




REPLY TO CHENG ET AL.:

Benefit generation dominates cost infliction in explaining cross-national status allocations

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In our study of the psychological determinants of status allocations across 14 nations (1), we conclude that “the primary foundation of human status allocation psychology is benefit generation rather than cost infliction.” Cheng et al. (2) identify strong correlations among our predictors and variance inflation factors (VIF) greater than 2.5 as cause for concern about our conclusion. We note that strong correlations among predictors are not themselves indicative of severe collinearity; there is little consensus on VIF cutoffs in the literature, and multicollinearity is not necessarily problematic for inference (3–6). Still, we appreciate their thorough examination of our study and agree it is valuable to probe the implications of our reliance on a commonly used VIF threshold of 10 (7, 8).

Cheng et al.’s (2) reanalyses of our data ameliorate collinearity by comparing benefit-generation ability to cost-infliction ability, benefit-generation willingness to cost-infliction willingness, and a benefit-generation composite to a cost-infliction composite. These reanalyses show that cost infliction exhibits smaller associations with status allocations holding constant benefit generation ($\beta = 0.04$ to 0.26) than did benefit generation holding constant cost infliction ($\beta = 0.74$ to 0.86). In our view, these findings are consistent with our original conclusion.

To formally assess the relative importance of benefit-generation and cost-infliction inferences in explaining status allocations, we reanalyzed our data using dominance analysis (9, 10). This method addresses collinearity by conducting an exhaustive set of submodels with

nonredundant combinations of predictors, examining how much additional variance in the outcome is accounted for upon adding each focal predictor, and comparing the additional contributions of focal predictors in a pairwise fashion across submodel sets. The “dominance” of one predictor over another is “complete” if its additional contribution is greater in every submodel comparison, “conditional” when its average contribution within each set of submodels is greater, and “general” when its additional contribution averaged across all submodels is greater (9).

Fig. 1 shows the proportion of 2,000 bootstrapped samples in which each level of dominance was established across pairwise comparisons of both our individual predictors and the composite variables for men and women across 14 nations. The benefit-generation composite “completely” dominates the cost-infliction composite across nations in 100% of replicates for both men’s and women’s status. The dominance of each individual benefit-generation variable over the individual cost-infliction variables is established at least at the “general” level in all replicates for men’s status in every nation, and for women’s status in all nations except China and Eritrea.*

These reanalyses support the conclusion that benefit generation statistically dominates cost infliction in explaining the status impacts of personal characteristics across nations. To determine the precise role of cost infliction in status hierarchies, future research must refine “dominance” (10).

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The authors declare no competing interest.

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*For data and code, see <https://osf.io/7gdv9/>.



Fig. 1. Results of dominance analyses showing the proportion of 2,000 bootstrapped replicates in which each level of dominance was established between pairwise comparisons of predictors of men's and women's status across nations.

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