Foreword

Currents in Language Learning provides programmatic state-of-the-art overviews of current issues in the language sciences and their applications in first, second, and bi/multilingual language acquisition in naturalistic and tutored contexts. It brings together disciplinary perspectives from linguistics, psychology, education, anthropology, sociology, cognitive science, and neuroscience.

Current developments in scientific practice and publishing impact us all. We are experiencing a rapid evolution in research methodology and quantitative reasoning across the social and natural sciences. The "new statistics" recognizes the vagaries of p levels and emphasizes instead confidence intervals, effect sizes, and data visualization. Whether our study is small or large, we must reconsider best practices in the analysis of quantitative data.

We are also experiencing a sea change in statistical theorizing. We no longer revere the point null hypothesis significance test. Bayesian inference is coming to rival the traditional methods introduced by Fisher. New statistical methods are being introduced and computational resources allow ever more powerful and sophisticated modeling. We want the sophistication and completeness of generalized linear mixed models rather than ANOVA, of structural equation models over factor analysis and linear regression, of dynamic growth models rather than static descriptions. We want to synthesize the findings of many studies rather than concentrate upon one experiment alone. We want to analyze the patterns latent in large quantities of language usage.

These developments provide both opportunity and burden to researchers of the language sciences, faculty and students alike. It is hard to keep up, especially where research methods range from detailed qualitative description to Big Data analysis, and it is easy to get things wrong. The responsibility is there for authors, for reviewers of articles, for journal editors, for us all. It is for these reasons that this second volume in the *Currents in Language Learning* focuses upon Quantitative Reasoning.

For this second issue, *Language Learning* sponsored a Roundtable Conference proposed by John Norris, Steven Ross, and Rob Schoonen that brought together leading figures in quantitative reasoning in applied linguistic research

in order to develop good practice. This meeting took place at Georgetown University in October 2013. The experts then teamed up to produce state-of-the-art overviews of the new methods, as well as to draw out the more general implications for research design, quantitative inference, and writing and publishing in the language sciences. Subsequent internal and external reviews resulted in these clear and cutting-edge syntheses.

Language Learning also tasked the editors of this volume to write a brief guideline for reporting quantitative methods and results in primary research that we could use in our editorial practices and that could provide good direction for students and language researchers. These are published as Norris, J. M., Plonsky, L., Ross, S. J., & Schoonen, R. (2015). Guidelines for Reporting Quantitative Methods and Results in Primary Research. *Language Learning, 65:2*, 470–476. They are also available from the Instructions to Authors on the *Language Learning* journal website: http://onlinelibrary.wiley.com/journal/10.1111/%28ISSN%291467-9922.

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