Supplemental Material

**Alternative Mediation Analyses: Does Trait Disgust Mediate the Link Between Orderliness and Conservatism?**

We conducted additional bootstrapped mediation analyses (Preacher & Hayes, 2008) to examine an alternative possibility that trait disgust mediates the link between Orderliness and political conservatism. Similar to our original models, the independent variables consisted of Orderliness and Industriousness. The mediators were overall trait disgust, as well as subscale-level disgust (entered simultaneously), for both the DS-R and the TDDS. We conducted separate analyses for overall and subscale levels of trait disgust, as well as for the DS-R and TDDS. The dependent variable was the composite political orientation score. Again, we entered age and gender as covariates in all analyses. We used 5000 bootstrap resamples for each analysis. The results described below were obtained using the Pooled Aggregates.

Analyses involving the DS-R were conducted using Pooled Aggregate 1. Overall trait disgust mediated the link between Orderliness and conservatism (*ab* = 0.05, *SE* = 0.009, 95% CI [0.03, 0.07]), but not between Industriousness and conservatism. Orderliness still had a significant direct effect (*c’* = 0.13, *SE* = 0.03, *t*(1473) = 4.68, *p* < 0.001) on political conservatism in addition to the significant indirect effect through trait disgust.

For the DS-R subscales, Contamination disgust (*ab* = 0.05, *SE* = 0.009, 95% CI [0.03, 0.07]) mediated the link between Orderliness and political conservatism, but not Industriousness and conservatism. Direct effects on political conservatism were still observed for Orderliness (*c’* = 0.12, *SE* = 0.03, *t*(1471) = 4.45, *p* < 0.001).

Analyses examining the TDDS were conducted using Pooled Aggregate 2. With regard to the TDDS, overall trait disgust mediated the link between Orderliness and conservatism (*ab* = 0.06, *SE* = 0.01, 95% CI [0.04, 0.08]), but not Industriousness and conservatism. However, Orderliness still had a significant direct effect on conservatism (*c’* = 0.12, *SE* = 0.03, *t*(1031) = 4.15, *p* < 0.001).

At the subscale level of the TDDS, we found that only Sexual disgust mediated the association between Orderliness and conservatism (*ab* = 0.06, *SE* = 0.01, 95% CI [0.03, 0.08]), but not Industriousness and conservatism. Orderliness still had a significant direct effect on conservatism (*c’* = 0.12, *SE* = 0.03, *t*(1029) = 4.00, *p* < 0.001) in addition to the significant indirect effect through Sexual disgust.

These results suggest that the alternative model, in which trait disgust acts as a mediator of the relationship between Orderliness and conservatism, is also possible. Specifically, people who are more orderly tend to be more disgusted by potential contaminations and inappropriate sexual behaviors, which may then shape more conservative political views. However, it is important to note that one needs to exert caution when interpreting reverse-mediation results. That is, comparison between the relative strengths of these pathways can be interfered by other factors, e.g., relative reliability. Mediation models can only suggest causal ordering of variables that can influence each other, with these variables being approximately measured at the same time (Lemmer & Gollwitzer, 2016; Thoemmes, 2015). Thus, it can be concluded that disgust and Orderliness both may influence political conservatism. Future work will need to adopt experimental designs to better establish firm causal effects.

References

Lemmer, G., & Gollwitzer, M. (2017). The “true” indirect effect won’t (always) stand up: When

and why reverse mediation testing fails. *Journal of Experimental Social Psychology, 69*, 144-149.

Preacher, K. J., &Hayes, A. F.(2008). Asymptotic and resampling strategies for assessing and

comparing indirect effects in multiple mediator models*. Behaviour Research Methods, 40,* 879-891.

Thoemmes, F. (2015). Reversing arrows in mediation models does not distinguish

plausible models. *Basic and Applied Social Psychology, 37*, 226–234.

Supplemental Table 1

*Descriptive Statistics for Analysis Variables in Samples 1 to 6*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Sample 1  Mean (SD) | Sample 2  Mean (SD) | Sample 3  Mean (SD) | Sample 4  Mean (SD) | Sample 5  Mean (SD) | Sample 6  Mean (SD) |
| Orderliness | 3.36 (.66) | 3.54 (.66) | 3.48 (.70) | 3.51 (.72) | 3.39 (.58) | 3.49 (.70) |
| Industriousness | 3.11 (.68) | 3.52 (.71) | 3.50 (.75) | 3.71 (.74) | 3.64 (.76) | 3.64 (.74) |
| DS-R Overall | 2.12 (.67) | 1.98 (.70) | 2.00 (.69) | .53 (.20) | .56 (.20) | .54 (.20) |
| DS-R Core | 2.35 (.73) | 2.17 (.72) | 2.21 (.72) | .59 (.21) | .62 (.20) | .61 (.20) |
| DS-R Animal Reminder | 2.20 (.91) | 1.98 (.90) | 1.99 (.88) | .53 (.28) | .55 (.25) | .53 (.27) |
| DS-R Contamination | 1.44 (.80) | 1.49 (.83) | 1.48 (.81) | .38 (.25) | .41 (.26) | .36 (.24) |
| TDDS Overall | 3.35 (1.03) | 3.74 (1.23) | 3.92 (1.19) | - | - | - |
| TDDS Moral | 3.98 (1.23) | 3.88 (1.70) | 4.25 (1.77) | - | - | - |
| TDDS Sexual | 2.78 (1.56) | 3.10 (1.58) | 3.28 (1.54) | - | - | - |
| TDDS Pathogen | 3.29 (1.32) | 4.24 (1.29) | 4.22 (1.26) | - | - | - |
| Liberalism | 3.23 (.60) | 3.12 (.80) | 3.22 (.83) | - | - | - |
| RWA | - | 63.78 (37.37) | 63.78 (38.45) | - | - | - |
| SDO | - | 2.30 (1.25) | 2.18 (1.23) | - | - | - |
| One-Item PO | - | 4.77 (1.63) | 4.81 (1.74) | 4.79 (1.71) | 4.60 (1.57) | 4.86 (1.70) |
| ACT | - | - | 3.31 (1.27) | - | - | - |

*Note.* For the DS-R, Samples 1 to 3 used the coding scheme provided by Haidt (2012), which provides scores ranging from 0 to 4; Samples 4 to 6 used the coding scheme provided by Olatunji et al. (2007), which provides scores ranging from 0 to 1.

Supplemental Table 2

*Main Correlations Between Trait Disgust, Orderliness, Industriousness, and Political Orientation in Samples 1 to 6*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Orderliness | Industriousness | DS-R Overall | DS-R Core | DS-R Animal Reminder | DS-R Contamination | TDDS Overall | TDDS Moral | TDDS Sexual | TDDS Pathogen |
|  |  | Sample 1 | | | | | | | | |
| Orderliness |  | .35\*\*\* | .24\*\*\* | .23\*\*\* | .15\* | .23\*\*\* | .27\*\*\* | .13 | .30\*\*\* | .16\* |
| Industriousness | .35\*\*\* |  | -.09 | -.10 | -.05 | -.06 | -.00 | .09 | -.03 | -.07 |
| IPIP Liberalism | -.28\*\*\* | -.15\* | -.18\*\* | -.18\*\* | -.07 | -.23\*\*\* | -.34\*\*\* | -.20\*\* | -.33\*\*\* | -.22\*\* |
|  |  | Sample 2 | | | | | | | | |
| Orderliness |  | .54\*\*\* | .15\*\* | .16\*\* | .07 | .18\*\*\* | .15\*\* | .05 | .12\* | .23\*\*\* |
| Industriousness | .54\*\*\* |  | .00 | -.01 | -.02 | .06 | .10\* | .08 | .06 | .11\* |
| IPIP Liberalism | -.25\*\*\* | -.24\*\*\* | -.31\*\*\* | -.28\*\*\* | -.22\*\*\* | -.33\*\*\* | -.41\*\*\* | -.28\*\*\* | -.36\*\*\* | -.35\*\*\* |
| RWA | .19\*\*\* | .17\*\*\* | .35\*\*\* | .29\*\*\* | .27\*\*\* | .42\*\*\* | .45\*\*\* | .24\*\*\* | .49\*\*\* | .35\*\*\* |
| SDO | .02 | -.07 | .02 | .00 | -.05 | .15\*\* | .10\* | .08 | .10\* | .06 |
| One-Item PO | -.09 | -.08 | -.15\*\* | -.10\* | -.13\*\* | -.20\*\*\* | -.23\*\*\* | -.15\*\* | -.25\*\*\* | -.15\*\* |
| Composite PO score | .16\*\* | .13\* | .25\*\*\* | .20\*\*\* | .17\*\*\* | .33\*\*\* | .35\*\*\* | .22\*\*\* | .36\*\*\* | .27\*\*\* |
|  |  | Sample 3 | | | | | | | | |
| Orderliness |  | .51\*\*\* | .22\*\*\* | .21\*\*\* | .19\*\*\* | .17\*\*\* | .19\*\*\* | .10 | .15\*\* | .21\*\*\* |
| Industriousness | .51\*\*\* |  | .01 | -.02 | -.01 | .11\* | 14\*\* | .15\*\* | .09 | .08 |
| IPIP Liberalism | -.31\*\*\* | -.27\*\*\* | -.22\*\*\* | -.18\*\*\* | -.18\*\*\* | -.25\*\*\* | -.31\*\*\* | -.20\*\*\* | -.31\*\*\* | -.23\*\*\* |
| RWA | .21\*\*\* | .13\*\* | .27\*\*\* | .20\*\*\* | .23\*\*\* | .34\*\*\* | .32\*\*\* | .11\* | .41\*\*\* | .25\*\*\* |
| SDO | .01 | .01 | -.06 | -.06 | -.10\* | .06 | -.01 | -.03 | .02 | -.01 |
| One-Item PO | -.19\*\*\* | -.21\*\*\* | -.10\* | -.08 | -.06 | -.15\*\* | -.16\*\* | -.06 | -.21\*\*\* | -.11\* |
| ACT | .32\*\*\* | .24\*\*\* | .31\*\*\* | .23\*\*\* | .25\*\*\* | .36\*\*\* | .36\*\*\* | .16\*\* | .41\*\*\* | .30\*\*\* |
| Composite PO score | .24\*\*\* | .20\*\*\* | .20\*\*\* | .15\*\* | .15\*\* | .28\*\*\* | .27\*\*\* | .12\* | .32\*\*\* | .21\*\*\* |
|  |  | Sample 4 | | | | | | | | |
| Orderliness |  | .51\*\*\* | .37\*\*\* | .32\*\*\* | .24\*\* | .39\*\*\* | - | - | - | - |
| Industriousness | .51\*\*\* |  | .11 | .11 | .00 | .21\* | - | - | - | - |
| One-Item PO | -.19\* | -.13 | -.03 | .01 | .01 | -.16 | - | - | - | - |
|  |  | Sample 5 | | | | | | | | |
| Orderliness |  | .57\*\*\* | .22\* | .18\* | .16 | .23\* | - | - | - | - |
| Industriousness | .57\*\*\* |  | .09 | .05 | .03 | .20\* | - | - | - | - |
| One-Item PO | -.02 | -.11 | -.24\*\* | -.21\* | -.11 | -.35\*\*\* | - | - | - | - |
|  |  | Sample 6 | | | | | | | | |
| Orderliness |  | .42\*\*\* | .32\*\*\* | .32\*\*\* | .21\*\* | .29\*\*\* | - | - | - | - |
| Industriousness | .42\*\*\* |  | -.08 | -.10 | -.11 | .04 | - | - | - | - |
| One-Item PO | -.29\*\*\* | -.19\*\* | -.19\*\* | -.14\* | -.15\* | -.22\*\* | - | - | - | - |

*Note*. \**p* < 0.05, \*\**p* < 0.01, \*\*\**p* < 0.001. For each individual Sample, scores on the political orientation measures were unchanged, such that for IPIP Liberalism and One-Item PO scores, higher values indicated higher liberalism, whereas for RWA, SDO, and ACT, higher values reflect higher conservatism.

Supplemental Table 3

*Regression Coefficients (β) for Analyses Predicting Orderliness and Political Orientation from the Subscales of the DS-R and the TDDS in Samples 1 to 6*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | DS-R Core | DS-R Animal Reminder | DS-R Contamination | TDDS Moral | TDDS Sexual | TDDS Pathogen |
|  | Sample 1 | | | | | |
| Orderliness | .13 | -.04 | .17\* | .08 | .27\*\*\* | .01 |
| IPIP Liberalism | -.19\* | .10 | -.18\* | -.07 | -.40\*\*\* | -.06 |
|  | Sample 2 | | | | | |
| Orderliness | .10 | -.11 | .17\*\* | -.04 | -.02 | .25\*\*\* |
| IPIP Liberalism | -.12 | -.01 | -.26\*\*\* | -.10 | -.23\*\*\* | -.20\*\*\* |
| RWA | .03 | .06 | .37\*\*\* | -.02 | .53\*\*\* | .12\* |
| SDO | .00 | -.15\* | .24\*\*\* | .05 | .21\*\* | -.02 |
| One-Item PO | .06 | -.08 | -.19\*\* | -.03 | -.29\*\*\* | -.01 |
| Composite PO score | .03 | .00 | .32\*\*\* | .05 | .37\*\*\* | .09 |
|  | Sample 3 | | | | | |
| Orderliness | .12 | .06 | .07 | .06 | .05 | .17\*\* |
| IPIP Liberalism | -.03 | -.11 | -.19\*\* | -.06 | -.36\*\*\* | -.06 |
| RWA | -.05 | .13\* | .32\*\*\* | -.08 | .55\*\*\* | .04 |
| SDO | .00 | -.12 | .14\* | -.05 | .21\*\* | -.04 |
| One-Item PO | -.03 | .00 | -.14\* | .05 | -.33\*\*\* | .01 |
| ACT | -.03 | .13\* | .31\*\*\* | -.03 | .47\*\*\* | .09 |
| Composite PO score | -.00 | .06 | .26\*\*\* | -.04 | .46\*\*\* | .03 |
|  | Sample 4 | | | | | |
| Orderliness | .18 | .05 | .28\*\* | - | - | - |
| One-Item PO | .08 | -.00 | -.17 | - | - | - |
|  | Sample 5 | | | | | |
| Orderliness | .03 | .05 | .18 | - | - | - |
| One-Item PO | -.13 | .16 | -.38\*\*\* | - | - | - |
|  | Sample 6 | | | | | |
| Orderliness | .25\* | -.02 | .15 | - | - | - |
| One-Item PO | -.07 | -.06 | -.16 | - | - | - |

*Note*. \**p* < 0.05, \*\**p* < 0.01, \*\*\**p* < 0.001.For each individual Sample, scores on the political orientation measures were unchanged, such that for IPIP Liberalism and One-Item PO scores, higher values indicated higher liberalism, whereas for RWA, SDO, and ACT, higher values reflect higher conservatism.

Supplemental Table 4

*Mediation Results for the Mediator Orderliness in Samples 1 to 6*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | DS-R Overall | DS-R Core | DS-R Animal Reminder | DS-R Contamination | TDDS Overall | TDDS Moral | TDDS Sexual | TDDS Pathogen |
| Sample 1 | | | | | | | | |
| IPIP Liberalism | *ab* = -.05  *SE* = .03  95%CI  [-.12,  -.01] | *ab* = -.03  *SE* = .02  95%CI  [-.08, .01] | *ab* = .01  *SE* = .02  95%CI  [-.03, .05] | *ab* = -.04  *SE* = .02  95%CI  [-.08,  -.002] | *ab* = -.05  *SE* = .02  95%CI  [-.11,  -.01] | *ab* = -.01  *SE* = .01  95%CI  [-.04, .01] | *ab* = -.04  *SE* = .02  95%CI  [-.10, -.003] | *ab* = -.001  *SE* = .01  95%CI  [-.03, .03] |
| Sample 2 | | | | | | | | |
| IPIP Liberalism | *ab* = -.01  *SE* = .01  95%CI  [-.04, -.002] | *ab* = -.01  *SE* = .01  95%CI  [-.03, .01] | *ab* = .01  *SE* = .01  95%CI  [-.004, .03] | *ab* = -.02  *SE* = .01  95%CI  [-.04, .001] | *ab* = -.02  *SE* = .01  95%CI  [-.04, -.003 | *ab* = .004  *SE* = .007  95%CI  [-.01, .02] | *ab* = .002  *SE* = .01  95%CI  [-.01, .02] | *ab* = -.02  *SE* = .01  95%CI  [-.05, -.003] |
| RWA | *ab* = .01  *SE* = .01  95%CI  [-.002, .04] | *ab* = .01  *SE* = .01  95%CI  [-.01, .03] | *ab* = -.01  *SE* = .01  95%CI  [-.03, .01] | *ab* = .01  *SE* = .01  95%CI  [-.01, .03] | *ab* = .01  *SE* = .01  95%CI  [-.001, .04] | *ab* = -.003  *SE* = .01  95%CI  [-.02, .01] | *ab* = -.002  *SE* = .01  95%CI  [-.02, .01] | *ab* = .02  *SE* = .01  95%CI  [-.01, .05] |
| SDO | *ab* = .01  *SE* = .01  95%CI  [-.003, .04] | *ab* = .005  *SE* = .01  95%CI  [-.01, .02] | *ab* = -.005  *SE* = .01  95%CI  [-.03, .01] | *ab* = .01  *SE* = .01  95%CI  [-.01, .03] | *ab* = .01  *SE* = .01  95%CI  [-.01, .03] | *ab* = -.003  *SE* = .01  95%CI  [-.02, .01] | *ab* = -.001  *SE* = .01  95%CI  [-.01, .01] | *ab* = .02  *SE* = .02  95%CI  [-.01, .05] |
| One-Item PO | *ab* = -.01  *SE* = .01  95%CI  [-.03, .01] | *ab* = -.005  *SE* = .01  95%CI  [-.02, .01] | *ab* = .005  *SE* = .01  95%CI  [-.01, .03] | *ab* = -.01  *SE* = .01  95%CI  [-.03, .01] | *ab* = -.01  *SE* = .01  95%CI  [-.03, .01] | *ab* = .002  *SE* = .01  95%CI  [-.01, .01] | *ab* = .001  *SE* = .01  95%CI  [-.01, .01] | *ab* = -.01  *SE* = .01  95%CI  [-.04, .02] |
| Sample 3 | | | | | | | | |
| IPIP Liberalism | *ab* = -.04  *SE* = .01  95%CI  [-.07, -.02] | *ab* = -.02  *SE* = .02  95%CI  [-.05, .01] | *ab* = -.01  *SE* = .01  95%CI  [-.03, .02] | *ab* = -.01  *SE* = .01  95%CI  [-.04, .01] | *ab* = -.04  *SE* = .01  95%CI  [-.07, -.02] | *ab* = -.01  *SE* = .01  95%CI  [-.03, .01] | *ab* = -.01  *SE* = .01  95%CI  [-.04, .01] | *ab* = -.03  *SE* = .01  95%CI  [-.06, -.01] |
| RWA | *ab* = .03  *SE* = .01  95%CI  [.01, .07] | *ab* = .02  *SE* = .01  95%CI  [-.005, .05] | *ab* = .01  *SE* = .01  95%CI  [-.01, .04] | *ab* = .01  *SE* = .01  95%CI  [-.01, .04] | *ab* = .03  *SE* = .01  95%CI  [.01, .07] | *ab* = .01  *SE* = .01  95%CI  [-.01, .03] | *ab* = .01  *SE* = .01  95%CI  [-.01, .03] | *ab* = .03  *SE* = .01  95%CI  [.004, .05] |
| SDO | *ab* = .003  *SE* = .01  95%CI  [-.02, .03] | *ab* = .003  *SE* = .01  95%CI  [-.01, .02] | *ab* = .001  *SE* = .01  95%CI  [-.01, .02] | *ab* = .002  *SE* = .01  95%CI  [-.01, .02] | *ab* = .0003  *SE* = .01  95%CI  [-.03, .03] | *ab* = .0002  *SE* = .005  95%CI  [-.01, .01] | *ab* = .0001  *SE* = .005  95%CI  [-.01, .01] | *ab* = .0005  *SE* = .01  95%CI  [-.02, .02] |
| One-Item PO | *ab* = -.02  *SE* = .01  95%CI  [-.05, .002] | *ab* = -.01  *SE* = .01  95%CI  [-.04, .005] | *ab* = -.01  *SE* = .01  95%CI  [-.03, .01] | *ab* = .01  *SE* = .01  95%CI  [-.03, .005] | *ab* = -.02  *SE* = .01  95%CI  [-.06, .0003] | *ab* = -.01  *SE* = .01  95%CI  [-.02, .01] | *ab* = -.01  *SE* = .01  95%CI  [-.02, .01] | *ab* = -.02  *SE* = .01  95%CI  [-.05, .002] |
| ACT | *ab* = .05  *SE* = .02  95%CI  [.02, .08] | *ab* = .03  *SE* = .02  95%CI  [-.01, .07] | *ab* = .01  *SE* = .02  95%CI  [-.02, .05] | *ab* = .02  *SE* = .01  95%CI  [-.01, .05] | *ab* = .05  *SE* = .02  95%CI  [.02, .09] | *ab* = .01  *SE* = .01  95%CI  [-.01, .04] | *ab* = .01  *SE* = .01  95%CI  [-.02, .04] | *ab* = .04  *SE* = .02  95%CI  [.01, .08] |
| Sample 4 | | | | | | | | |
| One-Item PO | *ab* = -.05  *SE* = .04  95%CI  [-.15, .02] | *ab* = -.02  *SE* = .03  95%CI  [-.09, .02] | *ab* = -.01  *SE* = .02  95%CI  [-.05, .03] | *ab* = -.03  *SE* = .03  95%CI  [-.10, .02] | - | - | - | - |
| Sample 5 | | | | | | | | |
| One-Item PO | *ab* = .03  *SE* = .03  95%CI  [-.01, .10] | *ab* = .004  *SE* = .02  95%CI  [-.04, .05] | *ab* = .01  *SE* = .02  95%CI  [-.03, .06] | *ab* = .02  *SE* = .02  95%CI  [-.02, .08] | - | - | - | - |
| Sample 6 | | | | | | | | |
| One-Item PO | *ab* = -.06  *SE* = .03  95%CI  [-.14, -.01] | *ab* = -.05  *SE* = .03  95%CI  [-.11, -.01] | *ab* = .003  *SE* = .02  95%CI  [-.03, .04] | *ab* = -.03  *SE* = .02  95%CI  [-.08, .004] | - | - | - | - |

*Note*. The mediation models tested whether Orderliness and Industriousness mediated the links between trait disgust and political conservatism. The indirect effects for Orderliness are presented, with *ab* denoting the indirect path coefficient, *SE* denoting the standard error, and the 95% CI presented in brackets.