Baby names show a QWERTY effect

In a conference proceedings paper that will appear in July 2014, we report two analyses of how US baby names have changed over time as predicted by the QWERTY effect (Casasanto, Jasmin, Brookshire, & Gijssels, 2014). The first analysis is longitudinal, and the second is cross-sectional.

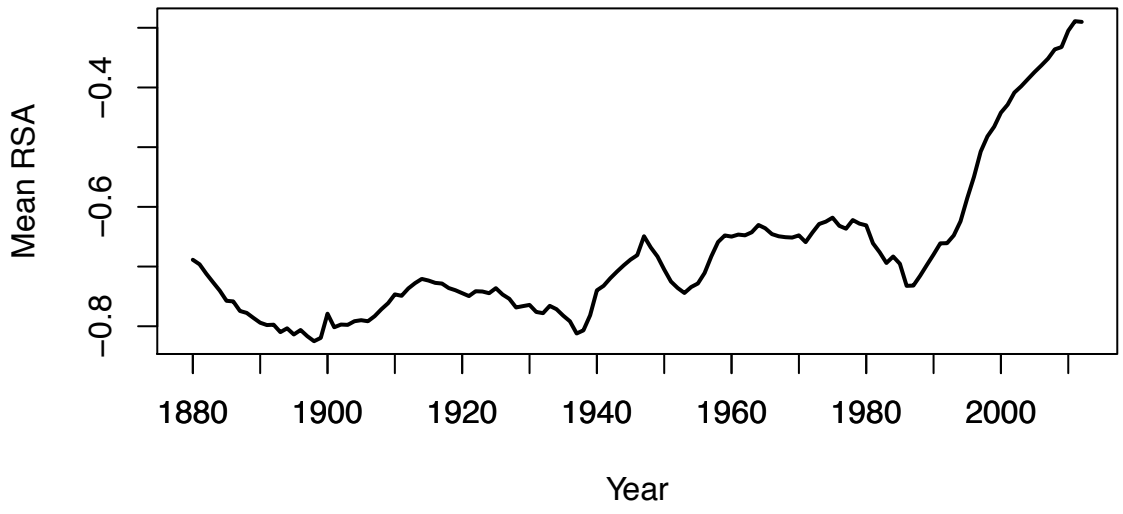
Mark Liberman attempted to reproduce and extend the longitudinal analysis. He did not, in fact, reproduce our analysis. The analyses he produced are difficult to interpret.

Some brief clarifications about our analyses:

For both of the baby names analyses we reported, "mean RSA" is the mean of the RSA of every person included in our analysis for that year. This is a weighted mean of all names, using the number of occurrences of each name in the given year as weights.

In our longitudinal analysis we only considered names that had been given to more than 100 children in **every year** between 1960 and 2012. By looking at longitudinal changes in the same group of names, this analysis shows changes in names' popularity over time. If instead you only look at names that were present in a given year, you are performing a haphazard collection of cross-sectional analyses, since many names come and go. The longitudinal analysis we report compares the popularity of the same names over time.

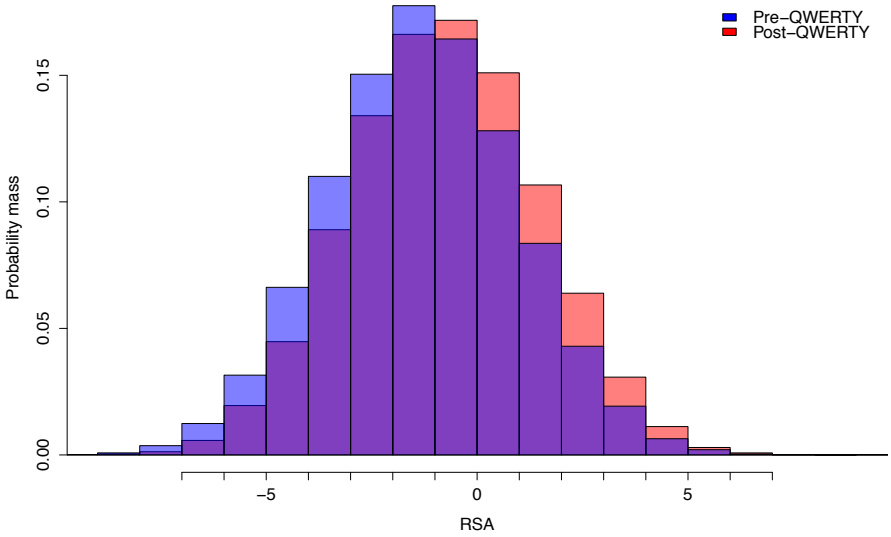
Trends earlier than 1960 might be informative about the observed changes in RSA, so we analyzed all names back to 1880 (this analysis will appear in the full manuscript on these studies; it was not included in the brief conference paper). In this more comprehensive analysis, we retained *all names* that had been used in *every year* between 1880 and 2012, as a more conservative test of our hypothesis. Here's what that analysis shows:



There is a dramatic upward slope beginning at 1990 — right when QWERTY was widely popularized. This increase in RSA is much larger than the fluctuations in RSA before QWERTY was in everyday use. The correlation between year and RSA is highly

significant ($r = .79$, $df = 131$, 95% CI = [0.71, 0.84], $p < 10^{-16}$).

In addition to this longitudinal analysis, in our conference paper we also report a cross-sectional analysis, comparing the Right Side Advantage of names used before vs. after the popularization of QWERTY. Names invented after 1990 (n = 38,746) use more letters from the right side of the keyboard than names in use before 1990 (n = 54,219; $t(84023.1) = 35.3$, $p = 6.3 * 10^{-271}$). Because we wanted to be sure that the choice of 1990 as the boundary between the pre- and post-QWERTY eras didn't influence the results, we performed this same analysis using every year between 1960 and 2000 as a cutoff. This comparison was significant at every cutoff year (all *p*s $< 10^{-84}$).



Thanks for your interest in this paper!
The authors, May 14, 2014

Conference paper:
Casasanto, D., Jasmin, K., Brookshire, G. & Gijssels, T. (2014). The QWERTY Effect: How typing shapes word meanings and baby names. In P. Bello, M. Guarini, M. McShane, & B. Scassellati (Eds.), *Proceedings of the 36th Annual Conference of the Cognitive Science Society.* Austin, TX: Cognitive Science Society.

http://casasanto.com/papers/CasasantoJasminBrookshireGijssels_CogSci_2014.pdf