1 Key Themes, Constructs and Interdisciplinary Perspectives in Second Language Pronunciation Assessment

Talia Isaacs and Pavel Trofimovich

Assessment of Second Language Pronunciation: Where We Are Now

After a period of relative neglect, second language (L2) pronunciation has experienced a resurgence of interest among applied linguistics researchers and L2 practitioners, with several indicators signalling growing momentum. For example, the past decade has witnessed the emergence of pronunciation-specific special journal issues (e.g. Cardoso & Trofimovich, 2014), invited symposia (e.g. Derwing & Munro, 2010), webinars and Electronic Village Online sessions organized by the pronunciation special interest group of professional teaching associations (e.g. Harding & Selman, 2014), research timelines (e.g. Munro & Derwing, 2011), meta-analyses (e.g. Lee *et al.*, 2015), and encyclopaedia volumes or handbooks (Reed & Levis, 2015). In addition, evidence of the growing interest in L2 pronunciation research is reflected in the establishment of the annual *Pronunciation in Second Language Learning and Teaching* (PSLLT) conference and proceedings in 2009 and, more recently, in the launch of the *Journal of Second Language Pronunciation* in 2015 – a symbol of the professionalization of the field. These developments have been accompanied by a substantial overall increase in the proportion of pronunciation-relevant articles published in applied linguistics journals over the past few years (Levis, 2015), which is key to the reintegration of pronunciation research into the applied linguistics research mainstream after decades of being sidelined. Several recent graduates with pronunciation expertise have also launched into academic positions at

international universities and are, in turn, training a new generation of pronunciation proponents, assuring L2 pronunciation a bright future in research and teacher training in the years to come, although there is much more work to be done (Derwing & Munro, 2015).

Pronunciation is, by its nature, interdisciplinary, drawing on research traditions in psycholinguistic, sociolinguistic and speech sciences and strongly interfacing with work in second language acquisition (SLA) and L2 pedagogy. There have been developments in all of these areas, although few common platforms for discussion exist, as the scholarly discourse, methodologies and research priorities vary substantially across domains. Notably, much of the renewed applied pronunciation related activity over the past several decades has been conducted by SLA researchers and research practitioners interested in teacher training and, to a lesser extent, by those researching the use of an L2 as a lingua franca across the globe. Interest in L2 pronunciation from within the language assessment community specifically, which includes both researchers and practitioners (e.g. exam board staff), has taken much longer to ignite. For example, there is no dedicated book on assessing L2 pronunciation in the foundational *Cambridge Language Assessment* series to accompany books on assessing other language components (e.g. grammar and vocabulary, although assessing pragmatics is similarly not featured). Pronunciation also plays only a peripheral role in books on assessing L2 speaking (Fulcher, 2003; Luoma, 2004) and was singled out as not having been included in Fulcher's (2015) research timeline on the topic. Until recently, there has also been little acknowledgement of the absence of pronunciation from the L2 assessment research agendas (Isaacs & Thomson, 2013), or of its often peripheral role in assessing L2 speaking proficiency, including in scales, where it has either been unmodelled or inadequately operationalized (Harding, 2013, this volume; Isaacs *et al.*, 2015).

The 2011 *Language Testing Research Colloquium* marked the 50th anniversary of the publication of Lado's (1961) seminal book, *Language Testing*, which is widely considered to signify the birth of the language assessment field (Spolsky, 1995). Over half a century later, Lado's work remains the only non-thesis single-authored book-length treatment on pronunciation assessment (among other topics) and, hence, the existing authority on designing and administering pronunciation tests, despite some key concepts being out of date (Isaacs, 2014). However, there are recent indications that pronunciation assessment is emerging from its time warp. For example, whereas only two pronunciation-focused articles were published in the longest standing language assessment journal, *Language Testing*, in its first 25 years of publication (1984–2009; Isaacs, 2013), seven articles have appeared in the five-year period since (2010–2015; Levis, 2015). Pronunciation assessment has also been featured in major events targeting the L2 speaking construct (e.g. the 2013 *Cambridge Centenary Speaking Symposium*) and in at least four externally funded TOEFL and IELTS research projects since 2010, a

topic hitherto rarely focused on in the validation of high-stakes tests. This implies that pronunciation is increasingly being viewed as integral to the L2 speaking construct.

Beyond the piecemeal contributions of individual researchers, a more sustained shift in attention back to pronunciation from the language assessment community at large has been seen in the introduction of fully automated standardized L2 speaking tests (e.g. Pearson's Versant test and Educational Testing Services' SpeechRater), which place considerable weight on acoustic and temporal measures in scoring (Kang & Pickering, 2014; Zechner *et al.*, 2009). The launch of fully automated tests in the international language testing market (e.g. the Pearson Test of English Academic for university entrance purposes) fed into a rigorous field-wide debate on machine-mediated automated scoring in the first decade of the 21st century (e.g. Chun, 2006, 2008; Downey *et al.*, 2008), which has arguably evolved into more pragmatic acceptance of the inevitability of the use of automated speech recognition technology during the second decade (e.g. Isaacs, 2016; Xi, 2010, 2012).

The growing use of English as a lingua franca in diverse international settings brought about by economic globalization and technological advancements has catapulted the issue of defining an appropriate pronunciation standard in L2 listening and speaking tests (e.g. Canagarajah, 2006; Elder & Davies, 2006; Jenkins, 2006; Ockey & French, 2014), in light of growing attention to proposals for supplementing (if not supplanting) the native speaker standard. Such discussions are permeating the decades-long language testing literature on international teaching assistants (ITA), with pronunciation-relevant research strands now focusing on identifying the linguistic features that are most important for being intelligible or easily understood by listeners, in addition to identifying sources of listener bias (e.g. listener background characteristics, such as differential exposure to particular varieties of L2 accented speech) that could have bearing on their judgements of oral performance, instructional competence or other social measures (e.g. Hsieh, 2011; Isaacs, 2008; Kang, 2008, 2012).

Bringing Together Different Research Strands

Although there are signs of growing interest in L2 pronunciation assessment among researchers and educational practitioners, there is, as yet, no synthesis of work beyond single book chapters in edited volumes that tend to target either audiences of primarily language testers (e.g. Isaacs, 2014), or predominantly SLA-oriented pronunciation researchers (e.g. Levis, 2006), with little apparent crossover between these communities. Consolidating knowledge on pronunciation assessment is sorely needed to keep pace with current advancements, promote a baseline level of understanding of relevant issues, spearhead interdisciplinary dialogue, guide teaching and test

development, and inform future research directions. This volume seeks to fill this gap by bringing to light the insights from assessing other skills (e.g. listening, writing) in addition to drawing on perspectives from research in speech sciences, SLA, psycholinguistics and sociolinguistics, including lingua franca communication, with concrete implications for pronunciation assessment. This edited collection thus pools the expertise of authors from different research communities to establish a common platform by which to carry issues forward in a research area that is increasingly assuming a higher profile and gaining currency in all domains within applied linguistics.

The edited collection caters to a mixed audience of L2 researchers, graduate students, teacher-educators and exam board staff with varying levels of expertise in pronunciation and assessment. It is conceived of as the first point of reference for readers from different disciplinary backgrounds, bringing to the fore topical issues and challenges that relate to formal and informal assessments of L2 pronunciation in classroom, research and real-world contexts. The edited volume is thus likely to be informative to both a new generation of researchers hoping to make inroads in pronunciation and/or assessment, and experienced pronunciation researchers who wish to consult and cite high-calibre work both within and beyond their specific areas of expertise. Although not explicitly tackling problems to do with developing and validating L2 pronunciation tests (e.g. item writing), which remains a tangible gap in the literature (Isaacs, 2014), the concrete implications for pronunciation assessment in each study are likely to address at least some important conceptual and practical issues and to generate further thought and discussion. Due to its interdisciplinary nature, the edited volume is likely to cater to students, researchers and practitioners with wide-ranging interests in applied linguistics that extend beyond pronunciation.

The chapters, which together span the methodological spectrum (quantitative, qualitative, mixed methods), represent the breadth of research traditions used to examine the linguistic and non-linguistic phenomena relevant to L2 pronunciation assessment. The chapters also include state-of-the-art reviews, empirically grounded contributions and research commentaries that interface with different aspects of pronunciation and assessment, elucidating key issues and underscoring implications for further research and practice. Despite the substantive and methodological breadth of each contribution making up the collection, the following principles apply to all:

(1) Each chapter is written in clear and accessible language for an audience of academics, graduate students and L2 teaching and testing professionals with varying expertise in L2 pronunciation and assessment.
(2) Key definitions of relevant terms are provided within the context of each chapter to promote an understanding of the definition of major constructs for the purposes of the reported study.

(3) In the case of research reporting, justification for key methodological decisions is provided to render the rationale behind novel procedures or adherence to research conventions more transparent.

(4) Each chapter concludes with a section delineating concrete implications for research and practice in L2 pronunciation assessment or future directions.

Structure of the Book

This book consists of 14 chapters, which can be read in sequence or as stand-alone units, featured in four main sections.

Part 1: Introduction

The chapters in this part, including the state-of-the-art overview in this introductory chapter, cover fundamental concepts in L2 pronunciation research, centring on ways in which major constructs are defined and operationalized, including problematizing pronunciation assessment instruments used by human raters.

Part 2: Insights from Assessing Other Language Skills and Components

This part focuses on the learning and assessment of other L2 skills and components, with chapters on assessing fluency, writing and listening. The assessment of these areas of ability has been more extensively researched than the assessment of L2 pronunciation, and insights could be useful in informing the future development of the field.

Part 3: Perspectives on Pronunciation Assessment From Psycholinguistics and Speech Sciences

This part consists of empirical studies grounded in research in psycholinguistic and speech sciences, including work on individual differences in listener (rater) characteristics and different objective and subjective ways of measuring the linguistic properties of L2 speech.

Part 4: Sociolinguistic, Cross-cultural and Lingua Franca Perspectives in Pronunciation Assessment

This part focuses on the implications and applications of pronunciation teaching and assessment in various cultural, educational and lingua franca contexts, including the role of the native speaker as an assessment standard. These contributions provide a unique perspective to the volume by

contextualizing pronunciation assessment within the complexities of present-day multilingual, cross-cultural and educational spaces.

Part 5: Concluding Remarks

The concluding part summarizes, synthesizes and discusses the nature of the innovation of each contribution and of the volume as a whole. It concludes with future directions for L2 pronunciation research and practice formulated as research themes and questions that are likely to be the subject of further investigation.

Key Concepts and Definitions

As stated above, this book responds to the urgent need to consolidate current expertise on L2 pronunciation assessment by bringing together insights and highlighting pedagogical and assessment implications from within the applied linguistics community that are of relevance to language assessment researchers and practitioners on a common platform. Having a single forum for bringing together different voices is a preliminary means of arriving at a common understanding of key issues, understanding the breadth of approaches, and charting future directions from an informed and interdisciplinary perspective, which is the overarching goal of this volume.

It seems fitting that a book that includes contributions from members of different research communities would begin by establishing common threads and providing definitions as a means of synchronizing across the different areas. However, without wanting to impose a priori definitions to the authors when approaching them for contributions – because they are conducting work on different facets of L2 pronunciation and/or assessment with distinct areas of expertise – providing common definitions of at least some key terms, particularly in L2 pronunciation, for the benefit of end-users is, at this stage, unfeasible. This is because there has been little cross-talk across fields and no precedent in terms of edited volumes on L2 pronunciation assessment that encompass the breadth of the research and practical applications presented in this collection. Although contributors are, in some cases, writing about similar issues, they tend to be approaching problems from different perspectives and, for the most part, speaking in very different languages, with different underlying assumptions and understanding of key issues, which they strive to clarify with transparency through the course of their chapter, and with discernibly different research priorities. Thus, the task of providing all-encompassing definitions that pervade all of the contributions – for example, for a term such as 'intelligibility', which has been defined and measured in numerous ways in the literature (Isaacs, 2008) in a similar way to a term such as 'fluency' (Koponen & Riggenbach, 2000) is

difficult, with different shades of meaning coming to light in different chapters as the concept is discussed in both broader conceptual terms, and in narrower operational meanings in the context of individual studies.

Despite these challenges, we feel that it is both possible and appropriate to clearly define the terms 'pronunciation' and 'assessment' that appear in the title. 'Pronunciation', in the way it was conceived of for this edited volume, encompasses (1) individual consonant and vowel sounds, commonly referred to in the literature as 'segments', and (2) features that span a larger unit than a single segment, such as word stress, rhythm and intonation, referred to synonymously in the literature as 'suprasegmentals' or 'prosody' – terms that are, therefore, used interchangeably in this volume. However, the reader should be aware that language tests, including rating scales, may have their own operational definitions of these terms that diverge from these meanings (Isaacs *et al.*, 2015).

Following Bachman's (2004) expanded view of assessment, the term 'assessment' in this volume broadly refers to the process of information gathering (e.g. about an L2 learner's or test taker's ability), potentially from multiple and varied sources on the variable(s) of interest, including generating information about what learners can do to feed into the teaching cycle. In contrast a 'test' refers more specifically to a particular type of assessment involving the elicitation of an L2 learner's or test taker's performance followed by inferences or decision making on the basis of that performance, generally informed by a test score or a numerical indicator from a score report. Therefore, all tests are also assessments, whereas not all assessments are tests, although tests are a very common and, due to their often high stakes, the most high-profile form of assessment.

We hope that this volume will be viewed as a trendsetter in a burgeoning field that is steadily gaining momentum, consolidating knowledge on current practice across disciplinary areas and driving the conversation forward. We also hope that it will help establish commonalities across research areas and facilitate greater consensus and agreement about key issues, terminology and best practice in L2 pronunciation research and assessment moving forward.

References

Bachman, L.F. (2004) *Statistical Analyses for Language Assessment*. Cambridge: Cambridge University Press.

Canagarajah, S. (2006) Changing communicative needs, revised assessment objectives: Testing English as an International Language. *Language Assessment Quarterly* 3 (3), 229–242.

Cardoso, W. and Trofimovich, P. (2014) Second language speech perception and production: Implications for language teaching. Special Issue of *Canadian Modern Language Review* 70 (4).

Chun, C.W. (2006) An analysis of a language test for employment: The authenticity of the PhonePass test. *Language Assessment Quarterly* 3 (3), 295–306.

Chun, C.W. (2008) Comments on 'evaluation of the usefulness of the Versant for English test: A response': The author responds. *Language Assessment Quarterly* 5 (2), 168–172.

Derwing, T.M. and Munro, M.J. (2010) Symposium – accentuating the positive: Directions in pronunciation research. *Language Teaching* 43 (3), 366–368.

Derwing, T.M. and Munro, M.J. (2015) *Pronunciation Fundamentals: Evidence-Based Perspectives for L2 Teaching and Research*. Amsterdam: John Benjamins.

Downey, R., Farhady, H., Present-Thomas, R., Suzuki, M. and Van Moere, A. (2008) Evaluation of the usefulness of the Versant for English test: A response. *Language Assessment Quarterly* 5 (2), 160–167.

Elder, C. and Davies, A. (2006) Assessing English as a lingua franca. *Annual Review of Applied Linguistics* 26 (1), 232–301.

Fulcher, G. (2003) *Testing Second Language Speaking*. London: Pearson.

Fulcher, G. (2015) Assessing second language speaking. *Language Teaching* 48 (2), 198–216.

Harding, L. (2013) Pronunciation assessment. In C.A. Chapelle (ed.) *The Encyclopedia of Applied Linguistics*. Hoboken, NJ: Wiley-Blackwell.

Harding, L. and Selman, A. (2014) Report on the joint IATEFL PronSIG/TESOL SPLIS group webinar. *Speak Out!* 51, 63–69.

Hsieh, C.-N. (2011) Rater effects in ITA testing: ESL teachers' versus American under-graduates' judgments of accentedness, comprehensibility, and oral proficiency. *Spaan Fellow Working Papers in Second or Foreign Language Assessment* 9, 47–74.

Isaacs, T. (2008) Towards defining a valid assessment criterion of pronunciation proficiency in non-native English speaking graduate students. *Canadian Modern Language Review* 64 (4), 555–580.

Isaacs, T. (2013) Pronunciation. In *Cambridge English Centenary Symposium on Speaking Assessment* (pp. 13–15). Cambridge: Cambridge English Language Assessment.

Isaacs, T. (2014) Assessing pronunciation. In A.J. Kunnan (ed.) *The Companion to Language Assessment* (pp. 140–155). Hoboken, NJ: Wiley-Blackwell.

Isaacs, T. (2016) Assessing speaking. In D. Tsagari and J. Banerjee (eds) *Handbook of Second Language Assessment* (pp. 131–146). Berlin: DeGruyter Mouton.

Isaacs, T. and Thomson, R.I. (2013) Rater experience, rating scale length, and judgments of L2 pronunciation: Revisiting research conventions. *Language Assessment Quarterly* 10 (2), 135–159.

Isaacs, T., Trofimovich, P., Yu, G. and Chereau, B.M. (2015) Examining the linguistic aspects of speech that most efficiently discriminate between upper levels of the revised IELTS pronunciation scale. *IELTS Research Reports Online* 4, 1–48.

Jenkins, J. (2006) The spread of EIL: A testing time for testers. *ELT Journal* 60 (1), 42–50.

Kang, O. (2008) Ratings of L2 oral performance in English: Relative impact of rater characteristics and acoustic measures of accentedness. *Spaan Fellow Working Papers in Second or Foreign Language Assessment* 6 (1), 181–205.

Kang, O. (2012) Impact of rater characteristics and prosodic features of speaker accentedness on ratings of international teaching assistants' oral performance. *Language Assessment Quarterly* 9 (3), 249–269.

Kang, O. and Pickering, L. (2014) Using acoustic and temporal analysis for assessing speaking. In A.J. Kunnan (ed.) *The Companion to Language Assessment* (pp. 1047–1062). Hoboken, NJ: Wiley-Blackwell.

Koponen, M. and Riggenbach, H. (2000) Overview: Varying perspectives on fluency. In H. Riggenbach (ed.) *Perspectives on Fluency* (pp. 5–24). Ann Arbor, MI: University of Michigan Press.

Lado, R. (1961) *Language Testing: The Construction and Use of Foreign Language Tests*. London: Longman.

Lee, J., Jang, J. and Plonsky, L. (2015) The effectiveness of second language pronunciation instruction: A meta-analysis. *Applied Linguistics* 36 (3), 345–366.

Levis, J.M. (2006) Pronunciation and the assessment of spoken language. In R. Hughes (ed.) *Spoken English, TESOL and Applied Linguistics: Challenges for Theory and Practice* (pp. 245–270). New York: Palgrave Macmillan.

Levis, J. (2015) Pronunciation trends across journals and the Journal of Second Language Pronunciation. *Journal of Second Language Pronunciation* 2 (1), 129–134.

Luoma, S. (2004) *Assessing Speaking*. Cambridge: Cambridge University Press.

Munro, M.J. and Derwing, T.M. (2011) Research timeline: Accent and intelligibility in pronunciation research. *Language Teaching* 43 (3), 316–327.

Ockey, G. and French, R. (2014) From one to multiple accents on a test of L2 listening comprehension. *Applied Linguistics*. Published online. doi:10.1093/applin/amu060.

Reed, M. and Levis, J. (eds) (2015) *The Handbook of English Pronunciation*. Malden, MA: Wiley Blackwell.

Spolsky, B. (1995) *Measured Words: The Development of Objective Language Testing*. Oxford: Oxford University Press.

Xi, X. (2010) Automated scoring and feedback systems for language assessment and learning. Special Issue of *Language Testing* 27 (3).

Xi, X. (2012) Validity and the automated scoring of performance tests. In G. Fulcher and F. Davidson (eds) *The Routledge Handbook of Language Testing* (pp. 438–451). Abingdon: Routledge.

Zechner, K., Higgins, D., Xi, X. and Williamson, D.M. (2009) Automatic scoring of non-native spontaneous speech in tests of spoken English. *Speech Communication* 51 (10), 883–895.