper and lower bounds equal to the point estimate plus or minus the estimated standard error multiplied by the appropriate critical value from the t-distribution.

**Data exclusion**

The surveys include an instructional manipulation attention check, and we will eliminate those who fail the check. We will also eliminate those who are under 18 years of age and those who opt to have their data excluded after being debriefed. We will also exclude anyone who responds with "don't know" or "prefer not to say" to any of the questions used to measure any of the included pre-treatment covariates or the dependent variable in a given analysis. Respondents who select "other" on the gender question will also be listwise deleted.

**Missing data**

Listwise deletion

**Exploratory analysis**

*No response*

# Other

**Other**

*No response*

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# References

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