## Supplementary Material

## Post-hoc analysis

An anonymous reviewer requested an additional, post-hoc analysis1 to delineate whether the explicit stereotypes in the unequal reporting condition reflected (1) an increase of criminality ratings for the group featured more frequently, (2) a decrease of criminality ratings for the group featured less frequently, or (3) both.

The following analyses indicate that the higher explicit stereotypes in the unequal reporting condition were due to both an increase of criminality ratings for the group featured more frequently in the articles and a decrease of the criminality ratings for the group featured less frequently.

Table 1 summarises the descriptive statistics of the individual semantic differential ratings that composed the difference-score on which the main analysis was performed for day one. As can be seen in table 2, the interaction between reporting condition and minority/majority group was highly significant. Subsequent comparisons showed that the majority group was rated as more criminal in the unequal reporting condition than the same group (e.g., Laapians) in the equal reporting condition (*t*(312) = 2.60, *p* = .010, *d* = 0.29), and the minority group was rated as less criminal in the unequal reporting condition than the same group in the equal reporting condition (*t*(300) = 1.82, *p* = .069, *d* = 0.21).

Table 1

*Means and standard deviations of the individual semantic differential scores on day one*

|  |  |  |
| --- | --- | --- |
|  | Minority | Majority |
| Equal Reporting | 4.66 (1.38) | 4.76 (1.32) |
| Unequal Reporting | 4.39 (1.21) | 5.14 (1.32) |

*Note*. Values in parentheses show standard deviations.

Table 2

*ANOVA table for the individual semantic differential scores on day one*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Source | SSeffect | SSerror | F(1, 314) |  |
| Equal/Equal Reporting | 0.56 | 639.28 | 0.27 | 0.00 |
| Minority/Majority Group | 3.06 | 429.30 | \*\*\*22.41\*\*\* | 0.07 |
| Interaction Effect | 1.68 | 429.30 | \*\*\*12.30\*\*\* | 0.04 |

*Note*. \*\*\* *p* < .001

Table 3 summarises the descriptive statistics of the individual semantic differential ratings that composed the difference-score on which the main analysis was performed for day two. Because there was an additional factor (control/crime statistics) on the second day, table 4 now summarises a three-way mixed ANOVA. The three-way interaction between  
Table 3

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Control Statistics | | Crime Statistics | |
|  | Minority | Majority | Minority | Majority |
| Equal Reporting | 5.04 (1.33) | 4.98 (1.28) | 4.96 (1.28) | 4.88 (1.34) |
| Unequal Reporting | 4.30 (1.37) | 5.51 (1.21) | 4.50 (1.23) | 5.05 (1.15) |

*Note*. Values in parentheses show standard deviations.

reporting condition, group, and statistics fell just short of the conventional significance level. This interaction reflects that the difference between majority and minority group was smaller in the crime statistics condition on the second day (for a visual representation see figure 1). As the interaction between reporting condition and minority/majority group was qualified by the three-way interaction, the relevant subsequent group comparisons are only reported for the control statistics condition here.

Table 4

*ANOVA Table for the individual semantic differential scores on day two*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Source | SSeffect | SSerror | F(1, 312) |  |
| Equal/Equal Reporting | 2.62 | 691.37 | 01.19 | 0.00 |
| Control/Crime Statistics | 2.10 | 691.37 | 00.95 | 0.00 |
| Reporting X Statistics | 0.08 | 691.37 | 00.04 | 0.00 |
| Minority/Majority Group | 26.81 | 321.64 | \*\*\*02.60\*\*\* | 0.08 |
| Reporting X Group | 35.62 | 321.64 | \*\*\*12.30\*\*\* | 0.10 |
| Group X Statistics | 4.92 | 321.64 | \*04.77\* | 0.02 |
| Three-way Interaction | 3.86 | 321.64 | 0a3.75a | 0.01 |

*Note*. \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

a The three-way interaction fell just short of significance: *p* = .054

Subsequent comparisons within the control statistics condition showed that the majority group was rated as more criminal in the unequal reporting condition than the same group (e.g., Laapians) in the equal reporting condition (*t*(154) = 2.64, *p* = .009, *d* = 0.42), and the minority group was rated as less criminal in the unequal reporting condition than the same group in the equal reporting condition (*t*(153) = -3.42, *p* < .001, *d* = -0.55).

*Figure 1*. Means of the semantic differential scores for the minority and majority group on day two as a function of reporting condition and control/crime statistics.

*Notes*

1 This means that these analyses were not included in the pre-registration.

## Assumption tests

As an application of structural equation modelling, latent growth curve models (LGCM) assume multivariate normality of all indicators. Finney and DiStefano (2013) suggest that this assumption can be maintained if skewness and kurtosis coefficients of the individual indicators do not exceed absolute values of 7 and 2, respectively, and Mardia’s normalised multivariate kurtosis coefficient is smaller than 3. Even though no indicator had absolute skew larger than 7 (mean *gm*= 0.45), all indicators had leptokurtic distributions (mean γ = 5.04) and Mardia’s normalised multivariate kurtosis coefficient was 34.78. Therefore, the Satorra-Bentler scaled χ² statistic was used for all subsequent analyses to adjust for deviations from non-normality (Finney & DiStefano, 2013).

A crucial assumption for latent growth curve modelling is strong factorial invariance both between time points and between groups, if a multi-group approach is used (Little, 2013). That is, factor loadings and intercepts of the construct indicators must be invariant between populations and over time for differences in factor means to represent genuine differences in the constructs of interest. Table 1 summarises the results of the procedure recommended by Little (2013) to test for strong factorial invariance.

First, a longitudinal null model (Little, 2013) was specified, which was needed to calculate appropriate comparative fit indices (CFI) for the substantial models. Second, a configural invariance model was fitted simultaneously to the biased and unbiased news conditions. This model can be understood as a simultaneous confirmatory factor analysis for all constructs, at both time points, and for both groups. As can be seen in Table 1, the model fit was acceptable to good (Little, 2013) and the model fitted the data significantly better than the null model. Thus, configural invariance could be assumed.

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Table 1

*Test of factorial invariance following Little (2013)*

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Model | χ² | *df* | *p* | RMSEA | 90 % CI | CFI | Δχ² | Δ*df* | *p* |
| Null model | 3029.240 | 196 | < .001 < | .302 | [.295, .310] | - | - | - | - |
| Configural invariance | 159.10 | 112 | .003 | .051 | [.031, .068] | .9837 | 2040.2000 | 848 | < .001 < |
| Weak factorial invariance a | 165.90 | 120 | .004 | .049 | [.029, .066] | .9838 | 07.79 | 8 | .454 |
| Weak factorial invariance b | 174.56 | 124 | .002 | .051 | [.032, .068] | .9822 | 08.16 | 4 | .086 |
| Strong factorial invariance a | 190.53 | 132 | .001 | .053 | [.035, .069] | .9793 | 16.58 | 8 | .035 |
| Strong factorial invariance b | 191.21 | 136 | .001 | .051 | [.032, .067] | .9805 | 00.76 | 4 | .943 |
| LGC model | 172.87 | 136 | .018 | .041 | [.018, .059] | .9870 | - | - | - |

*Note*. χ²: Satorra-Bentler scaled χ², RMSEA = Root mean square error of approximation, CI = Confidence interval, CFI = Comparative fit index, RMSEA and CFI are based on Satorra-Bentler scaled χ², Δχ²: Scaled difference of model χ² to previous model.

a within groups, b both within and between groups.

Next, weak factorial invariance was tested within groups by imposing equality constraints on the factor loadings between the first and the second day. The criterion for this and the subsequent model comparisons is a decrease in CFI of no more than .01 rather than statistical significance of the change in model fit (Little, 2013). Thus, weak factorial invariance could be assumed (see Table 1). The assumption of weak factorial invariance also held when further equality constraints were imposed on the factor loadings between the biased and unbiased news conditions. Finally, strong factorial invariance was tested by restricting the indicator intercepts to equality first within and then between groups. As can be seen in Table 1, these tests passed as well, and therefore all conditions for fitting the hypothesised growth model were met.

References

Finney, S. J., & DiStefano, C. (2013). Nonnormal and categorical data in structural equation modeling. In G. R. Hancock & R. O. Mueller (Eds.), *Structural Equation Modeling: A second course* (2nd ed., pp. 439-492). Charlotte, NC: Information Age Publishing.

Little, T. (2013). *Longitudinal Structural Equation Modeling*. New York, NY:   
Guilford Press.

## Descriptive statistics

Table 1

*Means and standard deviations of the explicit and implicit stereotype indicators*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Day 1 | | Day 2 | |
|  | *n* | Explicit | Implicit | Explicit | Implicit |
| Biased –  control statistics | 76 | 0.69 (1.84) | 0.10 (0.49) | 1.20 (1.72) | 0.10 (0.59) |
| Biased –  crime statistics | 89 | 0.78 (1.60) | 0.11 (0.53) | 0.55 (1.34) | 0.01 (0.53) |
| Unbiased – control statistics | 80 | 0.10  (1.50) | 0.03 (0.55) | -0.07- (1.33) | 0.03 (0.59) |
| Unbiased –  crime statistics | 71 | 0.09 (1.68) | 0.03 (0.48) | -0.09- (1.33) | 0.03 (0.48) |

*Note*. Cell frequencies did not differ significantly from an equal distribution (χ(3) = 1.09,   
 *p* = .780). Values in parentheses show standard deviations.

Table 2

*Correlation matrix for the biased – control statistics condition*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Day 1 | | Day 2 | |
|  | Explicit (1) | Implicit (2) | Explicit (3) | Implicit (4) |
| (1) | \*\*\*.98\*\*\* |  |  |  |
| (2) | \*\*.34\*\* | \*\*\*.81\*\*\* |  |  |
| (3) | .22 | .17 | \*\*\*.99\*\*\* |  |
| (4) | \*\*\*.41\*\*\* | \*\*\*.66\*\*\* | \*.26\* | \*\*\*.88\*\*\* |

*Note*. Diagonal values show Cronbach’s alpha; *n* = 76.

\* *p* < .05 \*\* *p* < .01 \*\*\* *p* < .001.

Table 3

*Correlation matrix for the biased – crime statistics condition*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Day 1 | | Day 2 | |
|  | Explicit (1) | Implicit (2) | Explicit (3) | Implicit (4) |
| (1) | \*\*\*.98\*\*\* |  |  |  |
| (2) | .20 | \*\*\*.82\*\*\* |  |  |
| (3) | \*\*\*.40\*\*\* | .05 | \*\*\*.97\*\*\* |  |
| (4) | \*\*.30\*\* | \*\*\*.69\*\*\* | .19 | \*\*\*.82\*\*\* |

*Note*. Diagonal values show Cronbach’s alpha; *n* = 89.

\* *p* < .05 \*\* *p* < .01 \*\*\* *p* < .001.

Table 4

*Correlation matrix for the unbiased – control statistics condition*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Day 1 | | Day 2 | |
|  | Explicit (1) | Implicit (2) | Explicit (3) | Implicit (4) |
| (1) | \*\*\*.96\*\*\* |  |  |  |
| (2) | \*\*.29\*\* | \*\*\*.76\*\*\* |  |  |
| (3) | .15 | .05 | \*\*\*.95\*\*\* |  |
| (4) | \*.28\* | \*\*\*.80\*\*\* | .15 | \*\*\*.86\*\*\* |

*Note*. Diagonal values show Cronbach’s alpha; *n* = 80

\* *p* < .05 \*\* *p* < .01 \*\*\* *p* < .001.

Table 5

*Correlation matrix for the unbiased – crime statistics condition*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Day 1 | | Day 2 | |
|  | Explicit (1) | Implicit (2) | Explicit (3) | Implicit (4) |
| (1) | \*\*\*.97\*\*\* |  |  |  |
| (2) | .17 | \*\*\*.81\*\*\* |  |  |
| (3) | \*-.29\*- | .10 | \*\*\*.98\*\*\* |  |
| (4) | .13 | \*\*\*.65\*\*\* | .19 | \*\*\*.82\*\*\* |

*Note*. Diagonal values show Cronbach’s alpha; *n* = 71.

\* *p* < .05 \*\* *p* < .01 \*\*\* *p* < .001.