# manuscript

## 1. Exclusion

|  | Eastern | Southern | Western | All |
|---|---:|---:|---:|---:|
| **Reason to exclude** |  |  |  |  |
| N without exclusion | $3,877$ | $5,333$ | $18,292$ | $27,502$ |
| Careless responding | 156 (4.0%) | 82 (1.5%) | 256 (1.4%) | 494 (1.8%) |
| Confusion | 752 (19.4%) | 658 (12.3%) | $1,718$ (9.4%) | $3,128$ (11.4%) |
| Familiarity with moral dilemmas | $1,669$ (43.0%) | $2,501$ (46.9%) | $10,332$ (56.5%) | $14,502$ (52.7%) |
| Technical problem | 531 (13.7%) | 413 (7.7%) | $1,225$ (6.7%) | $2,169$ (7.9%) |
| Non-native speaker | 347 (9.0%) | 177 (3.3%) | $1,305$ (7.1%) | $1,829$ (6.7%) |
| Failed attention check (Study1a) | 720 (18.6%) | 943 (17.7%) | $1,311$ (7.2%) | $2,974$ (10.8%) |
| Failed attention check (Study1b) | 849 (21.9%) | $1,042$ (19.5%) | $1,336$ (7.3%) | $3,227$ (11.7%) |
| Failed attention check (Study2a) | $1,102$ (28.4%) | $1,071$ (20.1%) | $4,900$ (26.8%) | $7,073$ (25.7%) |
| Failed attention check (Study2b) | $1,195$ (30.8%) | $1,367$ (25.6%) | $5,528$ (30.2%) | $8,090$ (29.4%) |
| **Final sample** |  |  |  |  |
| Study1a | 381 | 622 | 566 | $1,569$ |
| Study1b | 327 | 553 | 546 | $1,426$ |
| Study2a | 323 | 690 | $2,971$ | $3,984$ |
| Study2b | 277 | 576 | $2,660$ | $3,513$ |

## 2. Main replication analysis

### Study 1a and 1b

**Bayesian analysis**

The effect of personal force on moral dilemma judgements on Trolley dilemmas

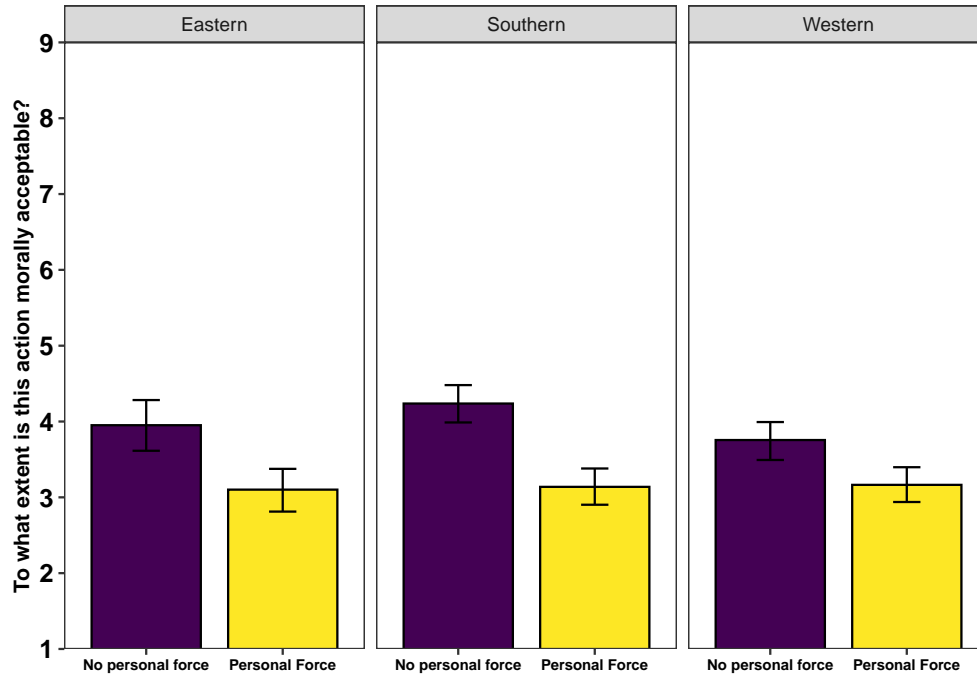| Exclusion | Cluster | BF | RR | t | df | p | Cohen's d |
|---|---|---|---|---:|---:|---|---:|
| Exclude | Eastern | 1.9e+02 | 7.00e-03, 14.00 | -3.69 | 366.23 | <.001 | -0.38 |
|  | Southern | 2.44e+07 | 1.00e-05, 2.80e+06 | -6.32 | 619.93 | <.001 | -0.51 |
|  | Western | 8.01e+01 | 1.20e-02, 4.30 | -3.41 | 553.15 | 0.001 | -0.29 |
| Including familiar | Eastern | 9.21e+04 | <1.00e-05, 1.10e+04 | -5.19 | 806.76 | <.001 | -0.36 |
|  | Southern | 5.91e+12 | <1.00e-05, 6.30e+14 | -8.09 | 1345.85 | <.001 | -0.44 |
|  | Western | 4.95e+05 | <1.00e-05, 9.80e+07 | -5.51 | 1338.48 | <.001 | -0.30 |

Figure 1: Results on Trolley dilemmas in Study 1 with all exclusion criteria applied.
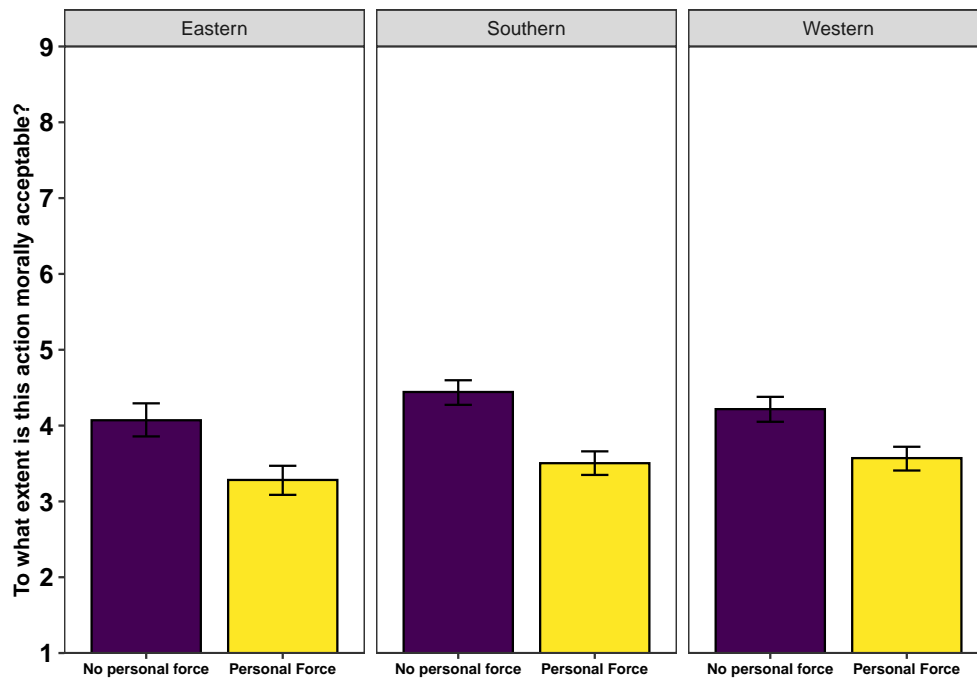


Figure 2: Results on Trolley dilemmas in Study 1 with including familiar participants

The effect of personal force on moral dilemma judgements on Speedboat dilemmas

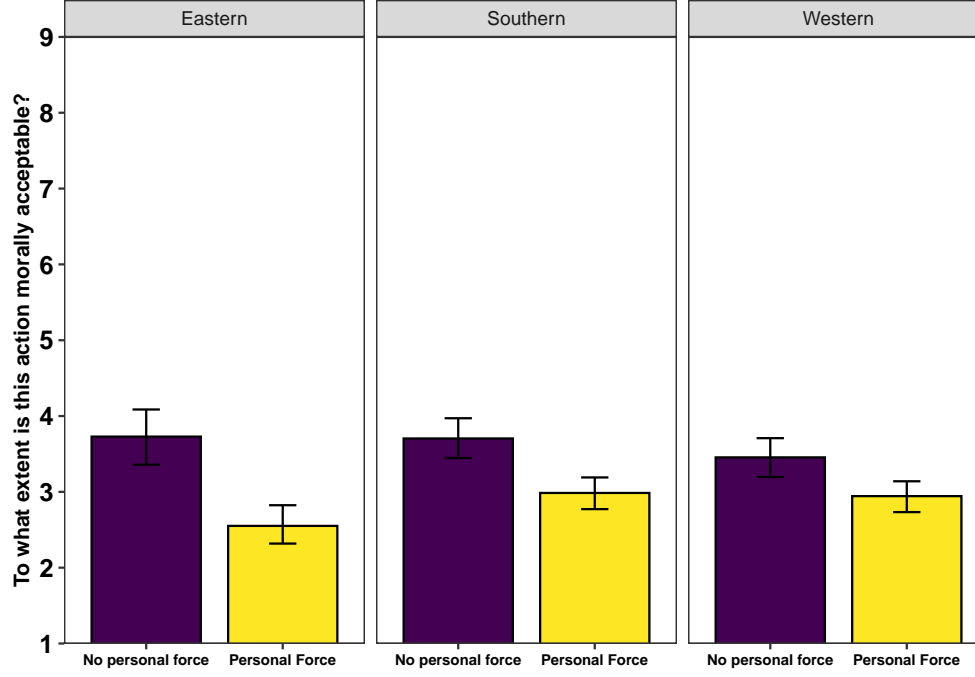| Exclusion | Cluster | BF | RR | t | df | p | Cohen's d |
|---|---|---|---|---|---|---|---|
| Exclude | Eastern | 1.16e+05 | 1.50e-0.3, 1.70e+04 | -5.26 | 283.92 | <.001 | -0.59 |
| | Southern | 1.01e+03 | 1.30e-03, 74.00 | -4.19 | 436.86 | <.001 | -0.37 |
| | Western | 2.52e+01 | 3.30e-02, 1.2 | -3.01 | 437.36 | 0.003 | -0.27 |
| Including familiar | Eastern | 2.4e+04 | <1.00e-05, 9.50e+03 | -4.88 | 680.10 | <.001 | -0.37 |
| | Southern | 7.8e+06 | <1.00e-05, 2.10e+08 | -5.94 | 908.97 | <.001 | -0.36 |
| | Western | 5.53e+07 | <1.00e-05, 1.0e+08 | -6.34 | 1140.72 | <.001 | -0.35 |



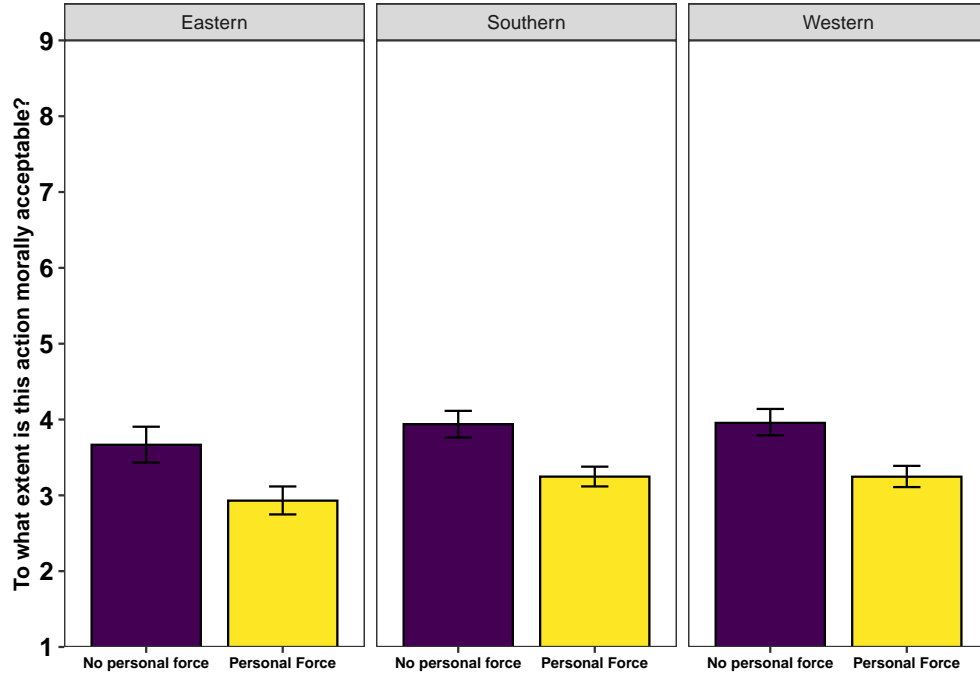Figure 3: Results on Trolley dilemmas in Study 1 with all exclusion criteria applied.

Figure 4: Results on Speedboat dilemmas in Study 1 with including familiar participants.

## Study 2a and 2b

Do personal force interact with intention on Trolley dilemmas?

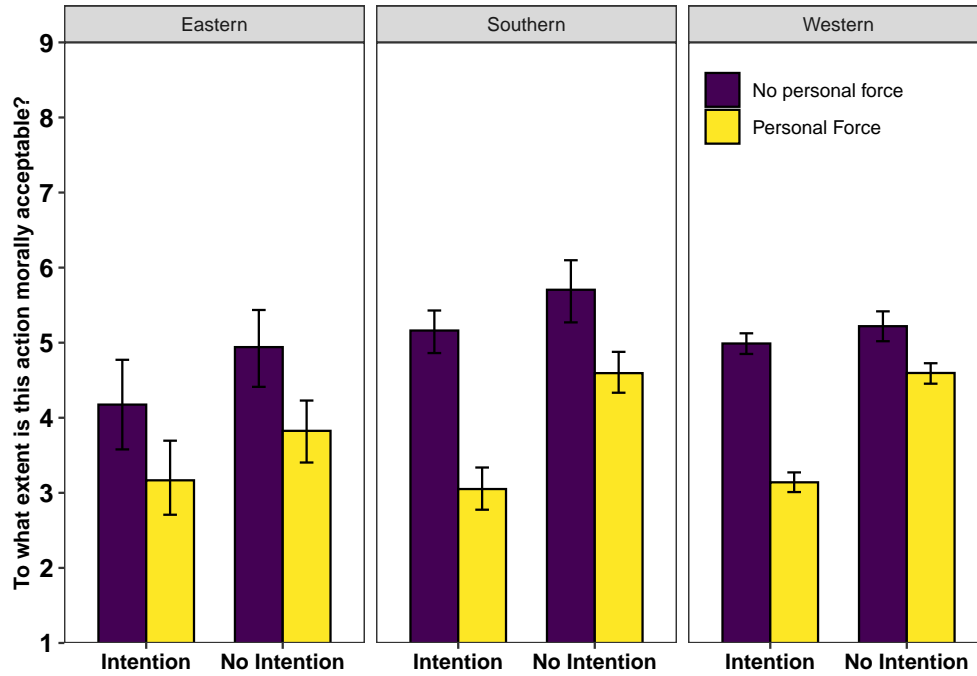| Exclusion | Cluster | BF | RR | F | df | p | Partial $\eta^2$ | Raw effect |
|---|---|---|---|---|---|---|---|---|
| Exlusion | Eastern | 6.01e-01 | 0.03, 0.64 | 0.041 | 1, 319 | 0.84 | 0.000 | 0.11 |
| | Southern | 9.07e+00 | 0.03, 0.2 | 9.455 | 1, 686 | 0.002 | 0.014 | -1.00 |
| | Western | 1.46e+11 | 6.00e-05, 1.80e+03 | 58.035 | 1, 2967 | <.001 | 0.019 | -1.23 |
| Include familiar | Eastern | 2.79e+00 | 2.50e-02, 0.91 | 4.702 | 1, 588 | 0.031 | 0.008 | -0.85 |
| | Southern | 3.08e+06 | 8.00e-05, 1.70e+03 | 36.642 | 1, 1373 | <.001 | 0.026 | -1.39 |
| | Western | 1.26e+30 | <1.00e-05, 2.30e+14 | 146.955 | 1, 7871 | <.001 | 0.018 | -1.17 |

Figure 5: Results on Trolley dilemmas in Study 2 when all exclusion criteria are applied. Error bars are 95% confidence intervals on the mean.
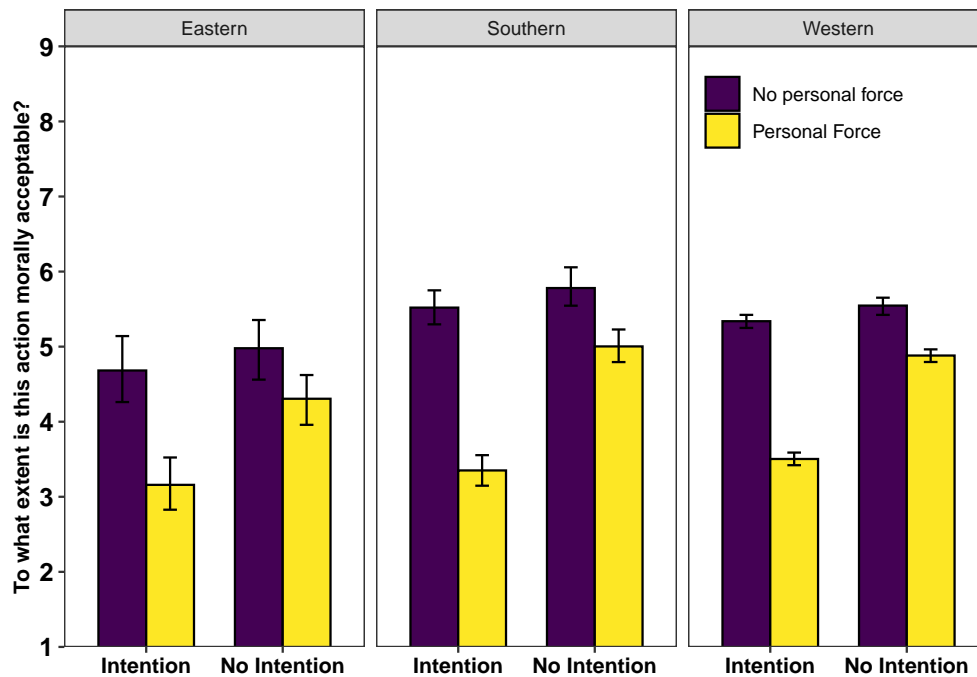


Figure 6: Results on Trolley dilemmas in Study 2 while not applying familiarity exclusion. Error bars are 95% confidence intervals on the mean.

Do personal force interact with intention on Speedboat dilemmas?

| Exclusion | Cluster | BF | RR | F | df | p | Partial $\eta^2$ | Raw effect |
|---|---|---|---|---|---|---|---|---|
| Exlusion | Eastern | 4.20e-01 | 4.90e-02, 0.69 | 0.003 | 1, 273 | 0.959 | 0.000 | -0.03 |
| | Southern | 3.60e-01 | 5.10e-02, 0.63 | 0.068 | 1, 572 | 0.794 | 0.000 | 0.11 |
| | Western | 2.19e+02 | 3.60e-02, 1.10 | 14.604 | 1, 2656 | <.001 | 0.005 | -0.64 |
| Include familiar | Eastern | 4.10e-01 | 2.60e-02, 0.72 | 0.009 | 1, 517 | 0.926 | 0.000 | 0.04 |
| | Southern | 1.12e+00 | 2.50e-02, 0.95 | 2.758 | 1, 1127 | 0.097 | 0.002 | -0.53 |
| | Western | 5.11e+07 | 1.40e-02, 1.30 | 40.396 | 1, 7350 | <.001 | 0.005 | -0.61 |
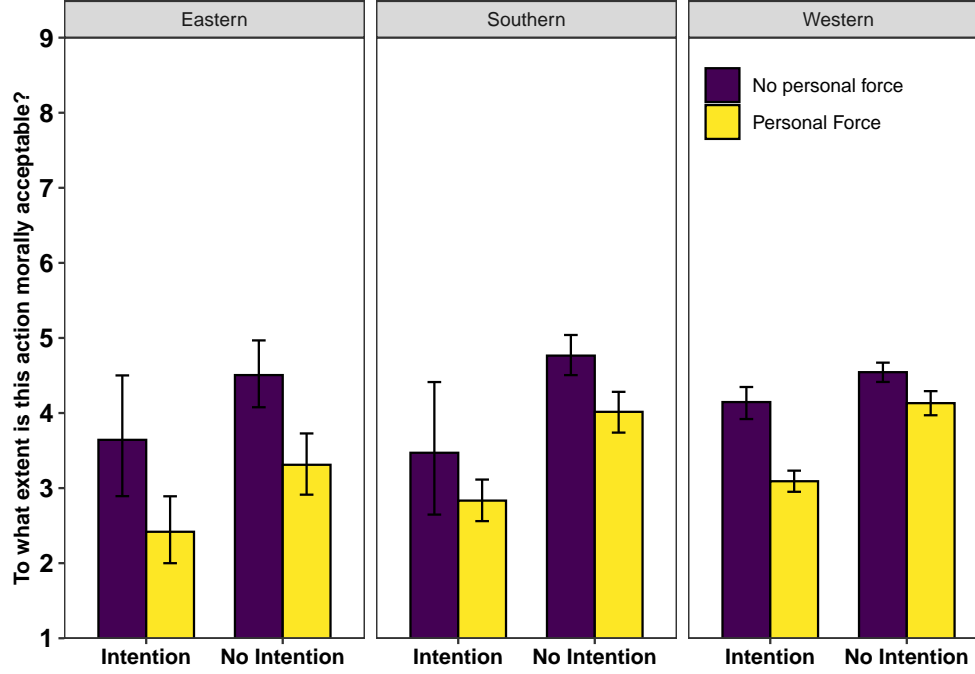


Figure 7: Results on the Speedboat dilemmas in Study 2 when all exclusion criteria are applied. Error bars are 95% confidence intervals on the mean.
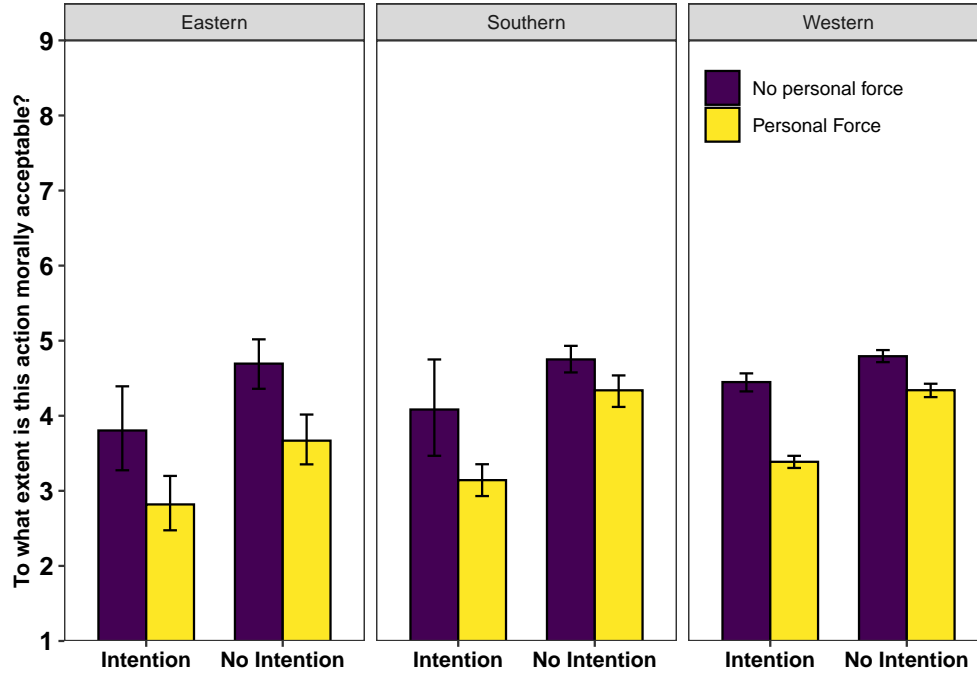
Figure 8: Results on the Speedboat dilemmas in Study 2, not applying familiarity exclusion. Error bars are 95% confidence intervals on the mean.

# 3. Individualism-collectivism analysis

## With all exclusions

Is the interaction of personal force and intention affected by individualism/collectivism (Trolley)?

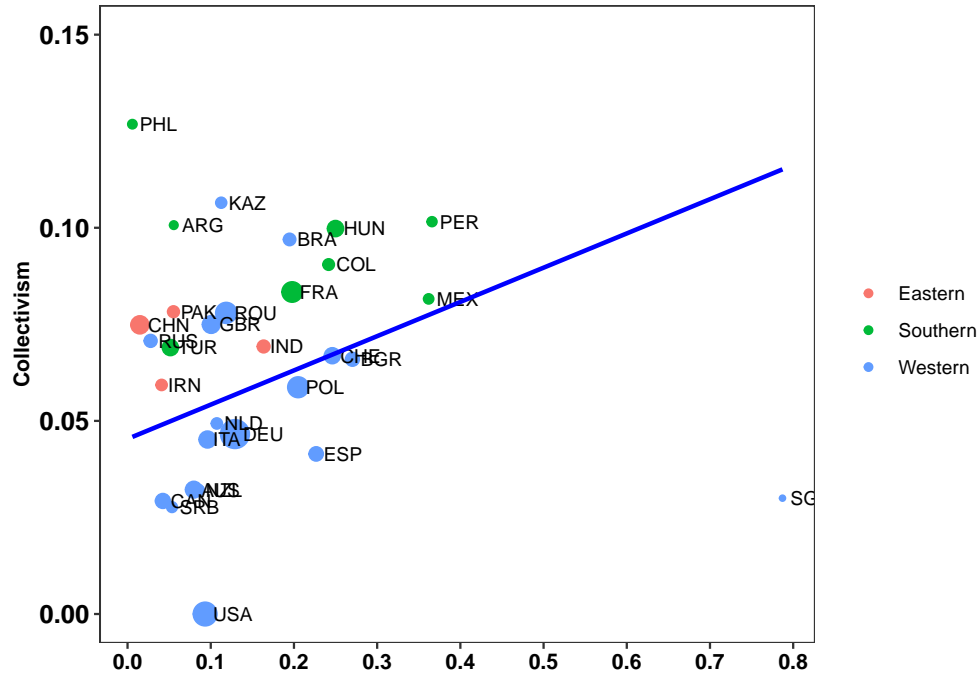| Variable | With familiarity exclusion | | | No familiarity exclusion | | |
|---|---|---|---|---|---|---|
| | BF | b | p | BF | b | p |
| Country-level collectivism | 0.82 | -4.54 | 0.405 | 2.34 | -5.08 | 0.096 |
| H. Collectivism | 1.61 | -0.11 | 0.263 | 2.30 | -0.11 | 0.096 |
| H. Individualism | 0.74 | 0.01 | 0.921 | 0.93 | 0.06 | 0.325 |
| V. Collectivism | 0.88 | 0.00 | 0.988 | 0.75 | -0.03 | 0.538 |
| V. Individualism | 0.75 | -0.06 | 0.451 | 0.46 | -0.03 | 0.607 |

Figure 9: Correlation between country-level individualism/collectivism and the effect of personal force in Eta sqaured on the Trolley dilemmas (all exclusions applied)
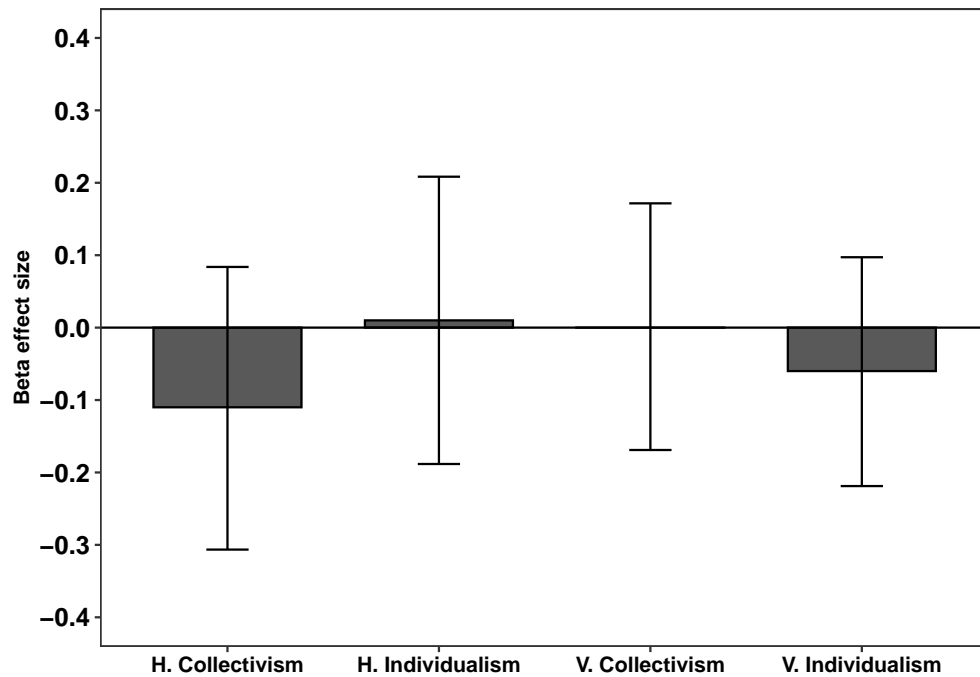


Figure 10: Personal level individualism/collectivism effects on the interaction of personal force and intention (trolley dilemmas, all exclusions applied)

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Is the interaction of personal force and intention affected by individualism/collectivism (Speedboat)?

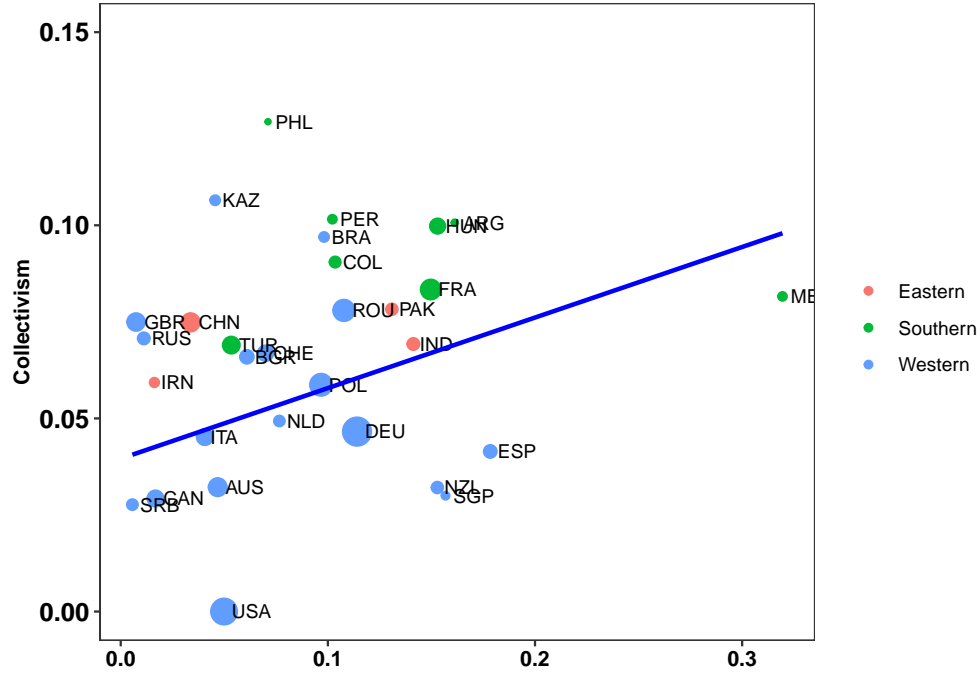| Variable | With familiarity exclusion | | | No familiarity exclusion | | |
|---|---|---|---|---|---|---|
| | **BF** | **b** | **p** | **BF** | **b** | **p** |
| Country-level collectivism | 0.65 | 2.66 | 0.631 | 0.24 | -1.27 | 0.684 |
| H. Collectivism | 2.93 | -0.17 | 0.114 | 0.88 | -0.06 | 0.396 |
| H. Individualism | 1.08 | -0.06 | 0.611 | 0.66 | 0.01 | 0.852 |
| V. Collectivism | 1.59 | 0.10 | 0.311 | 0.94 | 0.05 | 0.357 |
| V. Individualism | 0.71 | -0.01 | 0.952 | 0.57 | 0.03 | 0.590 |



Figure 11: Correlation between country-level individualism/collectivism and the interactional effect of personal force and intention in Eta squared on Speedboat dilemmas (all exclusions applied)
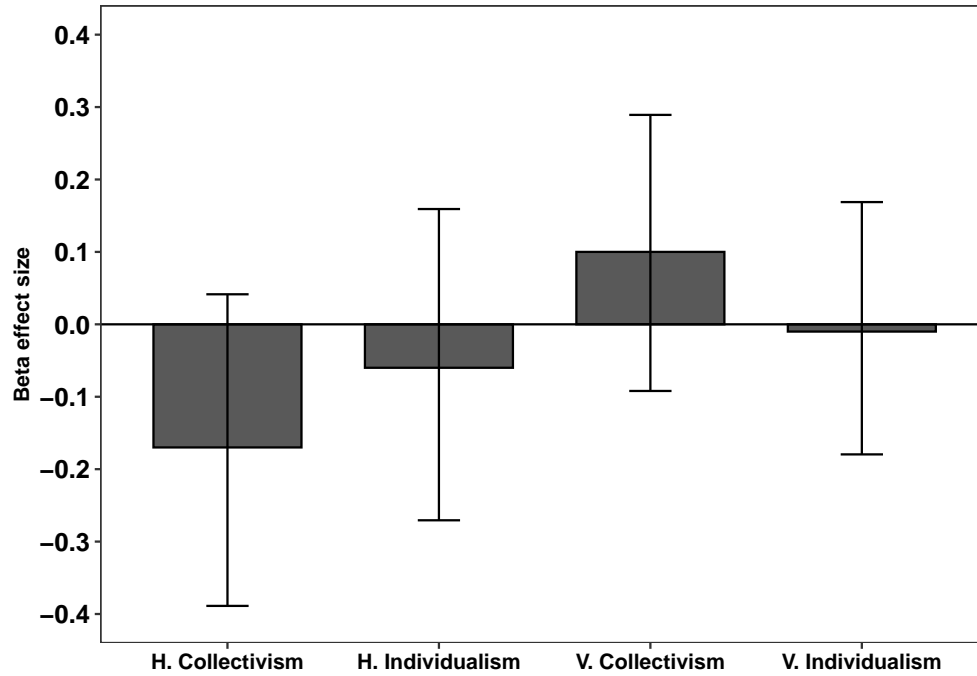
Figure 12: Personal level individualism/collectivism effects on the interaction of personal force and intention (speedboat dilemmas, all exclusions applied)
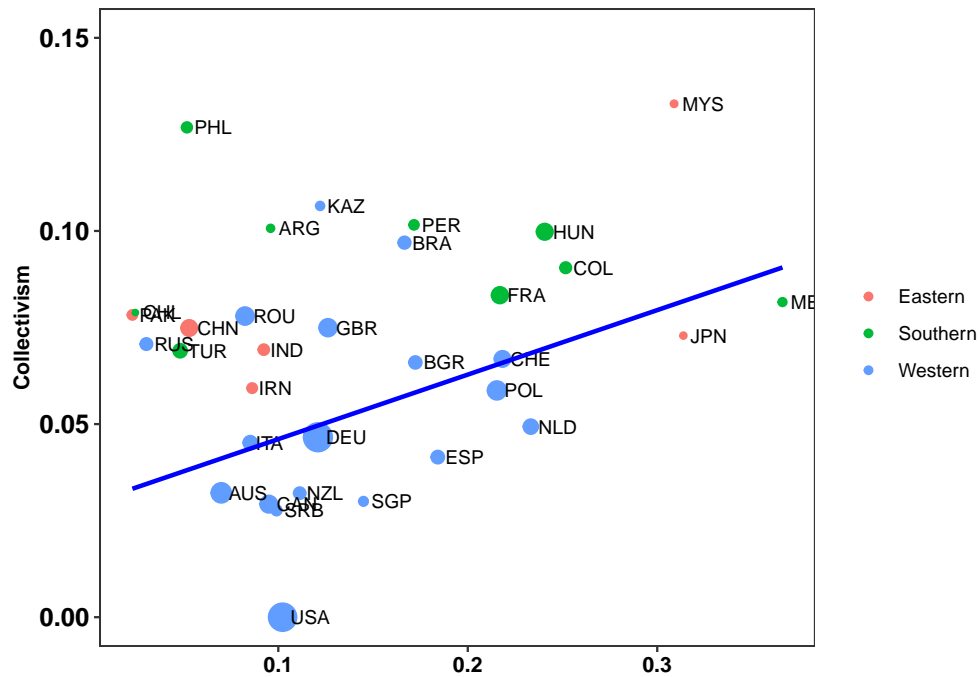
## Including familiar participants



Figure 13: Correlation between country-level individualism/collectivism and the effect of personal force in Eta sqaured on the Trolley dilemmas (familiarity exclusion not applied)
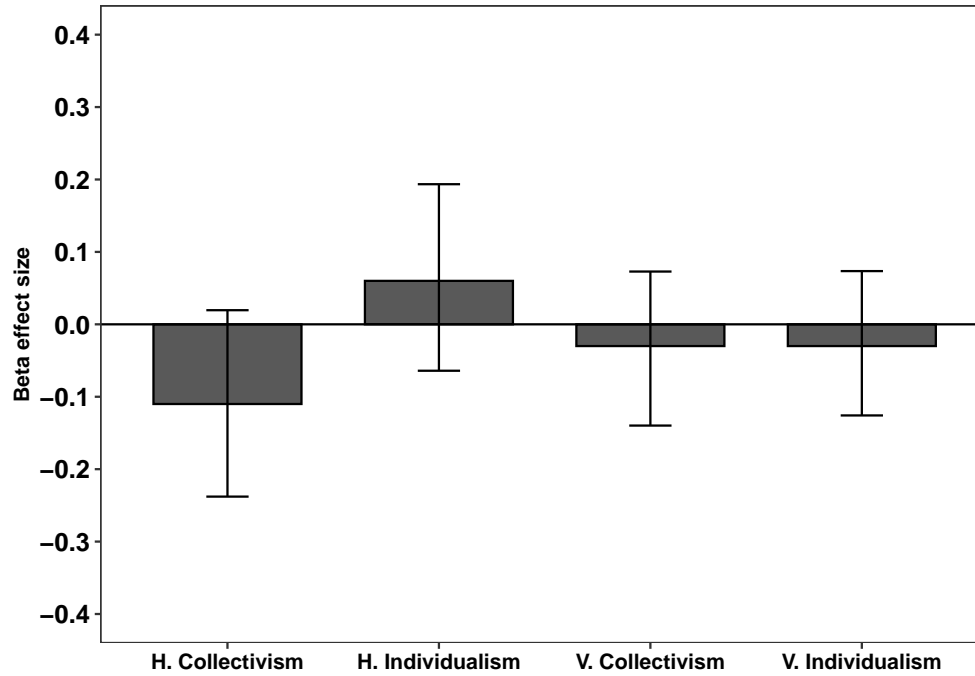
Figure 14: Personal level individualism/collectivism effects on the interaction of personal force and intention (trolley dilemmas, familiarity exclusion not applied)
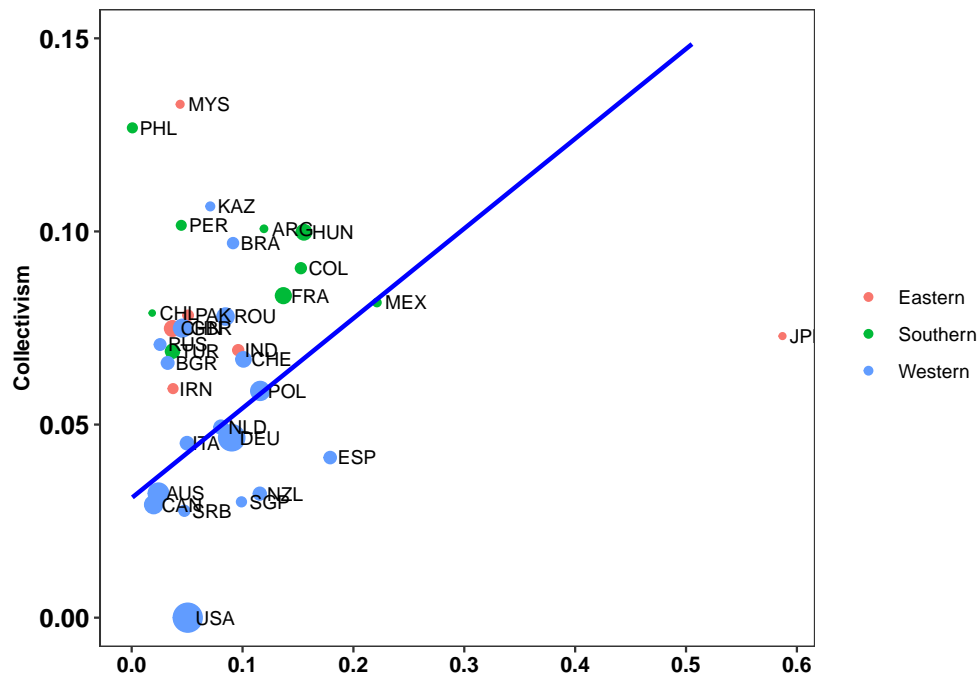


Figure 15: Correlation between country-level individualism/collectivism and the interactional effect of personal force and intention in Eta squared on Speedboat dilemmas (familiarity exclusion not applied)
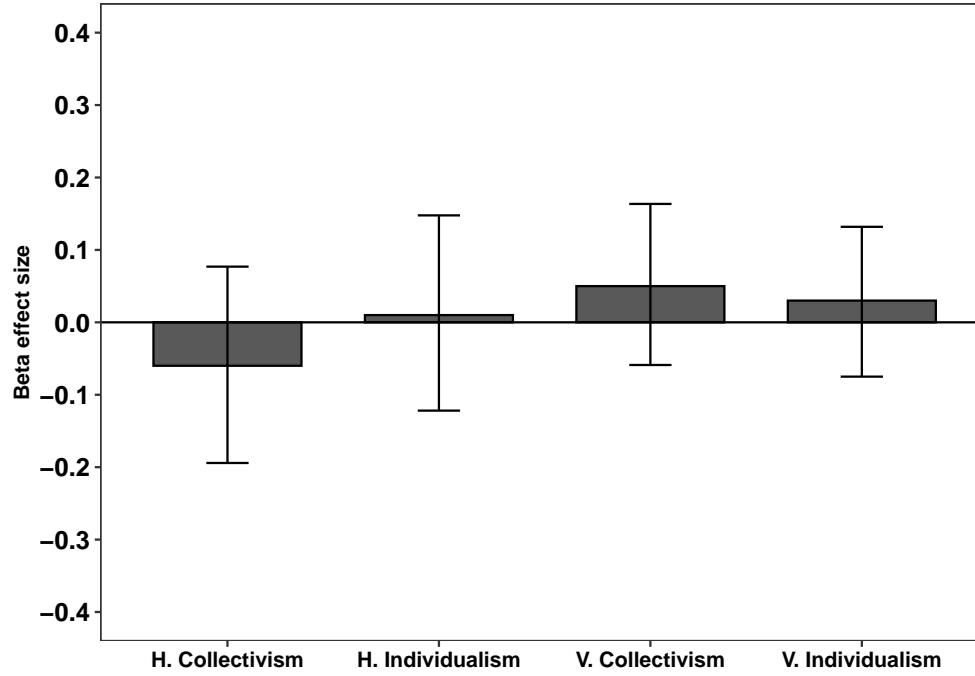
Figure 16: Personal level individualism/collectivism effects on the interaction of personal force and intention (speedboat dilemmas, familiarity exclusion not applied)

# 3. No exclusion analysis

## Study 1a and 1b

The effect of personal force on moral dilemma judgements (no exclusion)

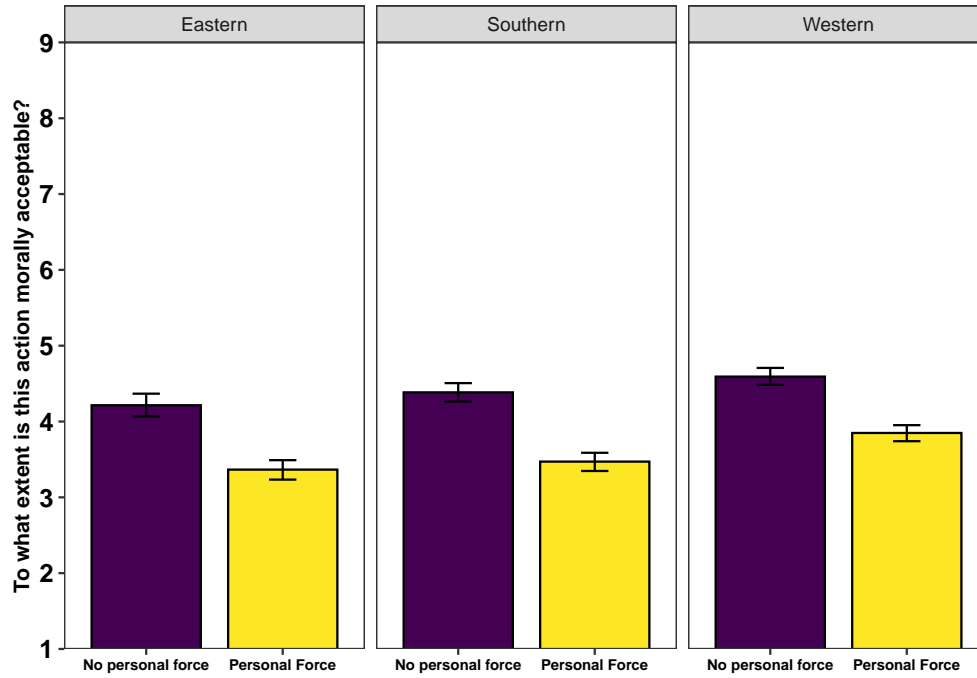| Dilemma | Cluster | BF | t | df | p | Cohen's d |
|---------|---------|------|------|------|------|-----------|
| Trolley | Eastern | 7.17e+13 | -8.34 | 1783.67 | <.001 | -0.39 |
| | Southern | 6.11e+22 | -10.61 | 2504.19 | <.001 | -0.42 |
| | Western | 2.97e+18 | -9.55 | 3397.97 | <.001 | -0.33 |
| Speedboat | Eastern | 5.28e+08 | -6.69 | 1789.34 | <.001 | -0.31 |
| | Southern | 8.83e+16 | -9.18 | 2503.63 | <.001 | -0.37 |
| | Western | 5.69e+16 | -9.12 | 3401.62 | <.001 | -0.31 |

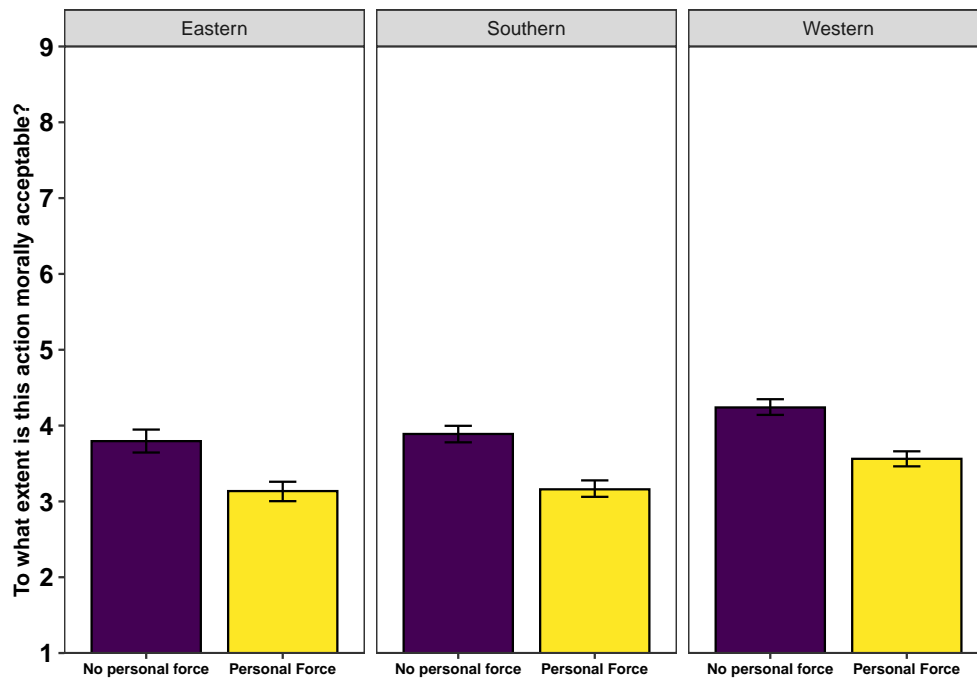Figure 17: Results on Trolley dilemmas in Study 1 with no exclusion criteria applied



Figure 18: Results on Speedboat dilemmas in Study 1 with no exclusion criteria applied.

# Study 2a and 2b

The interaction of personal force and intention on moral dilemma judgemnts (no exclusions)

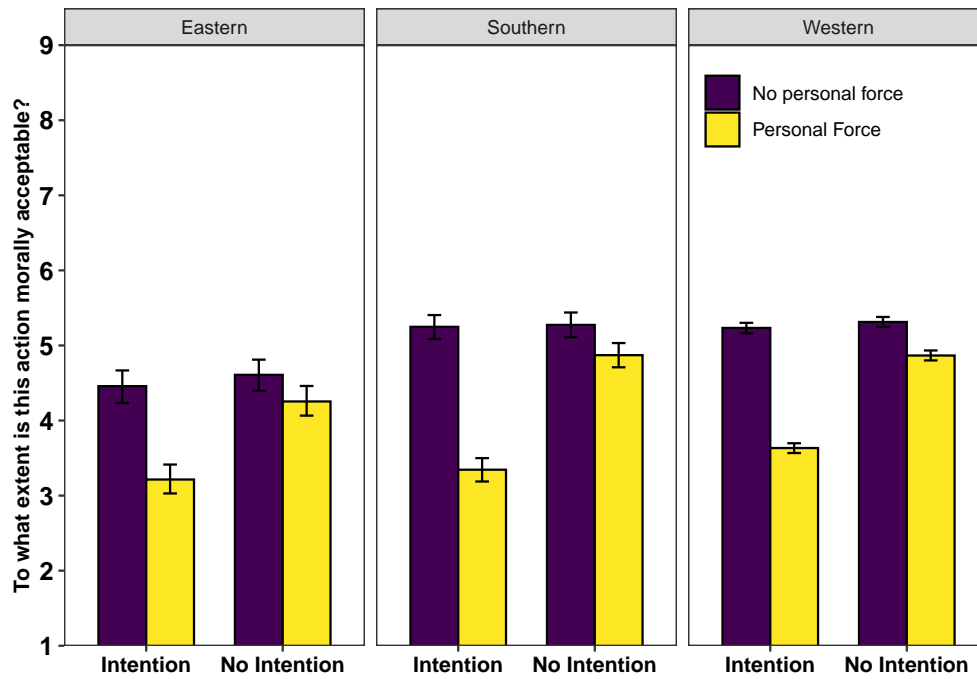| Dilemma | Cluster | BF | F | df | p | Partial $\eta^2$ | Raw effect |
|---|---|---|---|---|---|---|---|
| Trolley | Eastern | 1.76e+03 | 18.430 | 1, 2052 | <.001 | 0.009 | -0.89 |
| | Southern | 3.35e+16 | 83.791 | 1, 2802 | <.001 | 0.029 | -1.50 |
| | Western | 2.13e+58 | 278.475 | 1, 14474 | <.001 | 0.019 | -1.15 |
| Speedboat | Eastern | 3.65e-01 | 0.001 | 1, 2052 | 0.979 | 0.000 | -0.01 |
| | Southern | 1.16e+00 | 2.766 | 1, 2802 | 0.096 | 0.001 | -0.26 |
| | Western | 2.03e+01 | 10.405 | 1, 14474 | 0.001 | 0.001 | -0.22 |



Figure 19: Results on Trolley dilemmas in Study 2 when no exclusion criteria are applied. Error bars are 95% confidence intervals on the mean.
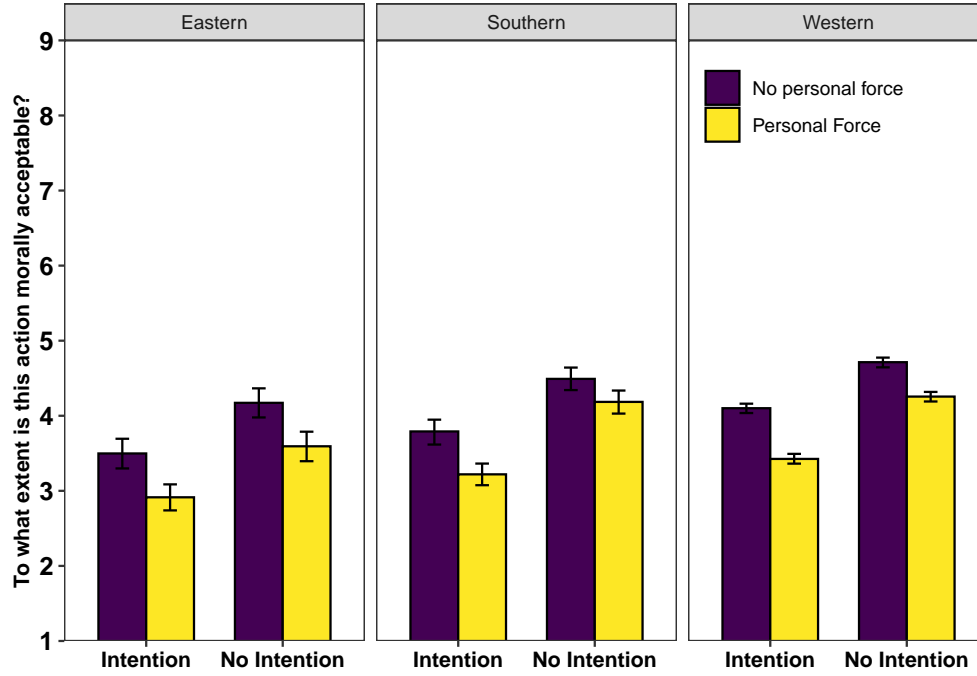
Figure 20: Results on the Speedboat dilemmas in Study 2 when no exclusion criteria are applied. Error bars are 95% confidence intervals on the mean.

## Individualism-collectivism analysis

Is the interaction of personal force and intention affected by individualism/collectivism?

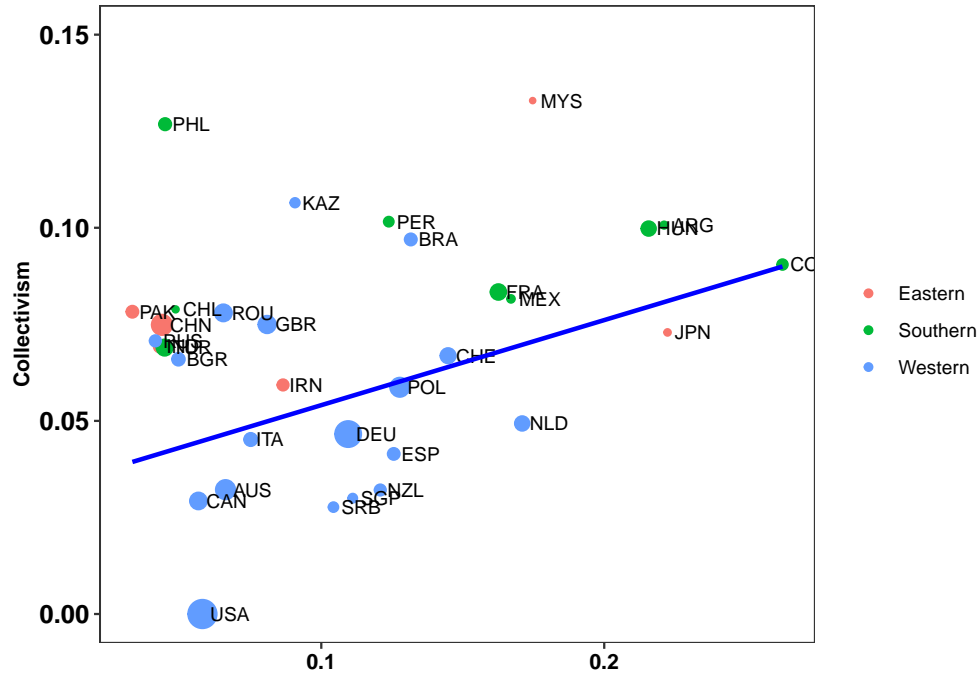| Variable | Trolley | | | Speedboat | | |
|---|---|---|---|---|---|---|
| | **BF** | **b** | **p** | **BF** | **b** | **p** |
| Country-level collectivism | 2.18 | -3.99 | 0.055 | 12.91 | 4.70 | 0.019 |
| H. Collectivism | 9.02 | -0.11 | 0.013 | 0.62 | -0.03 | 0.491 |
| H. Individualism | 3.35 | -0.09 | 0.042 | 0.46 | -0.01 | 0.733 |
| V. Collectivism | 0.57 | -0.02 | 0.516 | 0.44 | 0.01 | 0.874 |
| V. Individualism | 0.30 | 0.00 | 0.929 | 0.33 | 0.00 | 0.920 |

Figure 21: Correlation between country-level individualism/collectivism and the effect of personal force in Eta sqaured on the Trolley dilemmas (no exclusion)
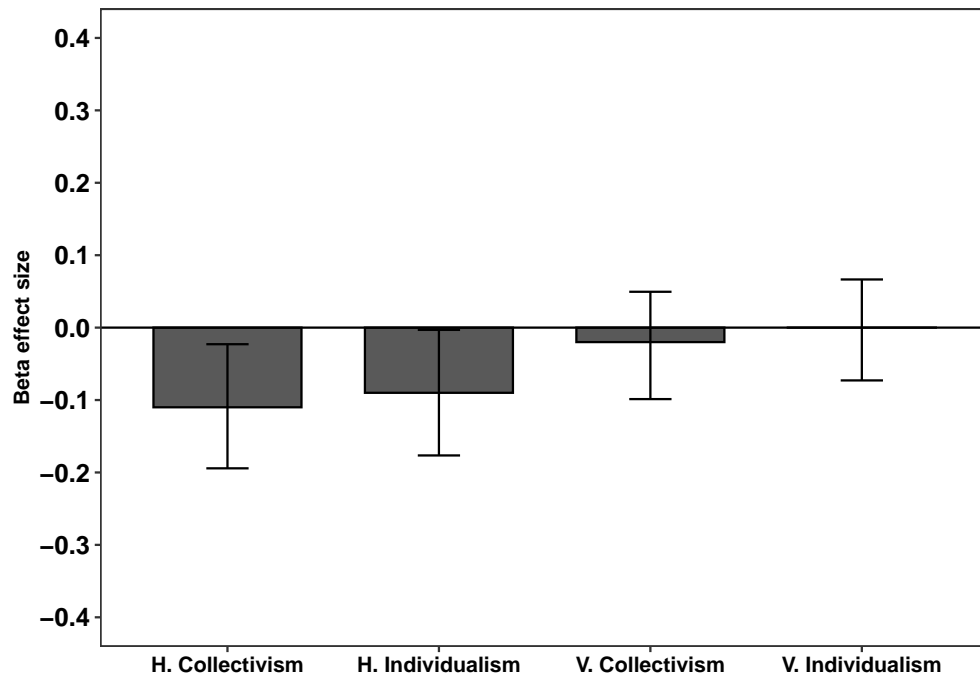


Figure 22: Personal level individualism/collectivism effects on the interaction of personal force and intention (trolley dilemma, no exclusions)
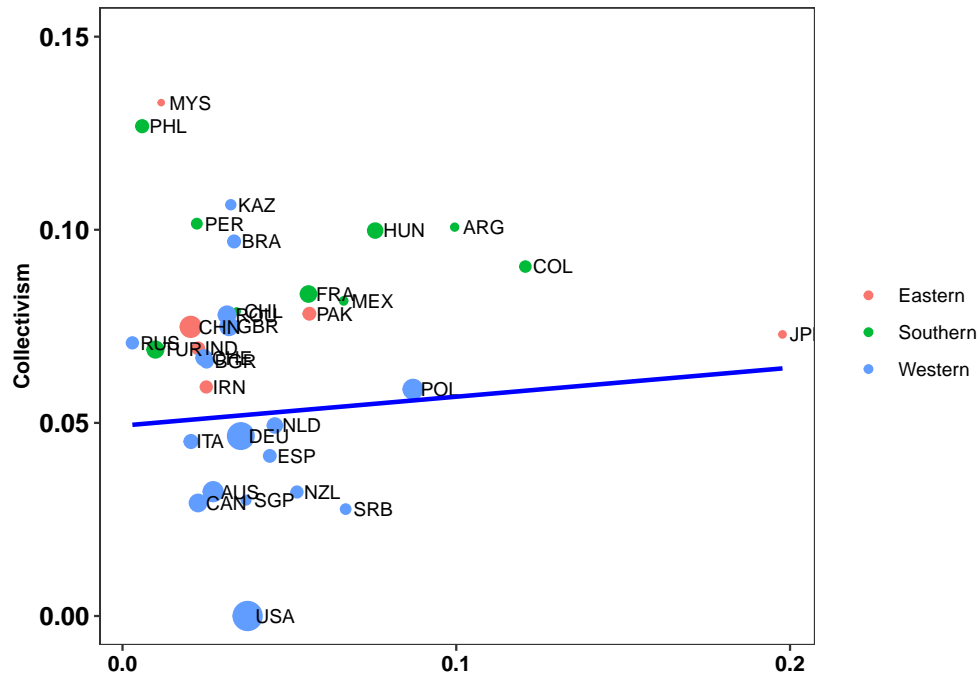
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Figure 23: Correlation between country-level individualism/collectivism and the interactional effect of personal force and intention in Eta squared on Speedboat dilemmas (no exclusions)
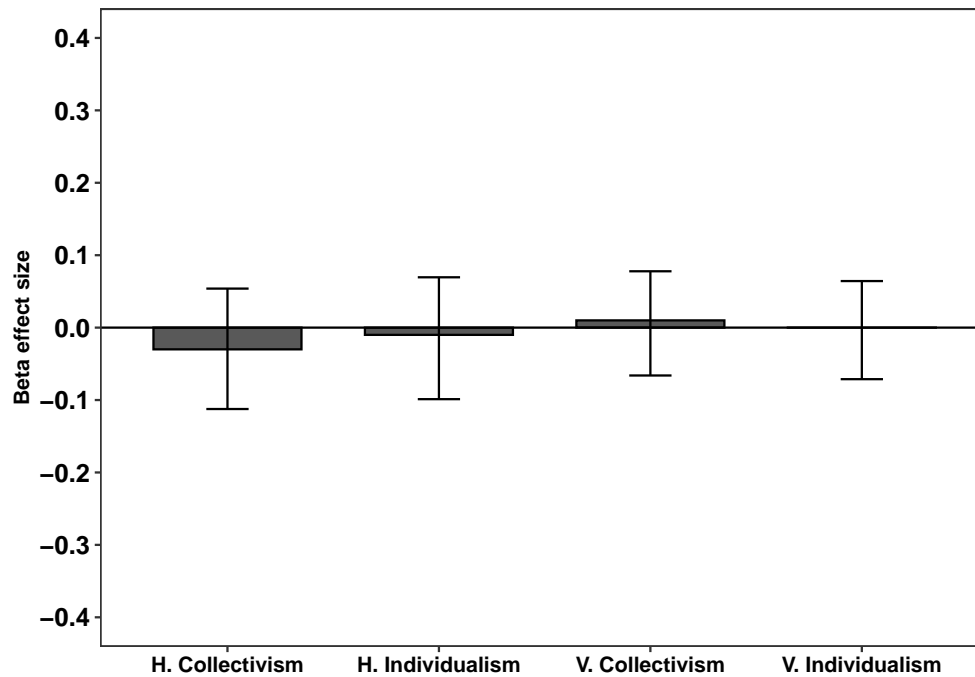


Figure 24: Personal level individualism/collectivism effects on the interaction of personal force and intention (speedboat dilemma, no exclusion)

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| Eastern |
| --- |
| China, India, Iran, Japan, Lebanon, Malaysia, North Macedonia, Pakistan, Thailand, United Arab Emirates    Argentina, |

## Table 1

```
#> # A tibble: 3 x 2
#>   region       n
#>   <chr>    <int>
#> 1 Eastern     11
#> 2 Southern    12
#> 3 Western     23
#> # A tibble: 1 x 1
#>       n
#>   <int>
#> 1    45
#> [1] "China, India, Iran, Japan, Lebanon, Malaysia, North Macedonia, Pakistan, Thailand, United Arab
#> [1] "Australia, Austria, Brazil, Bulgaria, Canada, Croatia, Denmark, Germany, Greece, Italy, Kazakhs
#> [1] "Argentina, Chile, Colombia, Czechia, Ecuador, France, Hungary, Mexico, Peru, Philippines, Slova
```