# Parents Are Slightly Happier Than Nonparents, but Causality Still Cannot Be Inferred: A Reply to Bhargava, Kassam, and Loewenstein (2014) 

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We welcome Bhargava, Kassam, and Lowenstein's (2014) commentary on our article (Nelson, Kushlev, English, Dunn, \& Lyubomirsky, 2013). The question we addressed, however, is different from the one Bhargava and colleagues posed. Although we slipped into using causal language in a few places, our primary aim was to examine the bivariate relationship between parenthood and well-being. Motivated in part by media portrayals of parents who are "miserable" and who "hate parenting," we simply asked whether happiness and parenthood can coexist. Our analyses revealed that, overall, when parents and nonparents were asked about their happiness levels, the parents were slightly happier. Other fields also use this approach; for example, many researchers have assessed the direct correlation between income and wellbeing, facilitating comparisons of data sets around the world (see Diener \& Biswas-Diener, 2002, for a review).

We did not try to examine the causal effect of parenthood on well-being, because our correlational design precluded causal interpretation. Bhargava et al., by contrast, aimed to test causality. However, their causal claim about the direction of the parenthood effect on wellbeing is entirely contingent on having a causal theoretical model-a model that assumes all causes of well-being correlated with parenthood are included (Cohen \& Cohen, 1983). That model was never articulated. Instead, the authors used a convenient (and limited) set of demographic variables (see their Note 3), undoubtedly leaving out important factors, such as child temperament and child age. We have recently moved beyond the simple "Are parents happier?" question to trying to understand when, why, and how some parents are happier (or less happy) than nonparents (Nelson, Kushlev, \& Lyubomirsky, 2013).

Of course, parents' marital status, age, and gender are also related to their well-being. We considered the Bhargava et al. approach of using these variables as covariates (as described in Nelson, Kushlev, English, et al., 2013, p. 4), but we instead examined how the association between parenthood and well-being varies among these groups. Indeed, we did find evidence of modera-tion-parenthood, compared with nonparenthood, was associated with relatively greater well-being for male and middle-aged individuals and with lower well-being for young and single ones. The presence of these significant moderators "invalidate[s] the analysis of covariance method" (Cohen \& Cohen, 1983, p. 320) used by Bhargava et al., which indicates violation of their analysis's assumptions. That is, once moderation is established for a particular variable, treating it as a control in subsequent analyses is generally considered unacceptable (Elwert \& Winship, 2010).

According to Bhargava et al., concluding that parenthood improves well-being is premature. We absolutely agree. No causal conclusions can be drawn-from our analyses or theirs. When disagreements emerge in behavioral research, it is important to demarcate the points of agreement and divergence. Notably, Bhargava et al. do not dispute our central claim-that, overall, parents are slightly happier than nonparents. However, disentangling the causal effect of parenthood remains an open and complex question that requires multiple triangulating methodologies-not just comparing parents and

[^0]nonparents but examining parents' experiences during the transition to parenthood and their experiences with and without their children.

## Author Contributions

S. K. Nelson and S. Lyubomirsky, with input from K. Kushlev, developed the ideas for the manuscript. S. K. Nelson wrote the first draft, and S. Lyubomirsky and K. Kushlev contributed additional material. S. Lyubomirsky and S. K. Nelson extensively revised the manuscript, and K. Kushlev and E. W. Dunn contributed to decisions about approach and language. All authors approved the final version of the manuscript for submission.

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## Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

## References

Bhargava, S., Kassam, K. S., \& Loewenstein, G. (2014). A reassessment of the defense of parenthood. Psychological Science, 25, 299-302.
Cohen, J., \& Cohen, P. (1983). Applied multiple regression/ correlation analysis for the behavioral sciences (2nd ed.). Hillsdale, NJ: Erlbaum.
Diener, E., \& Biswas-Diener, R. (2002). Will money increase subjective well-being? A literature review and guide to needed research. Social Indicators Research, 57, 119-169.
Elwert, F., \& Winship, C. (2010). Effect heterogeneity and bias in main-effects-only regression models. In R. Dechter, H. Geffner, \& J. Y. Halpern (Eds.), Heuristics, probability and causality: A tribute to Judea Pearl (pp. 327-336). London, England: College Publications.
Nelson, S. K., Kushlev, K., English, T., Dunn, E. W., \& Lyubomirsky, S. (2013). In defense of parenthood: Children are associated with more joy than misery. Psychological Science, 24, 3-10.
Nelson, S. K., Kushlev, K., \& Lyubomirsky, S. (2013). The pains and pleasures of parenting: When, why, and how is parenthood associated with more or less well-being? Manuscript submitted for publication.


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