

REJOINDER: CRISIS IN SCIENCE? OR CRISIS IN STATISTICS...

D. A. S. FRASER AND N. REID

Department of Statistical Sciences, University of Toronto, Toronto, Canada M5S 3G3, Canada

Email: dfraser@utstat.toronto.edu, reid@utstat.toronto.edu

We'd like to thank Andrew Gelman for the thoughtful discussion of our note, and for the article that inspired our response. That paper (Gelman and Loken, 2014) expressed concerns for a crisis in science; our response argued that the crisis was in statistics, with its wide-spread recommendation that p -values be represented in terms of decisions, at the 5% level, or even the 5 sigma level or 1 in 3.5 million as recently used by High Energy Physicists.

The commentary agrees with our perspective on "NHST", and provides insightful examples from applications. Technical concerns aside, there are also issues of responsibility, professionalism, and ethical behaviour that can't be overlooked. It seems then that we are in full agreement on the substance of the issues, with some differences of opinion on how the concerns should be weighted.

May Statistics rise to its challenges.

References

- [1] Gelman, A. and Loken, E. (2014). The statistical crisis in science. *Amer. Scientist*, 102:460–465.