1905-2014. R.I.P. The American Statistician, 68(3),

191–195. DOI: https://doi.org/10.1080/00031305

lost by ignoring modern statistical methods? Ameri-

can Psychologist, 53(3), 300-314. DOI: https://doi.

tributions. The Journal of Experimental Education,

73(3), 249-263. DOI: https://doi.org/10.3200/

and hypothesis testing. Cambridge, Massachusetts,

Westfall, P. H. (2014). Kurtosis as peakedness,

Wilcox, R. R. (1998). How many discoveries have been

Wilcox, R. R. (2005). Comparing medians: An overview plus new results on dealing with heavy-tailed dis-

Wilcox, R. R. (2011). Introduction to robust estimation

org/10.1037/0003-066X.53.3.300

to anova under variance heterogeneity. The Journal of Experimental Education, 65(3), 271–286. DOI: https://doi.org/10.1080/00220973.1997.9943459

Schneider, P. J., & Penfield, D. A. (1997). Alexander and Govern's approximations: Providing an alternative

Srivastava, A. B. L. (1959). Effects of non-normality on the power of the analysis of variance test. Biometrika, 46(1-

2), 114–122. DOI: https://doi.org/10.2307/2332813

Tiku, M. (1971). Power function of the f-test under nonnormal situations. Journal of the American Statistical Association, 66, 913–916. DOI: https://doi.org/10.1 080/01621459.1971.10482371

Tomarken, A. J., & Serlin, R. C. (1986). Comparison of anova alternatives under variance het-

erogeneity and specific noncentrality structures. Psychological Bulletin, 99(1), 90–99. DOI: https:// doi.org/10.1037//0033-2909.99.1.90 **Wasserman, B. D., & Weseley, A. J.** (2009). ?'Qué?

Quoi? Do languages with grammatical gender pro-

https://doi.org/10.1007/s11199-009-9696-3

mote sexist attitudes? Sex Roles, 61, 634–643. DOI:

JEXE.73.3.249-263

.2014.917055

US: Academic Press. DOI: https://doi.org/10.1016/ B978-0-12-386983-8.00010-X

Yuan, K.-H., Bentler, P. M., & Chan, W. (2004). Structural equation modeling with heavy tailed distributions. Psychometrika, 69(3), 421–436. DOI: https://doi. org/10.1007/BF02295644

How to cite this article: Delacre, M., Leys, C., Mora, Y. L., & Lakens, D. (2019). Taking Parametric Assumptions Seriously: Arguments for the Use of Welch's F-test instead of the Classical F-test in One-Way ANOVA. International Review of Social

Published: 01 August 2019

International Review of Social Psychology is a peer-reviewed open access journal published OPEN ACCESS &  $|\mathbf{u}|$ by Ubiquity Press.

Submitted: 05 June 2018

Copyright: © 2019 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC-BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See http://creativecommons.org/licenses/by/4.0/.

Accepted: 20 May 2019

Psychology, 32(1): 13, 1-12. DOI: https://doi.org/10.5334/irsp.198