Quantitative methods: New trends and perspectives*

Sali A. Tagliamonte
with Derek Denis and Matt Gardner

(Department of Linguistics)
(University of Toronto)

* Please note: This workshop is for beginners. It is not meant for experts, stats geniuses or R-aficionados.

Quantitative methods are the corner stone of variationist approaches to the study of language variation and change. This year's workshop continues the well-established tradition of revisiting existing methods and offering a sensible and practical guide to analytical trends.

We will assume basic understanding of pre-statistical variationist methods, including the definition of the linguistic variable and circumscription of the variable context (Guy, 1988, 1993; Tagliamonte, 2006, 2012; Wolfram, 1993). The workshop will follow the discussion presented in Tagliamonte (2012:chapter 5), using variable (that) as a case study:

(1)   I don't think THAT that's a matter of choice. I think Ø it's a matter of helping our system out. We will proceed step by step, touching on the critical steps for accountable quantitative analysis: 1) frequency, 2) crosstabulation, 3) fixed effects modelling, 4) a discussion of random effects and continuous factors, 5) mixed effects modelling, and 6) dealing with interactions. Guided of the 'three lines of evidence' (Poplack & Tagliamonte, 2001: chapter 5), statistical significance, constraint ranking and relative strength of predictors/factors, these are, in essence, the de facto 'standards' of the field. We will employ variable rule analysis with Goldvarb, fixed and mixed effects modelling with Rbrul and R, noting how these tools complement each other. If there is time we will demonstrate data exploration techniques such as conditional inference trees which are a helpful means to visualize unanticipated patterns in social variables. Methodological questions will be addressed where appropriate.

It is hoped that participants will go away with sufficient knowledge of these statistical tools to explore and understand their data on their own and feel confident in their quantitative practice. All participants should have Goldvarb installed on their computers as well as the latest version of R (and a few specific packages) before arriving for the workshop. We will send out a pre-workshop email to all registered participants with instructions.

References

Guy, Gregory R. (1988). Advanced VARBRUL analysis. In Ferrara, K., Brown, B., Walters, K. & Baugh, J. (Eds.), *Linguistic Change and Contact.* Austin, Texas: Department of Linguistics, University of Texas at Austin. 124-136.

Guy, Gregory R. (1993). The quantitative analysis of linguistic variation. In Preston, D. (Ed.), *American Dialect Research.* Amsterdam and Philadelphia: John Benjamins. 223-249.

Poplack, Shana & Tagliamonte, Sali A. (2001). *African American English in the diaspora: Tense and aspect.* Malden: Blackwell Publishers.

Tagliamonte, Sali A. (2006). *Analysing sociolinguistic variation.* Cambridge: Cambridge University Press.

Tagliamonte, Sali A. (2012). *Variationist Sociolinguistics: Change, observation, interpretation.* Malden and Oxford: Wiley-Blackwell.

Wolfram, Walt (1993). Identifying and interpreting variables. In Preston, D. (Ed.), *American dialect research.* Amsterdam and Philadelphia: John Benjamins. 193-221.