



Research Methods in Sociolinguistics

A Practical Guide

Edited by Janet Holmes
and Kirk Hazen

WILEY Blackwell

Research Methods in Sociolinguistics

Guides to Research Methods in Language and Linguistics

Series Editor: Li Wei, Birkbeck College, University of London

The science of language encompasses a truly interdisciplinary field of research, with a wide range of focuses, approaches, and objectives. While linguistics has its own traditional approaches, a variety of other intellectual disciplines have contributed methodological perspectives that enrich the field as a whole. As a result, linguistics now draws on state-of-the-art work from such fields as psychology, computer science, biology, neuroscience and cognitive science, sociology, music, philosophy, and anthropology.

The interdisciplinary nature of the field presents both challenges and opportunities to students who must understand a variety of evolving research skills and methods. The *Guides to Research Methods in Language and Linguistics* addresses these skills in a systematic way for advanced students and beginning researchers in language science. The books in this series focus especially on the relationships between theory, methods, and data – the understanding of which is fundamental to the successful completion of research projects and the advancement of knowledge.

Published

1. *The Blackwell Guide to Research Methods in Bilingualism and Multilingualism*
Edited by Li Wei and Melissa G. Moyer
2. *Research Methods in Child Language: A Practical Guide*
Edited by Erika Hoff
3. *Research Methods in Second Language Acquisition: A Practical Guide*
Edited by Susan M. Gass and Alison Mackey
4. *Research Methods in Clinical Linguistics and Phonetics: A Practical Guide*
Edited by Nicole Müller and Martin J. Ball
5. *Research Methods in Sociolinguistics: A Practical Guide*
Edited by Janet Holmes and Kirk Hazen

Forthcoming

Research Methods in Sign Language Studies: A Practical Guide
Edited by Eleni Orfanidou, Bencie Woll, and Gary Morgan

Research Methods in Language Policy and Planning: A Practical Guide
Edited by Francis Hult and David Cassels Johnson

Research Methods in Sociolinguistics

A Practical Guide

Edited by Janet Holmes and Kirk Hazen

WILEY Blackwell

This edition first published 2014
© 2014 John Wiley & Sons, Inc

Registered Office

John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, UK

Editorial Offices

350 Main Street, Malden, MA 02148-5020, USA
9600 Garsington Road, Oxford, OX4 2DQ, UK
The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, UK

For details of our global editorial offices, for customer services, and for information about how to apply for permission to reuse the copyright material in this book please see our website at www.wiley.com/wiley-blackwell.

The right of Janet Holmes and Kirk Hazen to be identified as the authors of the editorial material in this work has been asserted in accordance with the UK Copyright, Designs and Patents Act 1988.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, except as permitted by the UK Copyright, Designs and Patents Act 1988, without the prior permission of the publisher.

Wiley also publishes its books in a variety of electronic formats. Some content that appears in print may not be available in electronic books.

Designations used by companies to distinguish their products are often claimed as trademarks. All brand names and product names used in this book are trade names, service marks, trademarks or registered trademarks of their respective owners. The publisher is not associated with any product or vendor mentioned in this book.

Limit of Liability/Disclaimer of Warranty: While the publisher and author(s) have used their best efforts in preparing this book, they make no representations or warranties with respect to the accuracy or completeness of the contents of this book and specifically disclaim any implied warranties of merchantability or fitness for a particular purpose. It is sold on the understanding that the publisher is not engaged in rendering professional services and neither the publisher nor the author shall be liable for damages arising herefrom. If professional advice or other expert assistance is required, the services of a competent professional should be sought.

Library of Congress Cataloging-in-Publication Data

Research methods in sociolinguistics : a practical guide / Edited by Janet Holmes and Kirk Hazen.

pages cm

Includes bibliographical references and index.

ISBN 978-0-470-67360-7 (cloth) – ISBN 978-0-470-67361-4 (pbk.)

I. Sociolinguistics–Methodology. 2. Sociolinguistics–Research. I. Holmes, Janet, 1947–

II. Hazen, Kirk, 1970– editors of compilation.

P40.3.R47 2014

306.44072'1–dc23

2013012067

A catalogue record for this book is available from the British Library.

Cover image: Arch Bridge on California coast. Image © Shubroto Chattopadhyay/Corbis

Cover design by www.cyandesign.co.uk

Set in 10/12pt Sabon by SPi Publisher Services, Pondicherry, India

Contents

Notes on Contributors	vii
Acknowledgments	xii
Symbols for Vowels Used in This Volume	xiii
Articulatory Position of Vowels Used in This Volume	xiv
Introduction	1
<i>Janet Holmes and Kirk Hazen</i>	
1 A Historical Assessment of Research Questions in Sociolinguistics	7
<i>Kirk Hazen</i>	
Part I Types of Data and Methods of Data Collection	23
2 Sociolinguistic Interviews	25
<i>Michol Hoffman</i>	
3 Written Surveys and Questionnaires in Sociolinguistics	42
<i>Erik Schleef</i>	
4 Experimental Methods in Sociolinguistics	58
<i>Katie Drager</i>	
5 Computer-mediated Communication and Linguistic Landscapes	74
<i>Jannis Androutsopoulos</i>	
Part II Methods of Analysis	91
<i>Focusing on Features of Language from a Sociolinguistic Perspective</i>	92
6 Sociohistorical Analysis	93
<i>Terttu Nevalainen</i>	
7 Corpus Linguistics in Sociolinguistics	107
<i>Paul Baker</i>	
8 Phonetic Analysis in Sociolinguistics	119
<i>Erik R. Thomas</i>	
9 Phonological Considerations in Sociophonetics	136
<i>Paul Kerswill and Kevin Watson</i>	
10 Morphosyntactic Analysis in Sociolinguistics	149
<i>Julia Davydova</i>	

11	Vocabulary Analysis in Sociolinguistic Research <i>Michael Adams</i>	163
12	Doing Discourse Analysis in Sociolinguistics <i>Janet Holmes</i>	177
13	Words and Numbers: Statistical Analysis in Sociolinguistics <i>Gregory R. Guy</i>	194
	<i>Focusing on Aspects of Sociocultural Context in Analyzing Language</i>	211
14	Anthropological Analysis in Sociolinguistics <i>Alexandra Jaffe</i>	213
15	Conversation Analysis in Sociolinguistics <i>Paul Drew</i>	230
16	Geographical Dialectology <i>David Britain</i>	246
17	Speech Communities, Social Networks, and Communities of Practice <i>Robin Dodsworth</i>	262
18	Analyzing Sociolinguistic Variation in Multilingual Contexts <i>Rajend Mesthrie</i>	276
19	Social Context, Style, and Identity in Sociolinguistics <i>Nikolas Coupland</i>	290
20	Researching Children's Acquisition of Sociolinguistic Competence <i>Carmel O'Shannessy</i>	304
	Index	325

Notes on Contributors

Michael Adams teaches English language and literature at Indiana University as an Associate Professor. Currently President of the Dictionary Society of North America, he also edited its journal, *Dictionaries*, for several years. Now he edits the quarterly journal *American Speech*. An assistant on the *Middle English Dictionary*, Consulting Editor on *The American Heritage Dictionary of the English Language*, 4th edn (2000), and a Contributing Editor on *The Barnhart Dictionary Companion* (1999–2001), he is the author of *Slayer Slang: A Buffy the Vampire Slayer Lexicon* (2003) and *Slang: The People's Poetry* (2009), and, with Anne Curzan, *How English Works: A Linguistic Introduction*, 3rd edn (2012).

Jannis Androutsopoulos is Professor in German and Media Linguistics at the University of Hamburg. His research interests are in sociolinguistics and media discourse studies. He has written extensively on linguistic variability and style, multilingualism and code-switching, and media discourse and diversity. He is co-editor of the volume *Orthography as Social Action: Scripts, Spelling, Identity and Power* (2012) and editor of the Special Issue *Language and Society in Cinematic Discourse* (*Multilingua* 31:2, 2012). He serves on the advisory boards of the journals *language@internet*, *Pragmatics*, *Discourse Context & Media*, and *International Journal of Computer-Assisted Language Learning and Teaching*.

Paul Baker is Professor of English Language at the Department of English Language and Linguistics, Lancaster University where he researches discourse analysis, corpus linguistics, and language and identities. He has authored or co-authored 11 books including *Using Corpora in Discourse Analysis* (2006), *Sexed Texts: Language, Gender and Sexuality* (2008), and *Sociolinguistics and Corpus Linguistics* (2010). He is commissioning editor of the journal *Corpora*.

David Britain is Professor of Modern English Linguistics at the University of Bern. His research interests include the dialectology of Englishes, both new and old, especially the varieties spoken in southern England, the southern hemisphere, and Micronesia; and the dialectology–human geography interface, as well as the dialectological implications and outcomes of mobility and dialect contact. He is co-author of *Linguistics: An Introduction* (Cambridge University Press, 2009), editor of

Language in the British Isles (Cambridge University Press, 2007), and co-editor, with Jenny Cheshire, of *Social Dialectology* (John Benjamins, 2003).

Nikolas Coupland is Distinguished Professor of Sociolinguistics at University of Technology Sydney, and holds Research Chairs at both Copenhagen and Cardiff universities. He was founding co-editor of the *Journal of Sociolinguistics* and co-edits the book series *Oxford Studies in Sociolinguistics*. He has published on the sociolinguistics of style and performance, sociolinguistic theory, bilingualism in Wales, and language and aging. His most recent books are the *Handbook of Language and Globalization* (editor, Wiley-Blackwell, 2010) and *Standard Languages and Language Standards in a Changing Europe* (ed. with Tore Kristiansen, Novus, 2011).

Julia Davydova is a Research Associate at Mannheim University, where she teaches English linguistics at all levels. Her major research areas include language variation and change in non-native Englishes as well as the sociolinguistics of second language acquisition. Her first monograph is titled *The Present Perfect in Non-Native Englishes. A Corpus-Based Study of Variation* (Mouton de Gruyter, 2011). Her most recent publication is a textbook, *The Amazing World of Englishes*, co-authored with Peter Siemund and Georg Maier (Mouton de Gruyter, 2012).

Robin Dodsworth is Associate Professor in the Sociolinguistics program at North Carolina State University. Her primary research is on the changing vowel systems in the American South, particularly in the city of Raleigh. An article on the contact-induced reversal of the Southern Vowel Shift in Raleigh, co-authored with Mary Kohn, appeared in *Language Variation and Change* in 2012. Her ongoing research focuses on the effects of socioeconomic class on linguistic variation.

Katie Drager is an Assistant Professor in Linguistics at the University of Hawai'i at Mānoa. She is Co-Director of the Sato Center for Pidgin, Creole, and Dialect Studies and teaches sociolinguistics to undergraduate and graduate students. Her work uses ethnographic and experimental methods to investigate the relationship between linguistic variants and social meaning, focusing on how social and linguistic information are stored in the mind and how these mental representations are accessed during the production and perception of speech. Some of her recent publications can be found in *Language and Speech*, *Journal of Phonetics*, and *Language Variation and Change*.

Paul Drew is Professor of Conversation Analysis at Loughborough University, UK, having for many years taught at the University of York. His research covers the basic processes and practices of mundane social interactions, as well as research in more applied settings, including legal, social welfare, and especially medical settings, in which he currently has a number of projects including seizure and memory clinics. He is co-editor (with John Gumperz and others) of the Cambridge University Press series *Interactional Linguistics*. His recent publications include a four-volume collection, co-edited with John Heritage, *Contemporary Studies in Conversation Analysis* (SAGE, 2013).

Gregory R. Guy has been Professor of Linguistics at New York University since 2001, following previous appointments at Sydney, Cornell, Stanford, and York. His research interests include language variation and change, language and social class, and theoretical models of linguistic variation. He has done original sociolinguistic research in Argentina, Australia, Brazil, Canada, the Dominican Republic, New Zealand, and the United States. He is the co-author of *Sociolingüística Cuantitativa* (Parábola, 2007), and the lead editor of *Towards a Social Science of Language* (John Benjamins, 1996), and has published in such journals as *Language, Language Variation and Change*, *Diachronica*, and *American Speech*.

As Professor of Linguistics at West Virginia University, **Kirk Hazen** researches language variation and change in American English, primarily writing about Southern US varieties and English in Appalachia. He promotes sociolinguistic goals by presenting dialect diversity programs to numerous communities. Since founding the West Virginia Dialect Project in 1998, he has secured funding from state and federal sources (NSF and NEH) for linguistic research and outreach. His publications include articles in *Language Variation and Change*, *Language, English World-Wide*, and *American Speech*. He has written a forthcoming book entitled *An Introduction to Language*, designed for non-linguistic majors and published by Wiley-Blackwell.

Michol Hoffman is Associate Professor in the Department of Languages, Literature, and Linguistics at York University in Toronto. As a sociolinguist, she is interested in ethnicity, identity, language and dialect contact, language attitudes, historical linguistics, phonetics, and phonology. Her recent work focuses on variation and change in Spanish and English in Toronto, and her publications include articles in *Language Variation and Change*, *American Speech*, and the *Bulletin of Hispanic Studies*.

Janet Holmes is Professor of Linguistics at Victoria University of Wellington where she directs the Language in the Workplace Project and teaches sociolinguistics at undergraduate and postgraduate level. She has published on a wide range of topics including New Zealand English, language and gender, sexist language, pragmatic particles, compliments and apologies, and most recently on aspects of workplace discourse. Her most recent books are the 4th edition of the *Introduction to Sociolinguistics* (Pearson, 2013), *Gendered Talk at Work* (Blackwell, 2006), and *Leadership, Discourse, and Ethnicity* (Oxford University Press, 2011).

Alexandra Jaffe is Professor of Linguistics and Anthropology at California State University, Long Beach. She has published widely on her ethnographic and sociolinguistic research on Corsica, and on such topics as language politics, bilingual education, and language in the media. Her most recent edited volume projects include *Stance: Sociolinguistic Perspectives*, reissued in paperback by Oxford University Press in 2012, and *Orthography as Social Action* (De Gruyter, 2012) in collaboration with Mark Sebba, Jannis Androutsopoulos, and Sally Johnson. She is currently editor-in-chief of the *Journal of Linguistic Anthropology*.

Paul Kerswill is Professor of Sociolinguistics at the University of York, UK. His research is largely focused on sociolinguistic and linguistic aspects of dialect contact, particularly where migration and mobility are involved. His doctoral research dealt

with rural migrants in the Norwegian city of Bergen (*Dialects Converging: Rural Speech in Urban Norway*, Oxford University Press, 1994). In England he has directed sociolinguistic projects on the New Town of Milton Keynes and, latterly, on Multicultural London English. He has co-edited *Dialect Change: Convergence and Divergence in European languages* (Cambridge University Press, 2005) and *The SAGE Handbook of Sociolinguistics* (SAGE, 2011).

Rajend Mesthrie is Professor of Linguistics in the School of African & Gender Studies, Anthropology & Linguistics at the University of Cape Town, where he holds a National Research Foundation chair. He is a past president of the Linguistics Society of Southern Africa and past editor of *English Today*. Amongst his publications are *Language in South Africa* (editor, Cambridge University Press, 2002), *World Englishes* (Cambridge University Press, 2008, with Rakesh Bhatt), *A Dictionary of South African Indian English* (UCT Press, 2010), and *The Handbook of Sociolinguistics* (editor, Cambridge University Press, 2011). His current research focuses on sociophonetics and social change in post-apartheid South Africa.

Terttu Nevalainen is Professor of English Philology and the Director of the VARIENG Research Unit at the University of Helsinki. Her research and teaching are in historical sociolinguistics and corpus linguistics. She is one of the compilers of the Helsinki Corpus of English Texts and of the Corpus of Early English Correspondence. Her publications include *An Introduction to Early Modern English* (Edinburgh University Press, 2006), *Historical Sociolinguistics* (with Helena Raumolin-Brunberg; Pearson, 2003), and *The Oxford Handbook of the History of English* (with Elizabeth Traugott; Oxford University Press, 2012). She edits *Neuphilologische Mitteilungen* and the book series *Oxford Studies in the History of English*.

Carmel O'Shannessy is Assistant Professor in Linguistics at the University of Michigan. She documents Light Warlpiri, a newly emerged mixed language spoken in a Warlpiri community in northern Australia, focusing on the role of children in the development and stabilization of the new code. She approaches her study of the children's continuing multilingualism using a variety of methods, including ethnography, naturalistic and elicited production, and experiments. Key publications include papers on code-switching in *Linguistics*, on grammatical patterns in multilingual acquisition in the *Journal of Child Language*, and on language variation in a Warlpiri community in a recent edited collection.

Erik Schlee is Lecturer in English Sociolinguistics at the University of Manchester, UK. His research focuses on discourse, phonetic and phonological variation and change in dialects of the British Isles, the acquisition of variation, sociolinguistics and perception, and language and gender in educational settings. He has recently published the Routledge *Sociolinguistics Reader* with Miriam Meyerhoff, and he is co-editor of the *Edinburgh Textbooks in Applied Linguistics*.

Erik R. Thomas is a Professor of Linguistics at North Carolina State University, where he co-directs the linguistics program and teaches a variety of linguistics courses. He has published on various aspects of sociophonetics, ethnic dialects, and dialect geography. He is author or editor of four books, including *Sociophonetics*:

An Introduction (Palgrave Macmillan, 2011) and, with Malcah Yaeger-Dror, *African American English Speakers and Their Participation in Local Sound Changes: A Comparative Study* (Duke University Press, 2010).

Kevin Watson is a Lecturer in the Department of Linguistics at the University of Canterbury, New Zealand, where he teaches sociolinguistics and sociophonetics at both undergraduate and postgraduate levels. He has research interests in language variation and change, with a particular focus on the accents of northwest England and varieties of English spoken in New Zealand. He is the current editor of the *New Zealand English Journal*.

Acknowledgments

This book has been great fun to produce, largely due to the enthusiasm and cooperation of all those who have contributed in a variety of ways. We wish here to express our appreciation to them all.

Firstly, there are the 21 contributing authors from all over the world. They have worked hard to meet our deadlines, and we are very grateful to them for that.

Secondly, there are our two editors, Julia Kirk and Danielle Descoteaux, who have been unfailingly supportive and responsive to our many queries and requests for guidance.

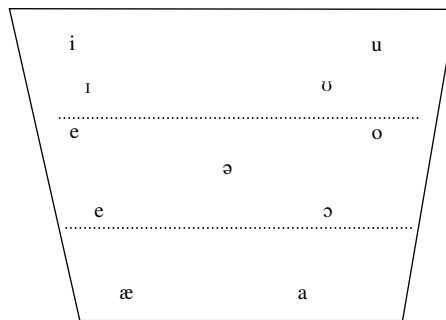
Thirdly, we would like to thank our research assistants, Lily Holz, Isabelle Shepherd, and Jaclyn Daugherty in the USA and Natalia Beliaeva in New Zealand, who helped with the editing, index, and reference checking, and Sharon Marsdon in New Zealand who helped with the index. We also acknowledge the financial assistance of the Faculty of Humanities and Social Sciences at Victoria University, and the Eberly College of Arts and Sciences at West Virginia University, which made this editing assistance possible.

Finally, we express our appreciation to our families, who provided wonderful support and encouragement throughout this project.

Symbols for Vowels Used in This Volume

Keyword	Vowel	Phonetic transcription
FLEECE	i	[bi]
KIT	ɪ	[bɪt]
GOOSE	u	[bu]
FOOT	ʊ	[bʊk]
FACE	e, eɪ	[bet]
DRESS	ɛ	[bet]
COMMA	ə	[bət]
GOAT	o	[bot]
THOUGHT	ɔ	[bɔt]
BATH	æ	[bæt]
LOT	a	[bat]
PRICE	aɪ	[baɪ]
CHOICE	ɔɪ	[boɪ]
MOUTH	aʊ	[haʊs]

Articulatory Position of Vowels Used in This Volume



Introduction

Janet Holmes and Kirk Hazen

We developed this book to help students conduct high-quality sociolinguistic research. It is a book about sociolinguistic methodology, and it encompasses a wide range of methodologies. The goal of each chapter is to provide students with a solid understanding of how to conduct different kinds of sociolinguistic research. Before we describe how we have organized the book, and what is covered, a few words about the scope of current sociolinguistic research may be helpful.

The study of linguistics itself is a young field, with its modern roots dating back to about 1850. The term *sociolinguistics* is even younger, and the collection of activities associated with it have been pulled together as an academic field only in recent decades. Many different research goals and different methodologies can be found under the label “sociolinguistics.” Some sociolinguistic research relies on experimental and quantitative data, with those researchers using statistical tests on abstracted data. Other sociolinguistic research adopts a more sociological or anthropological approach, conducting qualitative analysis while striving for ecological validity. Across this breadth of research, the authors and editors of this book have striven to connect their different areas of research through clearly explained methodologies. As indicated by the wide scope of this book’s research interests, the field of sociolinguistics is steadily maturing and developing disciplinary strengths from the rich soils of many diverse academic fields.

Research Methods in Sociolinguistics: A Practical Guide, First Edition.

Edited by Janet Holmes and Kirk Hazen.

© 2014 John Wiley & Sons, Inc. Published 2014 by John Wiley & Sons, Inc.

How the Book Is Organized

We have organized the book into two major sections. The first section focuses mainly on identifying the different types of data used in sociolinguistic research, and explains how to collect them. The second section demonstrates the many different ways in which sociolinguistic data can be analyzed. The second section is further divided into (i) chapters which examine what a sociolinguistic approach can tell us about the way language is structured, and (ii) chapters which consider what language can tell us about the way people use language to create their social identities in society. As Kirk Hazen describes in the first chapter, this latter division reflects a well-established difference in focus which can be traced back to the birth of sociolinguistics as a distinct discipline in the 1960s. Labov's linguistic research began by grouping people into social categories and then examining the linguistic features in the speech of different social groups. He searched for patterns in the linguistic and social heterogeneity. Dell Hymes, on the other hand, began by identifying languages and examined who used them for what purposes and in what kinds of sociocultural contexts. While there is inevitably some overlap in the methods, the writers of each chapter have oriented their discussion in one of these two directions.

The chapters are mainly aimed at budding sociolinguists and their teachers. In general, the authors do not assume familiarity with sociolinguistics, although there is much here that will be valuable to more senior students and even experienced researchers. Some chapters are more technical than others, and some assume a greater familiarity with linguistics terminology than others: for example, Erik Thomas's discussion of acoustic analysis assumes a sound knowledge of phonetics. Another distinction between the chapters is the material used for exemplification. Researchers tend to draw on material from the regions most familiar to them, and this familiarity allows them to authoritatively account for the social context. Thus the book includes illustrative material from the very wide range of geographical regions from which our contributors hail (nine countries on four continents).

Summary of the Content of the Different Chapters

The first chapter sets the historical scene for the rest of the book. Kirk Hazen's chapter explains how different kinds of research questions lead researchers in different directions to find answers which focus more on linguistic features or more on social identity. Both areas of study serve to further the goals of sociolinguistics, as he points out, but each researcher needs to choose which aspect of sociolinguistics they wish to focus on – the study of language or the study of society.

The four chapters that follow comprise the section of the book which deals with collecting different types of data. Between them, the four authors cover the most common methods of data collection in sociolinguistic research.

In Chapter 2, Michol Hoffman describes in detail what is involved in undertaking sociolinguistic fieldwork, from project conception and design, through preliminary

reconnaissance about and within communities, to ethnographic fieldwork methods, including the challenge of conducting successful interviews. While offering practical advice, she illustrates with examples from classic and recent studies. Dealing with one of the most widely used and important methods of sociolinguistic data collection, Hoffman's advice should assist any student who wants to conduct sociolinguistic interviews.

Erik Schlee describes in Chapter 3 how to construct and administer a questionnaire. Using examples from a number of relevant sociolinguistic studies, he describes the importance of careful preparation, discusses how to write good questions, and provides an overview of the main question types. He exemplifies the standard structure of successful questionnaires and concludes with advice on testing and administering a questionnaire.

In Chapter 4, Katie Drager leads students through experimental design in sociolinguistics, a rapidly growing area. She notes that a range of different experimental designs are available, depending on the sociolinguistic issue being researched. Her chapter provides a step-by-step guide to two of these: a matched-guise task, which can be used to investigate the social characteristics attributed to people who speak different varieties, and an identification task, which can be used to determine the degree to which expectations about a speaker affect how their speech is processed. She usefully outlines the advantages and disadvantages of different methodological decisions in the experimental process.

Chapter 5, the last chapter in this section, extends the definition of what counts as a research site and as appropriate data. Jannis Androutsopoulos helps readers explore data collection in the areas of computer-mediated communication (CMC) and linguistic landscapes (LL). Covering a wide range of both quantitative and qualitative data collection procedures, he illustrates CMC with text-based interpersonal communication via digital media, including e-mails, texts, social network sites, and discussion forums. Similarly, he illustrates LL research with data on language use in public space and data from the owners, creators, and consumers of such linguistic landscapes.

The next section of the book explores methods of analysis, and the first part of this section takes a more linguistic focus. Chapter 6 opens with Terttu Nevalainen writing on sociohistorical analysis. Her chapter provides background, tools, and ideas for the study of historical topics. She evaluates the advantages and disadvantages of engaging with historical data by looking at how language change can be observed in real time. Her case studies represent both variationist and sociopragmatic approaches.

Paul Baker provides a succinct description and evaluation of the benefits of corpus analysis in Chapter 7. He describes how advances in computer software make it possible to pursue new research issues, identify unexpected patterns, and confirm hypotheses. In the chapter, he describes some of the main analytical techniques and outlines the basic principles behind building corpora. He also illustrates the sorts of research questions most appropriate to this method and demonstrates its potential with a small study comparing age differences in language use.

In Chapter 8, Erik Thomas describes how to go about sociophonetic analysis. Sociophonetic analysis is an essential method for any sociolinguist working with sound variation. It does involve technical details, but Thomas's chapter leads readers through some of the most foundational techniques in a straightforward fashion. In

the chapter, he also explains basic terms like *formants*, provides advice on how to avoid common sources of measurement errors, and points toward other readings for additional techniques. The chapter provides a solid starting point for any researcher conducting a sociophonetic analysis.

In Chapter 9, Paul Kerswill and Kevin Watson discuss phonological concerns when analyzing variation in sound. Covering a range of different phonological variables (e.g., consonantal/vocalic, systemic/allophonic) and different methodologies from both production and perception studies, they illustrate with case studies how the phonological system constrains the variation of linguistic features.

In Chapter 10, changing linguistic levels, Julia Davydova describes procedures for conducting sociolinguistic analysis on morphosyntactic variation. She explains how to identify potential influencing factors, the effects of other linguistic levels, and the methodological choices facing researchers of morphological variation. She also provides advice on considering diachronic variation and the nature of the language's lexicon. To help the reader, Davydova delivers examples from different languages to illustrate the range of morphosyntactic variation.

Michael Adams describes how sociolinguistic analysis can illuminate lexical studies in Chapter 11. From a social perspective, words are often informative markers of linguistic identity, and may also provide interesting clues to immigration, settlement patterns, and intergroup contact. Adams discusses ways of collecting lexical evidence, including observation, surveys, questionnaires, and text analysis. He also illustrates ways of representing sociolinguistically interesting data, such as mapping. Additionally, this chapter discusses what the study of names can tell us about processes such as language change, and accommodation or resistance to pressures from other social groups.

Chapter 12 illustrates the value of discourse analysis in examining social interaction. Janet Holmes first describes a number of theoretical frameworks, and then takes a step-by-step approach to analyzing spoken discourse, from developing research questions through data collection to data analysis. Using workplace humor for exemplification, she illustrates the value of both qualitative and quantitative approaches to the analysis of discourse, presenting these as usefully complementary.

Chapter 13 is the last chapter in this section. In it, Gregory Guy provides a clear account of what statistics has to offer the sociolinguist and demonstrates why quantitative analysis remains an important component of sociolinguistics. He emphasizes that speakers and speaker groups do not differ categorically; they differ in the frequency with which they use certain linguistic variables. This chapter illustrates for readers why such phenomena require quantitative and statistical techniques. Guy explains some of the most relevant methods commonly used in sociolinguistic work.

The final section of the book begins with Chapter 14 and focuses on the sociocultural information that sociolinguistic analysis can provide. With her detailed analysis of a classroom interaction in a multilingual context, Alexandra Jaffe illustrates what an anthropological approach offers. She discusses the crucial roles of *context* and *indexicality* in linking the details of interactional practice with wider cultural, ideological, social, and political frameworks and processes. The analysis illustrates in detail the types and levels of contextual information needed to answer the question, "What is going on here?," and shows how different categories of data can be used to explore hypotheses and provide evidence for analytical claims.

In Chapter 15, while explaining its sociological roots, Paul Drew provides a valuable discussion of the features which distinguish conversation analysis (CA) from other kinds of discourse analysis. He clearly outlines the principal stages in the CA research process and then identifies and exemplifies three elements on which that process rests – social action, turn and turn design, and sequence organization. Using examples from mundane social interaction, as well as medical and other institutional interactions, this chapter illustrates the central significance of these concepts in CA.

David Britain details in Chapter 16 the ways in which dialect geography has developed as an area of sociolinguistics in the twentieth and twenty-first centuries. As an aid to the reader, Britain presents a critique of different geographical dialectology methods. He describes examples from speech communities and languages from around the world, including Norway, the United States, and East Anglia, identifying strengths and weaknesses which can help guide a new researcher in this area. As readers consider their own dialectological research, Britain's advice should steer them smoothly through the available literature and the wisest research methods.

Robin Dodsworth's Chapter 17 will appeal to those readers struggling to define the distinguishing qualities of speech communities, social networks, and communities of practice. As she notes, these three frameworks offer complementary units of analysis. Using examples from classic sociolinguistic studies, Dodsworth argues that the speech community is useful for comparing linguistic practices across demographic categories, and the social network approach is valuable for exploring how language changes spread. The community of practice framework foregrounds the social meanings of linguistic variables in everyday social contexts. The chapter offers readers the opportunity to explore which terms will prove most useful in their own research.

Chapter 18 turns the spotlight on multilingual communities. Rajend Mesthrie describes how to analyze variation in multilingual societies from the perspectives of language variation and change and language contact. Advice for analyzing variation in multilingual communities includes areas of phonetic and syntactic variation within a single language, mutual influences between two or more languages, code-switching, and issues of endangered languages. Any reader working on sociolinguistic variation in a multilingual community will need to study this chapter.

Style and social identity have both attracted increasing attention from sociolinguists in the last decade, and Nikolas Coupland explains in Chapter 19 why they hold such a central place in qualitative analytical approaches within sociolinguistics. Coupland argues that style researchers work to establish the ecological validity of their research, investigating and explaining social meanings at work in local environments. Style researchers hope to model how social actors themselves develop meaning in speech events. Coupland's chapter models examples of style analysis for readers to follow.

Finally, in Chapter 20, while reflecting on the huge range of sociolinguistic information which competent members of a speech community possess, Carmel O'Shannessy describes how to analyze the processes involved in acquiring sociolinguistic competence. Reaching across several linguistic fields, she emphasizes why children's development of sociolinguistic knowledge is important to the development of language skills. O'Shannessy clearly explains several research strategies needed to build a complete account of children's speech environments and children's competence. She illustrates for readers both qualitative and quantitative methods for

gathering social information and other details of children's language development. The chapter offers practical, field-tested methods for creating playful contexts to elicit language data from children. From this chapter, readers will be able to develop a successful research project on sociolinguistic acquisition.

Readers will find that all chapters have broadly similar structures, with a number of features in common. Our authors have all provided a brief opening summary box previewing what their chapter covers. Most include text boxes with interesting information such as further examples, explanations, clarifications, definitions, or elaborations. Every chapter provides positive advice for the new researcher, often in the form of bullet points, as well as identifying potential quagmires. Most suggest ways of avoiding potential pitfalls and hazards, and offer strategies for resolving typical problems. In each chapter the reader will also find ideas for projects which are stimulating and doable, as well as suggestions for further reading on the topic. The result is a collection of chapters which have greatly excited us. We hope they excite you too and stimulate you to make your own contribution to sociolinguistic research.

1 A Historical Assessment of Research Questions in Sociolinguistics

Kirk Hazen

Introduction	8
Implementation	10
Cross-references	19
Conclusion	19

Summary

Understanding the history of sociolinguistics will help students to ask better sociolinguistic research questions. Especially in the early days of sociolinguistics, but also today, scholars who work in the realm of sociolinguistics come from different academic backgrounds, and they pose different kinds of research questions. This chapter illustrates how some scholars ask research questions more focused on language, while others ask research questions more focused on society. Both areas of study serve to further the goals of sociolinguistics, but the researcher must choose one as primary in order to create a focused and coherent research project. This chapter highlights a selection of studies from the 1960s onward to explain some of the changes in sociolinguistics research questions, and illustrates some of the choices all researchers must make.

Research Methods in Sociolinguistics: A Practical Guide, First Edition.

Edited by Janet Holmes and Kirk Hazen.

© 2014 John Wiley & Sons, Inc. Published 2014 by John Wiley & Sons, Inc.

Introduction

Sociolinguistics has been a diverse academic field since its start in the 1960s. In this early period, scholars from linguistics, anthropology, and sociology came together because of their collective interest in the study of language in its social context (Bright, 1966). Yet, their collective interest did not translate into a single set of goals and methods. These scholars rarely thought of themselves as sociolinguists, and they tended to focus their research on select facets of language and society. The linguists used information about society to better explain how language works, while the sociologists and anthropologists used language variation to better explain how society works.

Many of the research questions that these scholars asked and the lines of research they followed are still important today. To demonstrate their continued validity, I

Multiple negation

The study of language variation in sociolinguistics often analyzes patterns which used to be normal but fell out of regular use in some populations. Multiple negation is a good case in point.

Consider this line from Chaucer's translation of Boethius's *Consolation of Philosophy*:

“so manye and diverse and contraryous parties, ne myghte nevere han ben assembled in o forme.”

Some other of Chaucer's lines from the same text were even more involved in their multiple negation:

“Certes,” quod I, “ne yet ne doute I it naught, ne I nyl nevere wene that it were to doute.”

Multiple negation has been a normal component of English since the first Germanic invaders brought their various dialects to Britain's shores. Negation in Old English was preverbal (e.g., *ne doute*), but this pattern only survives in modern English forms like *never* (*ne ever*), *none* (*ne one*), and *neither* (*ne either*). The *nyl* from the second quote would be modern English *won't*. Multiple negation became stigmatized around the end of the Middle English period as its use declined in some areas of England. Prescriptive self-help books subsequently dispensed whimsical advice as both etiquette and natural law, and multiple negation has become a shibboleth for formal education ever since. Yet, vernacular dialects all over the world still use it. As its patterns vary between speakers, styles, and social groups, it has become a useful sociolinguistic variable. Over its 1500-year history, its status has transitioned from the norm to the stereotype.

focus in this chapter on the history of sociolinguistic research questions. Research questions are important because they guide the researcher's time, and time is a valuable, vanishing resource. The primary object of study for most sociolinguistic studies will either be a language variation pattern, such as multiple negation, or a social attribute, such as gender, created by a group or individual. Making clear the project's object of study is a foundational part of developing a good research question. As basic as it may seem, it will help the project overall to lay out in detail the object of study. To be sure, empirical data from both language and society are used in many studies, but students need to explicitly decide which way they are going to lean prior to tackling their research projects.

The choice of research question determines the kind and amount of data you need, and it determines the need for qualitative methods only or for quantitative methods as well. The question of quantification versus non-quantification is no longer a quarrelsome issue. It used to be that some studies were deemed qualitative and others were both qualitative and quantitative (since to quantify anything, it had to be first qualitatively assessed). In modern scholarship, all fields have quantification available to them as needed, depending of course on the research question. With regard to types of data, sociolinguists in general greatly favor language resulting from human interaction (versus data constructed by linguists themselves). Such language is open to a multitude of analysis methods to achieve many different research goals, as the chapters in this book demonstrate.

The technology used within sociolinguistic studies has become much more sophisticated over the last four decades. In some ways, the results of these changes should be very obvious, but it is worth considering that with increased analytical powers, students can now ask research questions once reserved only for advanced scholars. In the 1960s, reel-to-reel recorders were used, to be replaced by audio cassettes, to be replaced by digital mini-disc recorders, to be replaced by solid-state and flash memory recorders and laptop computers. Students can now easily record audio and video data (for study of body signals and sign languages). Collecting perceptual information used to involve only paper surveys (not an obsolete idea even now), but with psycholinguistic studies of eye tracking and measurements of response time on computer-mediated software, many more kinds of perceptual information can be studied. Large corpora can be searched in either an exploratory way to develop research questions or in a research-directed manner after crafting a research question. Changes in technology alone, however, provide no guarantee that the quality of the research will improve. The research question is still a paramount step to conducting high-quality research. Researchers at all levels typically face more data than can be reasonably analyzed, and a well-designed research question is necessary to lead you through the labyrinths of data.

What makes a well-designed research question? First, it should be based on previous research. When the student situates the research project in a specific field of study, this decision provides guidelines for the project and puts it on a solid scholarly foundation. Second, the research question should extend the knowledge of the field in some way. The student researcher does not have to work miracles; even if older methods are applied to new contexts, knowledge of the field will be enhanced. Third,

it should be practical. Create a research question that is doable in the allotted time frame. Fourth, it should be simple. Everyone should easily understand where the project is headed.

When setting up their research projects, students must keep in mind that research questions shepherd their methodology. They are the guiding factor for all methodological choices. For methodologies focused on linguistic questions, innovations over the last few decades have altered what are possible research questions. These changes can be attributed to improvements in technology for recording language, for collecting perceptual information (e.g., eye tracking and response time software), for conducting statistical tests, and for analyzing sound. For methodologies focused on social questions, there have been similar improvements in collecting data (e.g., web-based surveys), but the most notable changes to those research questions involve refined definitions of the objects of study. For example, whereas early work focused on how women and men speak differently, later work focused on how people use their sociolinguistic resources to construct gender. These kinds of changes to research questions are a good sign for any developing field, and sociolinguistic research has grown in many ways since the 1960s. Early research questions yielded high-quality results, but students will profit most by crafting their own research questions while understanding their historical underpinnings. Within the context of this development, changes to both linguistic and social research questions are illustrated in this chapter.

Remember, a good research question:

- builds on what has been done before;
- adds to what we know about the topic;
- is practical and doable;
- is clear and simple.

Implementation

Linguistic research questions

In the early years, the linguists who focused on synchronic and diachronic language variation were sociolinguistic variationists. These scholars primarily explored linguistic questions using both linguistic and social variables, although much was also said about social categories using those data. For example, sociolinguists debated to what extent the origins of African-American Vernacular English (AAVE) were British or African, and these scholars heavily relied on quantitative results (Rickford and Rickford, 2000). Sociolinguistic variationists have also used their results in debates about social inequalities in education (see Hazen, 2007a for examples). A major concern for early variationists was the analysis of real data from real people and not just the analysis of an academic's own constructed data. From the earliest period, sociolinguistic variationists observed and collected language samples from a wide variety of social groups, but initially not all linguists were convinced of the value of this approach.

In recent times, more linguists than just variationists use a wide range of empirical data to examine synchronic and diachronic variation, and it is clear that over the last few decades variationists have convincingly sold their program of study to other linguists. Variation is no longer seen as a by-product of language processing, previously seen as the periphery of study, but instead is part and parcel with the lexicon and the mental grammar. It is true, however, that sociolinguistic variationists continue to use social factors much more often than other linguists as part of their research: they still hold the assumption that the social system in the mind is tightly intertwined with the linguistic system (most likely through the lexicon, but possibly in other areas also).

Since the 1960s, the main focus of most research questions has been the linguistic variable, a set of language forms (variants) alternating with each other, such as [ei] and [a] in *tomato*, or the -ing/-in' of *walking*. Sociolinguistic variationists examine these variants of the linguistic variable to answer their research questions. The linguistic variable is the set of variants which could occur in a certain linguistic environment: A lexical variable would include all the alternative terms for a meaning, such as *wheels*, *ride*, and *car* for *automobile*; a morphosyntactic variable would include all the alternative morphemes, such as -s and -th for the third-person singular verbal suffix, as in *The pig sitteth*. The linguistic variable is often the primary object of study for variationists, and crafting the variable is a necessary step in designing a research project. Students have to choose how many variants to distinguish for a variable. The student's goals and the nature of the language variation pattern will determine if the variable should be analyzed using two variants or, perhaps, five.

Choices: Variables

When studying language patterns, the researcher has to choose what should be in the study and what should be outside of the study. If the study is on [θ/f] variation, where in the words should it be studied? It depends on the community being studied. Some areas only have variation word finally and word medially, as in *baf* vs. *bath* and *brofel* vs. *brothel*. Others have it word initially, as in *free* vs. *three*.

Beyond the context, researchers have to decide how many variants should there be. For a vowel merger between the historical vowels in *caught* and *cot*, the researcher could decide on an auditory study, perhaps selecting three variants, an [ɔ], [ɑ], and [a]. Another auditory option would be to have the study focus on read pairs of words, so that the variants would be merged, close, and unmerged. An acoustic study would take a completely different approach, measuring acoustic qualities of the vowels. Novice researchers should look to the relevant literature to see what methods researchers choose.

To do this work, researchers generally adhere to some basic steps. First, find out which linguistic and social factors might influence the language variation patterns. For example, does the following sound or the formality of the context make a difference to how often [t] alternates with [ʔ] in a word like *kitten*? Second, which

factors are most important? Third, what is the order of their relative influence? These kinds of concerns have been part of the sociolinguistic analysis of language for decades, allowing researchers to provide quantitative, empirical evidence contributing toward a descriptive and explanatory analysis. For the linguistic research questions, the social factors have been included to assess their influence on language variation patterns.

As an example of how changes in technology have allowed for a wider diversity of research questions, consider that the earliest language variation studies relied on auditory analysis as their primary analytical tool. Labov (1963), in data from his MA thesis, examined whether the first parts of the PRICE and MOUTH vowels were raised up to where the STRUT vowel is in the mouth. Labov's research question employed discrete, auditorily assessed variants for these two vowels. With acoustic analysis software, researchers can now make more comparable and replicable analyses, asking research questions about specific qualities of vowels and consonants. As Thomas and Kerswill & Watson discuss in this volume, these possible research questions have proliferated.

The research of the 1960s and 1970s was innovative because it asked different kinds of research questions than previous linguistic studies. For example, Labov's dissertation (1963, 2006) was the first work to study dialect patterns in an urban area on a large scale. This study of the Lower East side of New York City redeveloped methods of sociology and dialectology in order to explore the interaction of language variation and social factors, such as socioeconomic class. The research questions about linguistic variables in an urban setting were a major switch from the focus on rural speech by dialectologists with traditional methods.

Research questions of this early period were constructed to establish evidence that vernacular language variation patterns appear in all communities, and that they are part of the systematic production of the human mind. Researchers interested in the study of language variation were attempting to establish it as a legitimate field within linguistics. Now that concepts such as inherent variability are a common assumption among many linguists, these kinds of research questions rarely appear in scholarly work. In addition, changes to research questions on the linguistic side of sociolinguistics are connected to changes in linguistic theory. For example, Labov (1969) examined variable rules because such transformational rules were a primary way of thinking about linguistic information in the 1960s and 1970s. Later scholars addressed different kinds of phonological principles as phonology itself changed, including the obligatory contour principle (e.g., Guy and Boberg, 1997) and Optimality Theory (e.g., Anttila, 2002).

The standard variationist research questions of that earlier time have developed into generally accepted tenets today. Bayley (2002: 118) discusses two of them with the principle of multiple causes and the principle of quantitative modeling. The first modern assumption is that language variation is usually influenced by more than one linguistic or social motivation. Multiple factors influence language variation patterns. The second is the assertion that by looking at trends in past data, we can better predict trends in future data. With these two assumptions, researchers can ask questions about which social and linguistic factors have the most influence on language variation patterns and statistically test that likelihood. For example, whether a speaker uses *say* or *be like* to introduce a quote (e.g., *They were like, "Oh yeah!"*) has been found to be influenced by the type of

grammatical subject, the verb tense, the sex of the speaker, and other factors depending on the community (Buchstaller and D'Arcy, 2009). Not all communities follow the same trends, but sociolinguistic variation is not random and patterns emerge if the researcher looks for them.

To a growing extent, changes in research questions have developed in terms of where the variationist methodology is applied. Variationist research questions have been applied to previously under-researched languages, such as sign languages. With the linguistic components of sign language, such as phonology, language variation patterns have been found to operate much as they do with spoken languages, demonstrating variability and the influence of social factors. Lucas, Bayley, and Valli (2001: 110) found that for signs involving the 1-handshape, the variants correlate systematically according to the grammatical category of the sign, the features of the preceding and following sign segments, as well as social factors like age, social class, and regional affiliation. For other researchers, the effects of colonial languages on indigenous and little-studied languages have been the focus. Shain and Tonhauser (2011) investigated synchronically and diachronically the language variation of differential object marking of direct objects in Guaraní, an indigenous language of Paraguay. With variationist methods, they assessed whether contact with Spanish resulted in Guaraní's use of differential object marking.

Besides sign languages and little-studied varieties, language-focused sociolinguistic research questions have been applied to more realms of language. Analysis of language variation in pragmatics was a focus of research in the early days of the variationist movement (e.g., Tedeschi, 1977). More recently the work of Barron and Schneider (2009) and Pichler (2009) is forging a new direction for pragmatics and variational pragmatics. Barron and Schneider (2009: 426–427) posit that “variational pragmatics investigates intralingual differences, i.e., pragmatic variation between and across L1 varieties of the same language” and can be “conceptualized as the intersection of pragmatics with sociolinguistics ...” The research questions for variational pragmatics are not focused on the linguistic and social influences of one variable, but on how linguistic and social factors affect linguistic forms, the action of interaction (e.g., a request or an apology), dialogic units (used to construct the speech interaction), the topic structure, and the organizational level. Examining language variation across five levels of pragmatics allows for many previously unasked research questions. For example, Pichler (2009) combines variationist methodology with methods from conversation analysis to craft a research question examining how local variants of “I don't know” and “I don't think” function differently from non-local variants in Berwick-upon-Tweed in the north of England. She found that non-local variants, such as *I dunno*, are bound by discourse meanings for when to use them, such as to soften the assertiveness of a comment or to state a lack of knowledge. In contrast, the local variants, such as *I divn't knaa*, are socially diagnostic in that their use correlates with social factors. She was able to craft her research question by examining the relevant branches of discourse analysis and pragmatics and becoming familiar with her community of study.

Wolfram (1991: 22) surmises that regardless of the theoretical tradition, all descriptive branches of linguistics that handle fluctuating language forms “operate with some notion of the linguistic variable,” including traditional dialect studies. The linguistic variable is a tool for researchers to use in the analysis of language in its

social context. It is not necessarily an argument about how sociolinguistic variation is organized in the mind, although such questions are directly tied to the design of any sociolinguistic study. Importantly, students who focus on language variation and change should be aware that the research question will directly guide the design of the linguistic variable and its variants.

Social research questions

Only some sociolinguistic research questions focus primarily on linguistic variation. Many, if not most, other research studies examine language variation to learn more about social factors relating to societies and individuals. Earlier research questions focused on topics such as race and sex, while later ones examine the mutual influences from areas such as ethnicity and gender. Sociolinguistic studies now regularly examine style, identity, and social meaning through language analysis. This subsection details some of the research questions that have been asked in these pursuits and examines how they have changed.

Social analysis in sociolinguistics has seen dramatic changes since the 1960s. In the early days, the key method was to correlate demographic categories and linguistic variables. In most of those studies, the goal was to figure out how the social factors influenced the language variation patterns under study. This broad correlation technique is still a method used to assess dialect regions and language change in larger communities, but it is mainly employed by variationists to answer linguistic questions. Subsequently, the range and complexity of social questions have increased in recent decades. The range now reaches from broader levels of society to social networks with different levels of density and multiplexity, to communities of practice, all the way down to the individuals who contain a model of the entire social macrocosm in their heads and who (re)create sociolinguistic styles in the ebb and flow of social meaning and personal identity.

An important change for social research questions is the object of study itself. In hindsight, it may appear to modern readers that early scholars investigated seemingly monolithic categories like race (e.g., Black, White) and sex (e.g., women, men), often because the terms were cast in such a way, and scholars of the time did not explain the complexity encompassed by such terms. Modern research questions explicitly discuss the natural complexity of social constructions like gender and ethnicity. In addition, for several cultural reasons, research involving social factors such as sexual orientation went unexamined in the early days, but these factors are now an essential part of sociolinguistic research. Sociolinguistic research questions concerning the social realm of ethnicity are illustrated below, along with some discussion of the equally sweeping changes in language and gender studies. Numerous other social areas have undergone similar transformations over the last 40 years.

Early studies of ethnicity were sociolinguistic descriptions of the language variation patterns of various ethnic groups. For example, Wolfram (1969) examined the dialect of African Americans in Detroit and, then, the dialect of Puerto Ricans in New York (1974). Labov *et al.* (1968) examined the language variation patterns of African Americans and Puerto Ricans in New York City, and Fasold (1972) did the same for African Americans in Washington, DC. Linguistic

variables were front and center in these studies, and the results reflected differences and similarities between and within ethnic groups. The research questions in such studies fell along the lines of: How do African Americans speak differently from other ethnic groups? At what rates do these variable rules operate for different social classes? Awareness and respect for ethnic diversity was a fundamental part of all these studies, but ethnicity itself as a social construct was not the focus of study.

The study of ethnicity and many other social factors was enhanced by increasing attention to the interactions of social factors. Developing different angles, either in analysis or in the object of study, from previous work has been a normal mode of operation for sociolinguists. For example, Clarke (1987) conducted a sociolinguistic study of a village of Montagnais speakers (an Algonquian dialect) in order to reveal how variation is manifested in communities that are not overtly stratified along several social dimensions (such as social class). This approach, where multiple influences on ethnicity are examined, continues in recent decades. Cheshire *et al.* (2011) examine ethnic differences, but these scholars grapple with the rise of multi-ethnic dialects and the complexity of group second-language acquisition from a diverse set of first languages. They write: “Individual speakers use these features variably, and we have labeled the resulting ‘variety space’ Multicultural London English, in recognition of the fact that the features are only loosely associated with specific ethnicities or language backgrounds” (2011: 190). These researchers argue that new varieties are appearing in Northern Europe as a result of several conflating factors including evolving ethnic identities. The research questions needed to examine such complexity differ necessarily from those of the early days.

In more recent studies, although ethnicity is often a factor assessed while examining language variation, ethnicity itself has become a construct of identity theory. In overt moves to distance themselves from any possible essentialist claims, researchers investigate ethnicity and other social categories as indexical fields of meaning. The research questions fall more along the lines of: How do speakers represent themselves ethnically (through speech)? What stylistic choices do speakers make in constructing their ethnic identity? What ethnically indexed language features are deployed to construct gender and sexual orientation? For example, Bucholtz (1999) analyzes the narrative of interracial conflict as told by a middle-class European American boy who employs AAVE features to construct an urban, young male identity in contrast to (and in conflict with) African American youth. The study of racial discourse dovetails with research questions that examine the metalinguistic practice of racial labeling. For example, Chun (2011) examines the discourse practice of “reading race” where speakers label people and practices with racial terms. Some of the labels in Chun’s (2011) study included *Oreo*, *Wannabe*, *Prep*, and *Ghetto*. The lexical items used as social labels are of interest: we should ask how they choose those labels instead of others. However, sociolinguists are primarily interested in how they are used and with what social meanings. Chun explores how gender and ethnicity interact for speakers who “drew on this sociocultural practice for ideological commentary” (Chun 2011: 403). Research such as Chun’s demonstrates the interactive nature of social analysis, in that her data result from the interactions of three types of ideologies: gender, race, and language.

The essentials

Starting in the middle of the twentieth century, many branches of the humanities began to analyze and question arguments which assumed that social groups had distinct foundational qualities. Was it part of a woman's essential nature to wash more dishes or talk more (or less) often than a man? Were differences between ethnic groups a result of their essential natures? Do social groups even have an essential nature? Scholars began to question and refute these *essentialist* claims. This discussion is part of a much larger debate on the (non) existence of a basic human nature (see Steven Pinker's *The Blank Slate* for a full account).

As with ethnicity, early variationist studies focused on how females and males used linguistic variables differently (with different constraint hierarchies or at different rates). The contrast between the earlier days and more modern studies is that the terms "sex" and "gender" have been recognized as separate for decades (e.g., Coates, 1993). The overt recognition of the difference between them allowed for studies of how speakers created their gendered identities. The study of language and gender is a large and growing area of scholarship, and students would be wise to familiarize themselves with the many possibilities in this research area (see, for example, Holmes and Meyerhoff, 2003).

Part of the change to sociolinguistic research questions for all social factors is what Eckert has dubbed the "third wave" of sociolinguistics (www.stanford.edu/~eckert/thirdwave.html). Research questions from the third wave of sociolinguistics examine style in the sociolinguistic construction of identity, and the basic assumption is that social categories like ethnicity, gender, and sexual orientation are co-constructed between speakers and audience. Early variationist work was a branch of linguistics with close methodological connections to earlier dialectology. The earliest variationist projects were tied to sociology projects and took up demographic social descriptors (see Hazen 2007b, 2011 for the history). Researchers focused on larger sociological categories and the speech community to model language change. While researchers have asked over the last few decades what language variation patterns mean for individuals, the answers from percentages and linear regressions of demographic categories and phonological conditioning environments did not speak as loudly as many scholars would have liked. Some scholars turned to ask different kinds of sociolinguistic research questions related to the fields of anthropology and social psychology. For example, Milroy (1987) expanded the search for language change by developing methods of social network analysis in data of Belfast neighborhoods. In the speech of Michigan teenagers, Eckert (2000) examined the social meaning of vowel variation rather than examining vowel variation and its social correlates. From research questions directed at social meaning, third-wave sociolinguistic analysis began.

Whose research questions have changed the most?

At first glance, between the 1960s and the 2010s, the realm of sociophonetics may seem to take the prize for the most changed research questions. Equipment from that time period seems remarkably dated compared to modern computers. Technological innovations, and corresponding methodological changes, abound in sociophonetics. Spectrograms were measured by hand in the early 1970s using a ruler to estimate the formants that represent vowels (e.g., Labov, Yeager, and Steiner, 1972). Computers using complex mathematical formulas and programmed scripts now measure and calculate formants and many other qualities of sounds.

Yet, the realm of language and gender might have the top legitimate claim for the most changed research questions.

1970 research question: *How do women speak differently from men?*

2010 research question: *How does this speaker in this local context construct gender through language?*

For these two there is a switch between all women and one speaker plus a switch between sex and gender.

It should be noted that some language and gender studies do use sociophonetic methods, so these two realms of sociolinguistics are not antithetical to each other. Sociophonetic techniques have also been rigorously employed in studies of language and sexual orientation. Just like discourse analysis or lexical analysis, sociophonetics is a means of examining certain layers of language structure. The realm of language and gender supplies a social focus for those linguistic methods.

Whereas many previous and subsequent studies focus on a single variable to elicit social meaning out of a community, Eckert (2000: 213) argues that

most [variables] take on interpretable social meaning only in the context of the broader linguistic styles to which they contribute, including both the inventory of variables and their use. When we view each variable in isolation, thinking of speakers as leading or lagging in the use of advanced variants, we miss the overall effect of speaker's choices. Social meaning from this perspective is a result of the creative process of style from all speakers and not a static entity attached to any one (or set of) variables.

In the dialectological, first-wave approach, the focus is on the dialect as separate from the holders of the dialect and how language changes alter the reified object (the dialect). In the third-wave approach, the question is how meaning, including identity of individuals, is composed and negotiated by different social groups.

Socially focused research questions

Consider social norms of proper language use. Researchers usually take the view that members of the same community share language norms, but with socially focused research questions, researchers could ask how norms differ within a community and why. Consider the case of a teenager in rural, southern West Virginia who refused to use the regular community form of *y'all* for plural *you*. She overtly argued against it, although everyone in her family and community used only that form. What external norms prompted her to disavow such a customary local form? What kind of social identity does she want to develop? Language-focused researchers would ask “Is *y'all* being used less often by whom?,” whereas socially focused researchers would ask “Why are some speakers moving away from *y'all* and what identities and social meanings are they creating with such a move?” The answers could come from single case studies or from larger surveys.

The third wave of sociolinguistic analysis crafts its research questions on how social meaning is constructed by individuals. Moore (2011: 221) writes: “sociolinguists in the third wave attempt to answer the question of how it is that a variable might come to mean ‘upper-class New Yorker’ or ‘rebellious adolescent girl’ ... this entails analyzing meaning at a level which is different from the social groups or categories considered in first- or second-wave research.” This approach changes the object of study from linguistic analysis of language variation to a social analysis of how sociolinguistic style and personal identities are created.

In the social sciences, many researchers have taken up theories of identity. Previously, researchers viewed a person’s identity as a stable entity, one they may have been born into, and one that individuals themselves did not change. In recent decades, researchers have come to understand identity as dynamic. With modern sociolinguistic research questions over the 2000s, the focus was between the individual, the small cultural group, and the larger society (composed of individuals and small cultural groups). For example, Coupland (2007: 107) points to Bauman and Briggs (1990) as developing the argument that culture is created through discourse, and people reaffirm themselves with cultures through the creative process of differentiating discourse. In other words, people create their identity through their active deployment of discourse. Modern socially focused research questions tend to examine how those identities are created.

Relatedly, many socially focused scholars craft research questions at the overlap of traditionally separate fields. For example, Woolard (2008: 447) argues that “by bringing linguistic anthropology and sociolinguistics back into close conversation, we might eventually enable a needed account for why very particular linguistic elements get picked out, ideologized, mobilized, and iconized for social purposes by specific speakers.” This argument captures the changes in the direction of research questions over the last few decades. As Bucholtz and Hall (2005) argue, identity is created through linguistic interaction. For them, identity is the product, not the source, of language variation. In this approach, the question is how meaning, including that of individual identity, is composed and negotiated through language. Similarly, Eckert (2008: 473)

remarks that research questions on “the social value of variation” must focus on social meaning in the daily exchanges of “constant local reinterpretation and repositioning.” This kind of focus yields research questions aimed at how speakers apply their social knowledge to their language patterns. As Coupland (2007: xii) writes, “I think we need a sociolinguistics of variation for people and for society, as well as (not instead of) a sociolinguistics of variation for language.” The research questions of modern sociolinguistics directly address variation for people and society.

Cross-references

Working in sociolinguistics requires researchers to learn a wide array of topics. In every chapter of this book, topics come up that are cross-referenced in other chapters.

For example, *communities of practice* are mentioned in this chapter, but Robin Dodsworth gives the full explanation of them in Chapter 17. Readers can probably figure out that communities of practice are groups of people. Scholars also require that groups identified as communities of practice participate in a common activity, thereby sharing some norms for that activity. Yet, this slight definition is not sufficient for researchers, and readers should peruse Dodsworth’s definition to get a richer sense of the term. The concept of the community of practice is a methodological tool, and the choice of some tools over others affects the results.

Be sure to follow those cross-references for the concepts you choose to use in your research study. It helps to have a full understanding of the important concepts before writing up your final argument.

Conclusion

When scholars were first discussing the validity and stability of sociolinguistics, Bright (1966: 11) wrote, “The sociolinguist’s task is ... to show the systematic covariance of linguistic structure and social structure – and perhaps even to show a causal relationship in one direction or the other.” Since that time, the range of potential research questions has expanded to include practically any study that can incorporate information from society and language. Some of those research questions focus more on linguistic questions while others focus more on social questions and personal identity. As students design research questions, they should be aware of the breadth of sociolinguistic scholarship and where their specific interests are located.

Quagmires and Troubleshooting

- *Don’t bite off more than you can chew.* With all sociolinguistic projects, large goals exist: How do people construct gender through language? How does new language variation spread through a community? With all these kinds of questions, an entire subfield is encompassed. Make your research questions much

more specific: How does this particular clique (or person) employ a style (or a linguistic variable) to demarcate social space?

- *Avoid scope-creep*. Interesting ideas will develop as you progress in your background reading and then analysis. As you come upon them, take notes, react, and lay out plans for future projects, but keep the research question and argument for your current research project stable.
- *The devil is in the details*. Generalities do not a good research project make. The more detailed your research question is, the better your argument will be.

Tips

- Develop a research question and make an argument: There are many interesting topics in sociolinguistics; part of the allure of this scholarship is that it is fascinating, even for non-scholars. Yet, research papers are not like documentaries or wildlife tours. Research papers should make a direct argument, and that argument will be guided by a research question. Make the research question an explicit component of the paper.
- You must have some knowledge of the nature of the data when planning the research (e.g., tag questions have different types of linguistic constraints than vowels).
- Stay specific and simple: Big questions are important to ask, but to answer them, you need detailed, specific questions to form the step-by-step procedure. Your research project might be just a single, small step toward that big question, but that is OK. This method is how human knowledge progresses. Asking how women use language is not answerable with a single research project, but asking how female customers use requests in service encounters at a specific store is. Ask answerable research questions.
- Falsifiability versus interpretation: Is the research question to be asked interpretative or is it falsifiable? If the research question is supposed to be falsifiable, then make sure that it can be clearly deemed as false or not. If it is interpretative, then make sure your detailed evidence supports your interpretation. For the uninitiated, the term *falsifiable* is a confusing term. Novice researchers should think about it in this way: If a hypothesis is falsifiable, it can be proven false through empirical testing. For example, consider these two hypotheses:

- 1 The lower the social class, the more often speakers will use the -in' of (ING).
- 2 These speakers construct their gender partly by modifying racial terms.

The first question is falsifiable. A study can examine how often speakers use the alveolar form and correlate those results with social class. The second question is open to interpretation and is not falsifiable. The researcher would have to build a case for a particular argument.

Further Reading and Resources

- Ball, M.J. (ed.) 2010. *The Routledge Handbook of Sociolinguistics Around the World*. New York: Routledge.
- Johnstone, B. 1999. *Qualitative Methods in Sociolinguistics*. New York: Oxford University Press.

- Milroy, L. and Gordon, M. 2003. *Sociolinguistics: Methods and Interpretation*. Malden, MA: Wiley-Blackwell.
- Tagliamonte, S. 2012. *Variationist Sociolinguistics: Change, Observation, Interpretation*. Malden, MA: Wiley-Blackwell.
- Van Herk, G. 2012. *What Is Sociolinguistics?* Malden, MA: Wiley-Blackwell.
- Wodak, R., Johnstone, B., and Kerswill, P.E. (eds) 2011. *The SAGE Handbook of Sociolinguistics*. New York: SAGE.

References

- Anttila, A. 2002. Variation and phonological theory. In *The Handbook of Language Variation and Change*, ed. J. Chambers, P. Trudgill, and N. Schilling-Estes, 206–243. Malden, MA: Blackwell.
- Bayley, R. 2002. The quantitative paradigm. In *The Handbook of Language Variation and Change*, ed. J.K. Chambers, P. Trudgill, and N. Schilling-Estes, 117–141. Malden, MA: Blackwell.
- Barron, A. and Schneider, K.P. 2009. Variational pragmatics: studying the impacts of social factors on language use in interaction. *Intercultural Pragmatics* 6(4): 425–442.
- Bauman, R. and Briggs, C. 1990. Poetics and performance as critical perspectives on language and social life. *Annual Review of Anthropology* 19: 59–88.
- Bright, W. (ed.) 1966. *Sociolinguistics*. Proceedings of the UCLA Sociolinguistics Conference, 1964. The Hague: Mouton.
- Bucholtz, M. 1999. “You da man”: Narrating the racial other in the production of white masculinity. *Journal of Sociolinguistics* 3(4): 443–460.
- Bucholtz, M. and Hall, K. 2005. Identity and interaction: a sociocultural linguistic approach. *Discourse Studies* 7: 585–614.
- Buchstaller, I. and D’Arcy, A. 2009. Localized globalization: a multi-local, multivariate investigation of quotative be like. *Journal of Sociolinguistics* 13: 291–331.
- Cheshire, J., Kerswill, P., Fox, S., and Torgersen, E. 2011. Contact, the feature pool and the speech community: the emergence of multicultural London English. *Journal of Sociolinguistics* 15(2): 151–196.
- Chun, E. 2011. Reading race beyond black and white. *Discourse & Society* 22(4): 403–421.
- Clarke, S. 1987. Dialect mixing and linguistic variation in a non-overtly stratified society. In *Variation in Language*, ed. K.M. Denning, S. Inkelas, F.C. McNair-Knox, and J.R. Rickford, 74–85. Stanford, CA: CSLI.
- Coates, J. 1993. *Women, Men and Language: A Sociolinguistic Account of Gender Differences in Language*. London: Longman.
- Coupland, N. 2007. *Style*. New York: Cambridge University Press.
- Eckert, P. 2000. *Linguistic Variation as Social Practice*. Malden, MA: Blackwell.
- Eckert, P. 2008. Variation and the indexical field. *Journal of Sociolinguistics* 12(4): 453–476.
- Fasold, R.W. 1972. *Tense Marking in Black English: A Linguistic and Social Analysis*. Washington, DC: Center for Applied Linguistics.
- Guy, G. and Boberg, C. 1997. Inherent variability and the obligatory contour principle. *Language Variation and Change* 9(2): 149–164.
- Hazen, K. 2007a. Variationist approaches to language and education. In *The Encyclopedia of Language and Education*, 2nd edn. Vol. 10: *Research Methods in Language and Education*, ed. N. Hornberger and K. King, 85–98. Springer.
- Hazen, K. 2007b. The study of variation in historical perspective. In *Sociolinguistic Variation: Theory, Methods, and Applications*, ed. R. Bayley and C. Lucas, 70–89. Cambridge, MA, Cambridge University Press.
- Hazen, K. 2011. Labov: language variation and change. In *The SAGE Handbook of Sociolinguistics*, ed. R. Wodak, B. Johnstone, and P.E. Kerswill, 24–39. New York: SAGE.

- Holmes, J. and Meyerhoff, M. (eds) 2003. *The Handbook of Language and Gender*. Malden, MA: Blackwell.
- Labov, W. 1963. The social motivation of language change. *Word* 19: 273–309.
- Labov, W. 1969. Contraction, deletion, and inherent variability of the English copula. *Language* 45: 715–762.
- Labov, W. 2006. *The Social Stratification of English in New York City*, 2nd ed., New York: Cambridge University Press.
- Labov, W., Cohen, P., Robins, C., and Lewis, J. 1968. *A Study of Non-standard English of Negro and Puerto-Rican Speakers in New York City*. Report on Co-operative Research Project 3288. Washington, DC: Office of Education.
- Labov, W., Yeager, M., and Steiner, R. 1972. A quantitative study of sound change in progress. US Regional Survey.
- Lucas, C., Bayley, R., and Valli, C. 2001. *Sociolinguistic Variation in American Sign Language*. Washington, DC: Gallaudet University Press.
- Milroy, L. 1987. *Language and Social Networks*, 2nd edn. Oxford: Blackwell.
- Moore, E. 2011. Variation and identity. In *Analysing Variation in English*, ed. W. Maquire and A. McMahon, 219–236. New York: Cambridge University Press.
- Pichler, H. 2009. The functional and social reality of discourse variants in a northern English dialect: I DON'T KNOW and I DON'T THINK compared. *Intercultural Pragmatics* 6(4): 561–596.
- Pinker, S. 2003. *The Blank Slate: The Modern Denial of Human Nature*. London: Penguin Books.
- Rickford, J. and Rickford, R. 2000. *Spoken Soul: The Story of Black English*. New York: John Wiley & Sons, Inc.
- Shain, C. and Tonhauer, J. 2011. The synchrony and diachrony of differential object marking in Paraguayan Guaran. *Language Variation and Change* 22(3): 321.
- Tedeschi, P.J. 1977. Some aspects of conditional sentence pragmatics. In *Studies in Language Variation: Semantics, Syntax, Phonology, Pragmatics, Social Situations, Ethnographic Approaches*, ed. R. Fasold and R. Shuy. Washington, DC: Georgetown University Press.
- Wolfram, W. 1969. *A Sociolinguistic Description of Detroit Negro Speech*. Washington, DC: Center for Applied Linguistics.
- Wolfram, W. 1974. Sociolinguistic aspects of assimilation: Puerto Rican English in New York City. Washington, DC: Center for Applied Linguistics. www.eric.ed.gov/ERICWebPortal/detail?accno=ED091933 (last accessed April 3, 2013).
- Wolfram, W. 1991. The linguistic variable: fact and fantasy. *American Speech* 66: 22–32.
- Woolard, K.A. 2008. Why dat now?: linguistic-anthropological contributions to the explanation of sociolinguistic icons and change. *Journal of Sociolinguistics* 12(4): 432–452.

Part I Types of Data and Methods of Data Collection

2 Sociolinguistic Interviews

Michol Hoffman

Introduction	26
Developing Research Questions	26
Methods of Data Collection and Analysis	28
Entering the Community	32
Observing, Interviewing, and Recording	33
Equipment	35
Components of the Sociolinguistic Interview	35
Records and Writing Up	38

Summary

This chapter leads the researcher in the process of data collection through fieldwork and sociolinguistic interviews. It will help you think of project ideas, locate appropriate research topics before fieldwork, and plan the most reasonable scope of fieldwork. The chapter also gives advice about different strategies for entering the community and using both formal and informal methods for conducting fieldwork. It provides advice on organizing your ideas and data throughout the chapter, as these are fundamental for data collection.

Introduction

This chapter offers guidance on a key component of sociolinguistic research: the collection of linguistic and social information through fieldwork. In particular, it focuses on methods for conducting the sociolinguistic interview, a long-standing tool of sociolinguistic research. It will lead you through the research process, from the idea stage through completion of your fieldwork. We discuss developing your plans, designing your data sample, contacting and entering communities, and engaging in fieldwork that incorporates an ethnographic perspective. As you read this chapter, it may be helpful to make notes relevant to your own project ideas.

You are consulting this book because you are interested in language in its social context. You have likely observed ways in which people speak differently in personal interactions and in the media and now are ready to engage in original research of your own. Where to begin? Variation in language has been documented and depicted since ancient times. Most such references were either representations of speakers with different social characteristics in literature, or prescriptive comments regarding “incorrect” speech such as the Appendix Probi, a third- or fourth-century document attributed to a grammarian who lamented the demise of “proper” Latin by contrasting a list of vernacular forms with their Classical Latin equivalents. These types of data were based on impression and observation, but lacked the scope and rigor of today’s data collection methods.

The first sociolinguistic fieldwork came from the dialect geography tradition: for example, the *Linguistic Atlas of France* (Gilliéron and Edmont, 1969) and the *Linguistic Atlas of the Iberian Peninsula* (Heap, 2003). In the late nineteenth century dialectologists investigating regional variation began the systematic collection and documentation of linguistic data (see e.g., Chambers and Trudgill, 1980: 15–23). These early fieldwork data were phonetically transcribed on the spot by fieldworkers. Technological advances in the mid-twentieth century made fieldwork audio recordings viable and facilitated the methodological innovations of pioneering sociolinguists. In particular, William Labov’s landmark studies (e.g., 1963, 1972a, 1972b, 1984) set the standard for variationist sociolinguistic fieldwork. This work laid the foundation for the methods we use today. The sections below will guide you in your research process from the idea stage through the collection of your own data.

Developing Research Questions

Inspiration for research topics can come from a variety of sources such as reading articles, attending a lecture, or even personal experiences. (My own work on the Canadian Vowel Shift began after my PhD supervisor, Gregory Guy, mistook my pronunciation of the word *disk* for *desk*. If it was shifting, I wanted to know more about it!) When an idea piques your interest, devote some time to brainstorming. Write down all your questions and ideas, and let your subconscious go to work as well. Thoughts may occur to you while you’re engaged in an unrelated activity, so be ready to jot down additional notes.

Once you feel that you have enough questions related to your topic, your next step will be to develop your ideas by reading previous work related to your topic. Supplement general references with a literature review based on both the linguistic variables and the types of communities you intend to work with. Needless to say, it is a bad idea to rely strictly on a Google search. There are many databases that access discipline-specific published academic research (e.g., Language and Linguistics Behavioral Abstracts (LLBA)), and consulting bibliographies in books and articles can lead you to relevant sources. As you progress in your research, you can refine the parameters of your study, including your research question, and determine where it fits in with previous work.

A literature review is also helpful when considering methodologies and can guide you toward methods that are most appropriate to your project. The experiences of other scholars can alert you to challenges involved in dealing with a particular variable or type of community. Your fieldwork methods will, to some extent, depend on your research focus. For example, if you plan on acoustic analyses, you may need to consider specific recording equipment or adding a reading passage or word list or

Literature search: how to find the right sources

If you have little experience with bibliographic research, most universities have research librarians who are expert at efficient searches. Librarians can help compile demographic information from government surveys and the census when researching your community. There are also discipline-specific list servers for linguists to seek and offer advice.

- **Been there, done that?**

Just because someone has investigated a particular variable in a particular community doesn't mean you can't put a new spin on it. For example, a number of studies (e.g., Blake and Josey, 2003; Pope, Meyerhoff, and Ladd, 2007) have revisited Labov's (1963) study of Martha's Vineyard. Researching a long-studied variable in a new community can contribute to our understanding of determined pan-varietal patterns and community norms.

A solid project should explore something new in terms of theory, community, language internal factors, and/or the role of social factors involved in variation. Consider how your research contributes to our understanding of language in its social context.

- **Focus!**

It's hard to believe, but the research project you're engaged in does not have to be the be-all and end-all of your linguistics career. You want to answer every question, consider every possible angle, engage with and interview every possible participant ... but you can't. All projects are limited by time, space, and resources.

- **Input**

Discussing ideas with fellow linguists will help sharpen your questions, but you may wish to explain your project to a non-linguist as well. If you can successfully articulate your questions and goals (without getting too technical), you'll know you are on track for a successful investigation.

elicitation task in your fieldwork. Similarly, you may find that to achieve your goals, you need to immerse yourself in a particular community for a longer period of time. As you consult previous work, you will continue to refine your plans. Project development is a fluid endeavor. However, there comes a time when you must jump in and begin. Too much preparation can be overwhelming. Experienced colleagues and advisors can help with focus and put you in touch with others who can offer advice.

Methods of Data Collection and Analysis

Before turning to the “how to’s” of the fieldwork enterprise, I would like to briefly address an issue integral to sociolinguistic research: which aspects of social context to consider in your fieldwork and your analysis. This is a complex question with no definitive answers or set of rules. This chapter and the chapters in this book addressing aspects of sociocultural context will help guide you, as will your previous knowledge and project specific research.

Looking for patterns of variation according to language external or social factors is an essential part of sociolinguistic research. What is the social profile of variation and change, and how do social factors contribute to variation? When researching a community, it is up to you to determine which social factors are relevant to variation and should be included in your analyses. A number of social factors have been typical of sociolinguistic work since the field’s inception. These include speakers’ sex, age, measures of socioeconomic status, and ethnicity. Such categories are *etic* or externally imposed and are common in public discourse. There have been many important findings based on these factors, salient patterns that appear time and time again in sociolinguistic studies.

Other social distinctions and categories are *emic*, or relevant within a particular group, but not necessarily relevant to external observers. Incorporating emic categories involves including an ethnographic approach in your fieldwork. As Eckert (2000: 69) points out, “ethnography is, among other things, a search for local categories.” Norma Mendoza Denton’s work on Latina high school students in California (Mendoza-Denton, 2008) is a fine example of a variationist ethnographic study making use of a number of emic categories. Whereas an outsider might have grouped all speakers in her study as Mexican (-American) or Latina – an externally imposed, etic category contrasting broad ethnic groupings – other distinctions were highly relevant to the young women themselves. These orientations were distinguished both by variable linguistic features and aspects of external style, such as makeup and clothing.

Studies considering the local, specific relevance of sociolinguistic meaning are more and more prevalent (see e.g., Eckert, 2012). This chapter offers guidance in incorporating an ethnographic approach to fieldwork based on data collection through sociolinguistic interviews. If you are interested in devoting the resources necessary for more thorough ethnographic methods, Eckert (2000) and Mendoza-Denton (2008) are excellent models for such sociolinguistic work.

Ethical issues

Whenever research involves living beings, ethical issues come into play. We seek to minimize risk to anyone involved in our work. Risks may seem more obvious in

medical research, but there are ways that our work could compromise our participants socially too. Since our goal is accessing different varieties of speech, including casual speech, we often enter the private spheres of peoples' lives, both physically (e.g., interviewing in their homes) and emotionally (they may reveal deeply personal information). We must be mindful so that they are secure in their anonymity and our promise of confidentiality. Making our practices clear to them can help our research too.

All institutions require an ethics review of some sort, either through a department, faculty, or university-wide office. The guidelines they oversee may be set by governments, funding councils, or individual universities, but they all conform to some basic standards and practices. It is normal to submit a research proposal in accordance with your university's policies before beginning your fieldwork. In it, among other things, you will outline your research methods and present a copy of a consent form and/or an information letter for your participants. Such a letter normally includes goals of the project, assurances of anonymity and ethical use and storage of the data, and offers participants the opportunity to withdraw from the research. Templates are likely available from your institution and helpful colleagues. Although we must inform participants that we are interested in their language, we typically do not alert them to the particular focus of our work. Rather, we might say, for example, that we are investigating aspects of culture, traditions, and language in a particular community. Providing linguistic details could be counterproductive from both our perspective and theirs. We don't want them to consciously alter their speech to provide us with "desirable" data. Although knowledgeable about their communities, non-experts may not be interested in very specific aspects of our analyses. We can offer to share the results of the study, should they wish to know more.

In sociolinguistic research it is critically important to protect the anonymity of our participants (unless, of course, we are analyzing speech of public figures from the media or our permission forms explicitly disclose the public nature of the data). We never use their surnames, and current practice identifies them using pseudonyms or alphanumeric designations. Similarly, institutions such as schools, community centers, neighborhoods, or even towns are not typically identified by their actual names, although details about them are specified. This practice is generally thought to benefit the participants. However, by making this choice, we are also imposing a particular value judgment on our participants. This practice may even be perceived as patronizing or dismissive. Patricia Cukor-Avila and Guy Bailey have a long-term research project in a Texas town they refer to as Springville (e.g., 2001). After their work was shared on a popular national web site, some participants were irked that the town's real name hadn't been revealed; they were proud of their community and their association with the project (Patricia Cukor-Avila, personal communication; see Cukor-Avila, 2013).

Contact with the community

Once you decide on some basic parameters for your project, your next step will involve reconnaissance. There are numerous sources of information about your fieldwork site and community. For preliminary demographic information, you can consult statistical sources such as government census records and school records. These are useful for researching the socioeconomic profile of your community, including information about ethnicities, minority languages, immigration, and other details relevant to your study. Non-governmental community organizations and

advocacy groups can also offer excellent information. They often generate reports specific to the groups they represent. For example, in Toronto, Canada, the Hispanic Development Council has produced research on the socioeconomic status and needs of Spanish speakers in Toronto. Background research is important to any study. If you are interested in particular communities based on ethnicity or practice, you should look to related organizations for guidance.

The history of your community is as relevant as its current context. Socioeconomic shifts bring changes in education and professional status, different types of contact and relationships among groups, and changes to social networks and attitudes. For example, Sharma and Sankaran's (2011) investigation of South Asians in West London shows that differing sociopolitical contexts account for differences in variation between two age groups within the Punjabi community. Johnstone *et al.*'s work on features associated with Pittsburgh English, or "Pittsburghese," draws heavily on the contribution of geographic and social shifts (e.g., Johnstone, Andrus, and Danielson 2006; Johnstone and Kiesling 2008). Although it is beneficial to begin this research before your fieldwork, you should continue it throughout your project.

Sample size

How many speakers are required for a viable study? The amount of data you collect and analyze depends on the parameters of the project. Of course, the more participants interviewed, the better – but, as noted above, all projects are limited in terms of time and resources. Identifying the group of speakers you wish to investigate is the first step in determining the size of your sample. The language external or social factors you plan to analyze play a role in the number of speakers interviewed: the more factors, the more speakers are required. Ideally, samples are stratified or evenly divided according to social groupings, with a minimum number of speakers per cell (with a shared background). For example, Table 2.1 depicts a sample for a study examining variation according to three language external criteria: sex, age group, and area of residence. It calls for five speakers per cell, an adequate number by most standards. As Milroy and Gordon (2003: 28–29) point out, it is not necessary to have larger numbers in a sample. Tagliamonte (2006: 31) suggests two speakers per cell as a bare minimum.

Since the scope of your study may depend on your resources, consider which hypotheses you wish to test, and what type of data will best serve your needs. If you

Table 2.1 Sample speaker stratification

Area of residence	Urban		Suburban		Total
	Men	Women	Men	Women	
Sex					
Age					
18–30	5	5	5	5	20
41–55	5	5	5	5	20
65–80	5	5	5	5	20
	15	15	15	15	60

only have the time to conduct and transcribe 30 interviews, you may wish to limit the social factors investigated. Although it is clearly inappropriate to make generalizations about the social profile of variation based on one speaker per cell, where your data is less robust, you can hypothesize based on a combination of your existing data and your ethnographic observations. Furthermore, as you engage in your research, you may discover which social distinctions are more or less significant locally, which can help streamline your sample.

Sampling

There are several different methods for selecting participants for sociolinguistic research. This section presents aspects of two main approaches: (i) random sampling and (ii) judgment samples that entail snowball/friend-of-a-friend methods for contact.

Random sampling involves choosing names or addresses from sources such as a telephone directory or electoral lists. The target populations are still restricted somewhat by criteria such as neighborhood, but the likelihood of choosing one person (or household) over another is arbitrary. Those who approach participants with this method can still seek a stratified sample according to (for example) age, sex, or ethnicity by looking for people meeting those criteria in a particular household. Although random sampling may be most representative in a strict sense (e.g., Labov 2001: 38–40), it may not easily fulfill project goals for certain demographic criteria. Currently, relatively few studies employ random sampling methods; however, pioneering work in the field such as Labov's (2001) study of Philadelphia and Cedergren's (1973) work on Spanish in Panama City collected data this way. The *Atlas of North American English* (Labov, Ash, and Boberg, 2006) and Sali Tagliamonte's Toronto English Project (2003–7), which combined random sampling with locating participants through social networks, are notable exceptions.

Sociolinguistic fieldwork involves a degree of trust on the part of the community. Approaching people “cold” and asking to enter their homes may make them uncomfortable and wary. Furthermore, in this era of telemarketing, this method may be perceived as an annoying intrusion. There are some people, my father among them, who welcome a chance to participate in opinion polls or surveys, but many of us are used to automatically saying “we're not interested” even before the solicitor finishes a pitch. Consequently, random sampling may not be as effective or conducive to accessing the “naturalistic” speech we seek in most sociolinguistic studies.

Judgment sampling is the most common method for both methodological and pragmatic reasons. Judgment samples target participants that meet the predetermined criteria of the study, such as relevant social categories. They make use of extended social networks of the researcher and the researcher's contacts within the community, employing the “friend of a friend” or snowball technique to recruit additional speakers: participants and community contacts are asked to recommend others who might be amenable to participating in the research. They, in turn, recommend more speakers. In this way, researchers benefit from preexisting relationships and the trust inherent in being known to a friend or acquaintance, which can encourage participation. If someone familiar has contributed to the project, we are more likely to do so as well.

Entering the Community

First contact with your community will depend on preexisting relationships or lack thereof. If you are a member of the community you wish to study, you will benefit from familiarity and established connections. This position has obvious advantages and some drawbacks. You are a true participant observer, with a natural place in the community and an inside perspective on its norms and social practices, and your preexisting social network will lead you to participants fairly easily. However, objectivity may be a challenge as your role as observer/researcher interacts with your role as member. Furthermore, it may be more awkward to explain your research and to “interview” people you know very well. Interviewing close friends and relatives is difficult as topics in the interview schedule (see below) may be common knowledge. This awkwardness can lead to long silences, which won’t help you collect the data you need. If this is your context, it is important to make use of an extended social network. For example, ask your cousins to connect you to their cousins on the other side of the family, and your grandparents’ or parents’ friends to facilitate introductions to their (other) friends. In this way, you can free your fieldwork from potentially complicating family dynamics, and ensure that your sample does not just reflect one family or dense social network (unless that is your intention).

If you have little previous contact with the demographic group you wish to study, it is still possible to conduct successful fieldwork. Be assured that many sociolinguists have worked with communities that were new to them. In this scenario, you need to find points of entry and connections who can introduce you to more participants. That is where social skills become important. There are different approaches for seeking contacts, and you will need to think about which are appropriate for you in your context. One way to access a community is to connect with people through community organizations, religious institutions, or schools. People involved or employed in such sites can assist you by introducing you to suitable participants and by offering insights about the communities. Another possibility is to hang out at locations frequented by community members such as coffee shops, restaurants, or recreational facilities. This situation requires the fieldworker to be outgoing and make contacts on their own. Once you have some initial contacts, make use of the friend-of-a-friend method mentioned above to locate additional participants. There is some disagreement on the usefulness of authority figures to facilitate your research. On the one hand, contacts such as teachers and religious leaders can be invaluable in facilitating fieldwork (e.g., Feagin, 2002). On the other hand, connections through such authorities may cause participants to be more formal and careful in their speech style during the interviews (e.g., Tagliamonte, 2006). Since trust is fundamental to your relationship with research participants, consider which approaches are best for you in your context.

Here are some examples of points of entry:

- Josey (e.g., Blake and Josey, 2003) served as an au pair in order to gain entry to the community.
- Haddican (2007) investigated local features of Basque. He sought the help of community members to locate participants. As a native speaker of English, he was present during fieldwork, but left the interviewing to locals, except for the final portion of the interview, a conversation about language.

- Cameron (2010) did research on gender and variation among schoolchildren in the Chicago area. His successive points of contact were a school principal, the school board, and individual teachers, obtaining permission throughout. In addition to interviewing the schoolchildren, he spent time helping out in classrooms and observing the children in informal contexts.

A useful approach involves asking your participants about issues and topics that are relevant to them. They are the authorities, not you, but there's nothing wrong with showing interest in a group other than your own. Do not try to accommodate in terms of linguistic features. Presenting yourself with honesty and interest is the best way to connect in fieldwork (and otherwise). When I was doing fieldwork in Spanish with youth of Salvadorian descent in Toronto, I was eight to ten years older than my participants, a native speaker of English. Furthermore, my Spanish resembled that of a Castilian from Spain. I used my experience to explain my interest in Spanish in Toronto (high school and university classes and a student exchange in Spain). It sparked conversation on life in Toronto, attitudes toward dialects, and the participants' own interests.

The observer's paradox

This well-known dilemma of sociolinguistic (and social science) fieldwork (Labov, 1972b) refers to the tension between the desire to record and analyze the way people speak when they're not being observed and recorded, and the need for the researcher's presence, observing and recording. There are various strategies to mitigate the effect of observation and minimize the potential awkwardness of the research process.

Observing, Interviewing, and Recording

You've developed your research questions, designed your sample, researched your community, made contacts, and are ready to record.

The standard tool for fieldwork in sociolinguistics is referred to as the *sociolinguistic interview*. This method was developed and elaborated by William Labov through a number of projects (e.g., 1963, 1966, 1972a, 1972b) and outlined in Labov (1984). This section will discuss the mechanics of the "interview" itself, from equipment to strategies for conversation, to components that you might wish to include. I will also present some basic dos and don'ts. Remember that this chapter is a guide; you should think about adapting techniques to suit your research question. Also remember that successful fieldwork and interviewing is a process. Don't expect perfection right from the start.

The term "sociolinguistic interview" is, perhaps, a misnomer: we don't want it to resemble an interview at all. Our most frequent goal is to record naturalistic speech or the vernacular; we would like our participants to pay more attention to what they are saying and be less conscious of the way they are saying it (e.g., Labov, 1966, 1984, 2001). This is a false division in some ways. We all make use of different styles

and registers depending on contextual factors. There are also different models for style (e.g., Coupland, 2007), and in the course of the sociolinguistic interview, you may wish to elicit various styles or ways of speaking (see below). If your objective is naturalistic speech, how can we encourage participants to speak unselfconsciously? What is the role of the fieldworker/researcher?

Interview topics and process

There are several types of questions that have been used by researchers successfully. A topic like how they met their partner may induce involved personal narratives, one of the best types of interview speech. If there has been a significant event in the area, you might want to ask about where they were and how they responded. For example, questions about a power outage can prompt narratives of how individuals experienced and dealt with it.

Note: Caution is essential when asking about potentially traumatic personal experiences. We want the interview experience to be as comfortable as possible for both the participant and the interviewer. Try to avoid general opinions about issues and politics; they sometimes encourage a preachy formal style, also known as “soapbox” (e.g., Labov, 1972b, 1984, 2001). Use your knowledge about the community and your own social experiences. You can also ask the connection who referred you to the participant a bit about the person and their interests.

With the possible exception of standard contextual questions, your interviews do not have to reflect the same subjects. In fact, it’s better if topics are spontaneously initiated by the participants themselves. That way the speech is less self-conscious and more natural. It’s OK to use an interview schedule as a resource, but you do not need to follow it precisely, and don’t have it visible during the interview. Taking out a copy and rifling through it looking for questions is a sure-fire way to ensure silence and discomfort.

Be flexible: change topics if they are not working. If one topic leads to another, let the participant continue talking even if you have not broached all potential topics in your interview schedule.

Sociolinguistic interviews involve both preparation and finesse. The main objective is to elicit as much speech as possible from your participant. However, sociolinguistic interviews are, in some sense, a conversation. We strive to avoid short, stilted responses to series of questions. There are a number of resources and tips that can help you achieve the right balance. Fieldworkers in sociolinguistics may use a resource called an *interview schedule* (e.g., Labov, 1984). The interview schedule is a series of questions divided into thematic sets or modules that may be helpful. Its purpose is not to provide a script but rather a resource that will guide conversation. The modules contain both general questions and questions that are specific to the participants’ personal experiences. The most successful interviews are those in which participants speak about personal experiences, narrating events from the near and distant past, even digressing from the interviewer’s questions or topics to initiate talk about their interests and feelings (Labov, 2001: 92–94).

Equipment

We are fortunate to conduct research in an age of ever improving technology. Current recording equipment is now smaller, better, and less expensive than in even the recent past. The most convenient audio recorders are now digital, which offer the advantage of direct file transfer to computers for transcribing and analysis. When choosing the appropriate machine, keep recording quality in mind. It is best to procure an instrument capable of recording uncompressed, more detailed files that can be used for acoustic analyses, even if that is not your immediate goal. Although most recorders have reliable built-in omnidirectional microphones, best practices call for an external cardioid lavalier microphone, placed on the participant's lapel area (Cieri, 2011: 28–30). For further details and technical specifications, consult Cieri (2011).

Although the presence of recording equipment highlights the artificial nature, or at least, the main purpose of the interview, try not to draw undue attention to the recorder. After about 10 minutes of conversation, the level of engagement should be high and the equipment will be forgotten or peripheral.

Components of the Sociolinguistic Interview

Linguistic data

We have discussed ways to encourage naturalistic speech in the sociolinguistic interview. However, using conversation as our only source of linguistic data means that we rely both on the random – the lexicon that reflects the subjects we discuss – and the systematic – the relative surfeit or dearth of particular forms in the sociolinguistic interview. This randomness can affect the collection of both morphosyntactic, grammatical, and phonetic/phonological variables, to say nothing

Equipment tips

- It is best to interview in a location with a power outlet, and to use it rather than batteries. If you are in a location that requires you to rely on batteries, always make sure you have extras on hand.
- Most external microphones are battery operated. Double check that the microphone is turned off after each interview so the battery does not run out. If it does, you still have your extras.
- Ensure that the microphone is appropriately placed to be certain of effective recording of the participant.
- Test your recording equipment before you begin. Check (i) the recording level and (ii) that recording is actually taking place.
- Be sure that you have an extra storage device, such as an SD card, in case problems occur or the interview goes longer than anticipated.

of discourse variables. The number of tokens per speaker you aim to analyze depends on your needs and chosen methods of analysis. The general axiom “more is better” is tempered by practical issues such as time and resources. In quantitative analyses such as multivariate analyses, you may wish to include approximately 100 tokens of each variable per speaker. You may wish to control for or track lexical and phonetic effects (see Guy, this volume). It may seem likely that an hour-and-a-half to two-hour interview would meet your quantitative needs, but depending on your specifications and the goals of your analysis, that may not be the case.

The data you collect for your project will serve you in the future as well. If a promising thought occurs to you, it does not hurt to add an element to your fieldwork. For example, adding a word list at the end of the interview will not hinder the conversation portion of the interview, and it might come in handy later. Similarly, it is best to elicit more rather than less demographic information.

For example, if your study includes an acoustic analysis of the English high back vowel [u], Di Paolo, Yaeger-Dror, and Wassink (2011: 88) suggest treating tokens with following nasals, following velars, preceding and following liquids, and clusters with liquids as separate categories due to their effects on the vowels. Following nasals have a tendency to raise and tense vowels in words such as *hang* and *bag*, and following laterals may contribute to lowered realizations in words such as *help* or *shelf*. If these contexts are not separated or distributed evenly, your results may be skewed. Although intuitively, stressed [u] seems like a common sound, finding enough suitable tokens between selected obstruents can be a challenge. You may find several tokens of *food*, but words such as *suit*, *boot*, *booed*, *hoot*, or *tube* are less common. If your project involves acoustic or other analyses of phonetic variables, consider including components such as word lists or reading passages.

If you examine grammatical or discourse variables, you may wish to include tasks designed to elicit particular forms. For example, if you are interested in imperative forms (e.g., *Study more!* or *Don't watch too much TV*) or ways in which your participants convey commands (*Could you bring me some water?*; *Please remember to be careful with those dishes*), you could design a component in which you present a scenario that calls for commands or requests and ask the participants how they or others might convey their wishes. You can also try to elicit forms subtly in the conversation portion of the interview by asking participants to recall scenarios from their past. For instance, a topic such as rules and discipline in the home might begin with questions about how strict their parents were, leading to more specific incidents and recollections of how parents instructed or disciplined children. Of course, these involve more attention to speech and therefore a shift in sociolinguistic style. There are trade-offs to bear in mind when considering your project goals and the methods that best suit them.

Social data

We have already discussed collecting information about your target sample through demographic research, first-hand observation and “hanging out,” and interaction

Interview tips: dos and don'ts

- *Do* let the participant take the conversation in any direction they choose, as long as they're talking.
- *Don't* steer them back to topics they were hesitant about, even if they're part of your module or list of "good" questions.
- *Do* feel free to participate to some extent in the conversation, especially if the participant asks you a direct question. Then, steer the discussion back to them.
- *Don't* dominate the conversation with your own views and experiences. Try to curb the urge to share, or modify it. Remember, when you extract data, you will want their speech, not your own.
- *Don't* interrupt the participant. No matter how enthusiastic your need to share your views and experiences, never interrupt the participant in mid-flow. This may seem frustrating, but it is nowhere near as frustrating as extracting tokens and finding that you have more data from your own speech than your subject's.

with participants and their communities. Ethnographic methods are an excellent way to glean insights into relevant emic and etic social distinctions. However, they present two main challenges: the necessary time and resources, and potential lack of equivalent data for each speaker in your sample. One way to resolve this is to seek ethnographic and demographic information in conjunction with or as part of the sociolinguistic interview. This approach has the advantage of ensuring consistent data for and about all speakers and can take a number of forms. One option involves developing a standard set of questions about practices, behavior, and attitudes that you pose

In addition to providing further qualitative data about your participants' social context, the results of your questionnaires can be used as part of your quantitative analysis. You can develop a system to quantify the social information and assign speakers values based on their answers to selected questions. My colleague James Walker and I used this approach in our work on linguistic variation and ethnic identity in Toronto English (e.g., Hoffman and Walker, 2010). We wanted to move beyond classifications of ethnicity based on ancestral descent and consider the extent to which speakers oriented themselves toward aspects of their ethnicity. We included questions such as: "Do you think of yourself as [e.g.] Italian, Canadian, or Italian-Canadian?" "Are most of your friends Italian?" "Should Italian-Canadian kids learn Italian?" "Italian culture?" "Would you rather live in an Italian neighborhood?"

As part of our analyses, we assigned each participant scores based on their responses to questions about language use, participation in community activities, and attitudes toward their ethnicity. We then used these scores in quantitative analyses of linguistic features in order to investigate the role of identity in variation.

orally and record at the end of the interview (e.g., Hoffman and Walker, 2010). When you have enough conversation (after about an hour and a half to two hours), ask your participants for a few more minutes of their time to answer some additional questions. At this point, in order to ensure consistency, you should read the questions directly from a prepared questionnaire. If a particular response tweaks your interest, feel free to veer off script a little to add follow-up questions; just be sure to return to the questionnaire. Written questionnaires are another option (see Schleef, this volume). You can either leave them with the participants to be picked up later or have them fill them out immediately following the interview. Include different types of questions in your oral or written questionnaire. Elicit yes/no answers, open-ended answers, or information on a scale. Possible topics include: language use and preference (for multilingual communities), social activities and distinctions, social networks, family history.

Records and Writing Up

Having addressed many aspects of the fieldwork process, I would like to end with an essential but under-discussed step: record keeping. Some people are naturally more organized than others. The fieldwork process offers an ideal opportunity to hone your organizational skills. First of all, acknowledge that organization is an important aspect of work. When I was a graduate student, I only thought I was working if I was engaging in fieldwork, transcribing, analyzing, or writing. Not so! Keeping good, organized records is work, and hard work at that. It is best to take advantage of both old-school and new-school media. A bound notebook will come in handy for jotting down information and ideas through the fieldwork process. From phone numbers to locations, descriptive clues (you'll be meeting a lot of people) to research questions, handwritten notes may be quicker and less conspicuous than using an electronic device. Then again, there may be contexts in which you'll fit in better by pretending to be texting. If you use a smartphone or tablet, back them up in case of e-failure. Make copies of your hard-copy notes too!

Once you've begun your interviews, be sure to keep track of your consultants. Spreadsheets are a convenient way to create a bio-information table. Allot a separate line for each consultant, and enter any relevant information (this is a good place to give them a pseudonym) in columns. In addition to a pseudonym, you may wish to assign each speaker a letter or symbol from the keyboard as a convenient identifier for your analyses. This file can be used as a template; when you add linguistic data, it can be easily formatted for use in analytical programs such as SPSS, R, Goldvarb, Rbrul, or NORM, the Vowel Normalization Suite (Thomas and Kendall, 2007). Set a time either following each interview or at regular intervals to enter this information. It may seem tiresome, but you'll be glad you did.

Quagmires and Troubleshooting

- *You can't fill your sample.* Keep looking until you exhaust your connections' connections. If you still don't have enough speakers, reconsider the makeup of your sample.

- *Your equipment fails.* Troubleshoot based on the guidelines above. If nothing works, try to reschedule the interview. If you cannot, just move on.
- *No one wants to talk to you.* Ask your contacts or community members for guidance and advice on how best to approach potential participants.
- *A participant's speech is stilted and formal.* Try all your tricks. If they can't stimulate good speech, chock it up to experience and move on. Everyone has good and bad interviews.
- *You get caught in an uncomfortable situation.* Keep a phone nearby at all times, and let someone know where you will be and for how long. Politely excuse yourself and leave as quickly as possible.
- *After your first or second interview, you realize that you should have sought additional demographic information.*
 - Incorporate it now. Even though you won't have the additional data for your entire sample, you can still incorporate it into your study by specifying it was obtained from a subsample of speakers.
 - Contact the participant and collect the information remotely or in person.

Advice

You now have basic tools to guide you through your fieldwork journey. Refer back to this, and other chapters in this volume. Follow up by consulting other published sources, such as those listed below, and by sharing with colleagues and mentors. Prepare yourself, but remember that you'll learn best from your own experiences.

Tips

Remember to:

- Work with what you have.
- Represent yourself as you: you may be a stranger to your community, you may be a member in a strange role. People respond to authenticity.
- Check equipment and bring extra batteries.
- Expect to fail ... sometimes.
- Be flexible, natural, and responsive during the interview, and use your skills to elicit the most and best speech from participants (see *Observing, Interviewing, and Recording* above).
- Recognize the constraints on your research. You can't answer every question in the field this time around, but you can address some.
- If there is an idea you wish to explore but do not have the resources for additional interviews, consider including your observations as hypotheses for future research.
- Patterns may emerge as you analyze data, spend time in the community, and listen to interviews. Consider how you can best incorporate these insights into your research. Quantitative analyses? Qualitative observations?

Project Ideas

Some sources of inspiration for your project ideas were mentioned above. The best ideas to pursue are those that excite you, the researcher! They must also meet academic criteria for viability and rigor. You need access to communities, a large enough fieldwork sample, and enough analyzable data.

Here are some suggested points of departure:

- 1 *Public commentary*: Look for articles in local media about different local (or group) ways of speaking. Do your friends and family comment on this usage? Ask people whether or not a particular way of speaking can identify people as residents of X or members of group Y. Sometimes anecdotal impressions are terrific points of departure to identify systematic differences. Sometimes these characterizations are social stereotypes that you can debunk.
- 2 *Personal observation*: Are you doing something in your own speech that drives you crazy? OK, this is not how linguists are supposed to react, but whether we like it or not, we're only human, with judgments of our own. We're never the best judges of our own speech, but it can serve as inspiration, as can the speech of close friends and family. Lately I've noticed that I've been posing *yes/no* questions by using high terminal intonation: *You're going out?* or *She liked the cake?* rather than inverting subject and verb or using *do* support: *Are you going out?* or *Did she like the cake?* I haven't begun this project yet, but I've been wondering about the variable context for such questions and which factors contribute to their different forms.

Further Reading and Resources

- Chambers, J.K., Trudgill, P., and Schilling-Estes, N. (eds.) 2002. *The Handbook of Language Variation and Change*. Malden, MA: Blackwell.
- Milroy, L. and Gordon, M.J. 2003. *Sociolinguistics: Method and Interpretation*. Malden, MA: Blackwell.
- Tagliamonte, S.A. 2006. *Analysing Sociolinguistic Variation*. Cambridge: Cambridge University Press.

References

- Blake, R. and Josey, M. 2003. The /ay/ diphthong in a Martha's Vineyard community: what can we say 40 years after Labov? *Language in Society* 32(4): 451–485.
- Cameron, R. 2010. Growing up and apart: gender divergences in a Chicago land elementary school. *Language Variation and Change* 22(2): 279–319.
- Cedergren, H. 1973. The interplay of social and linguistic factors in Panamanian Spanish. PhD dissertation. Cornell University.
- Chambers, J.K. and Trudgill, P. 1980. *Dialectology*. Cambridge: Cambridge University Press.
- Cieri, C. 2011. Making a field recording. In *Sociophonetics: A Student's Guide*, ed. M. Di Paolo and M. Yaeger-Dror, 24–35. London: Routledge.
- Coupland, N. 2007. *Style: Language Variation and Identity*. Cambridge: Cambridge University Press.

- Cukor-Avila, P. 2013. Naming vs. not naming field sites and fieldwork participants. In *Data Collection in Sociolinguistics: Methods and Applications*, ed. C. Mallinson, R. Childs, and G. Van Herk. New York: Routledge.
- Cukor-Avila, P. and Bailey, G. 2001. The effects of the race of the interviewer on sociolinguistic fieldwork. *Journal of Sociolinguistics* 5(2): 254–270.
- Di Paolo, M., Yaeger-Dror, M., and Beckford Wassink, A. 2011. Analyzing vowels. In *Sociophonetics: A Student's Guide*, ed. M. Di Paolo and M. Yaeger-Dror, 87–106. London: Routledge.
- Eckert, P. 2000. *Linguistic Variation as Social Practice*. Oxford: Blackwell.
- Eckert, P. 2012. Three waves of variation study: the emergence of meaning in the study of variation. *Annals of Anthropology* 41: 87–100.
- Feagin, C. 2002. Entering the community: fieldwork. In *The Handbook of Language Variation and Change*, ed. J.K. Chambers, P. Trudgill, and N. Schilling-Estes, 20–39. Malden, MA: Blackwell.
- Gilliéron, J. and Edmont, E. 1969. *Atlas linguistique de la France*. Bologna: Forni.
- Haddican, B. 2007. Suburbanization and language change in Basque. *Language in Society* 36(5): 677–706.
- Heap, D. 2003. *Linguistic Atlas of the Iberian Peninsula*. www.alpi.ca (last accessed March 26, 2013).
- Hoffman, M.F. and Walker, J.A. 2010. Ethnolects and the city: ethnic orientation and linguistic variation in Toronto English. *Language Variation and Change* 22: 37–67.
- Johnstone, B. and Kiesling, S.F. 2008. Indexicality and experience: exploring the meanings of /aw/-monophthongization in Pittsburgh. *Journal of Sociolinguistics* 12(1): 5–33.
- Johnstone, B., Andrus, J., and Danielson, A.E. 2006. Mobility, indexicality, and the enregisterment of “Pittsburghese”. *Journal of English Linguistics* 34(2): 77–104.
- Labov, W. 1963. The social motivation of a sound change. *Word* 18: 1–42.
- Labov, W. 1966. *The Social Stratification of English in New York City*. Washington, DC: Center for Applied Linguistics.
- Labov, W. 1972a. *Language in the Inner City*. Philadelphia: University of Pennsylvania Press.
- Labov, W. 1972b. *Sociolinguistic Patterns*. Philadelphia: University of Pennsylvania Press.
- Labov, W. 1984. Field methods of the project on linguistic change and variation. In *Language in Use: Readings in Sociolinguistics*, ed. J. Baugh and J. Sherzer. Englewood Cliffs, NJ: Prentice Hall.
- Labov, W. 2001. *Principles of Linguistic Change*. Vol. 2: *Social Factors*. Oxford: Blackwell.
- Labov, W., Ash, S., and Boberg, C. 2006. *The Atlas of North American English: Phonetics, Phonology, and Sound Change*. Berlin: De Gruyter.
- Mendoza-Denton, N. 2008. *Homegirls: Language and Cultural Practice among Latina Youth Gangs*. Malden, MA: Blackwell.
- Milroy, L. and Gordon, M.J. 2003. *Sociolinguistics: Method and Interpretation*. Malden, MA: Blackwell.
- Pope, J., Meyerhoff, M., and Ladd, D.R. 2007. Forty years of language change on Martha's Vineyard. *Language* 83: 615–627.
- Sharma, D. and Sankaran, L. 2011. Cognitive and social forces in dialect shift: gradual change in London Asian speech. *Language Variation and Change* 23(3): 399–428.
- Tagliamonte, S.A. 2006. *Analysing Sociolinguistic Variation*. Cambridge: Cambridge University Press.
- Tagliamonte, S.A. 2003–2007. Research Grant. Social Sciences and Humanities Research Council of Canada. (SSHRCC) *Linguistic Changes in Canada Entering the 21st Century*. 410-2003-0005.
- Thomas, E.R. and Kendall, T. 2007. NORM: the vowel normalization and plotting suite. Online resource. <http://ncslaap.lib.ncsu.edu/tools/norm/> (last accessed March 26, 2013).

3 Written Surveys and Questionnaires in Sociolinguistics

Erik Schleef

Introduction	43
Developing a Questionnaire	43
Writing Questions/Items	45
Structuring the Questionnaire	49
Testing the Questionnaire	51
Administering the Questionnaire	52
Processing and Evaluating the Questionnaire	53

Summary

This chapter discusses how to construct and administer one of the most important tools of survey research: the questionnaire. It outlines the preparatory stage in questionnaire design and gives examples of sociolinguistic studies for which questionnaires have been used. It describes how to write good questions and provides a brief overview of some main question types. The standard structure of questionnaires (introduction, mid-section, conclusion) and the elements that are normally found within them are described and exemplified. Finally, the chapter addresses the issue of how to test and, eventually, administer a questionnaire successfully.

Research Methods in Sociolinguistics: A Practical Guide, First Edition.

Edited by Janet Holmes and Kirk Hazen.

© 2014 John Wiley & Sons, Inc. Published 2014 by John Wiley & Sons, Inc.

Introduction

We have all experienced survey research as participants, perhaps by enduring an interview by a market researcher on the telephone, or by returning a customer-service questionnaire. A survey allows researchers to organize data collection when the number of potential respondents is very high or when they cannot easily be accessed. In order to conduct a survey, researchers should consider three important issues: (i) the general design of the survey, (ii) the sampling methods, and (iii) the data collection instrument. This chapter focuses on the third point; specifically, I outline how to construct and administer questionnaires, especially self-administered written questionnaires.

Questionnaires allow researchers to collect a relatively large amount of data quickly. If the questionnaire construction is well thought through, processing the data is also quick and efficient. Questionnaires are also relatively cost effective and can be used in a variety of contexts. Writing a good questionnaire is not easy; however, a large amount of helpful knowledge has been acquired in various branches of the social sciences that can help to make the process of questionnaire writing and administration a much more effective and successful endeavor. The following section describes this process briefly from a sociolinguistic point of view. This chapter outlines:

- how to develop a questionnaire;
- how to write good questions;
- how to structure a questionnaire;
- how to test a questionnaire;
- how to administer the questionnaire.

Developing a Questionnaire

Researchers usually have only one shot at collecting their data, so it is extremely important to make sure the questionnaire is based on thorough preparation and is as clear and effective as possible. First, a problem statement and a research question, motivated by previous research, should be developed. It is important to decide exactly what the study is supposed to find out. Second, a preliminary set of theoretically driven ideas should be generated on topics that may be helpful in answering the research question.

In order to gain insight into the relevant issues, the questionnaire design phase is sometimes preceded by focus group interviews or a short questionnaire with open questions. These are good methods for finding out what questions work and what potential answers could be used, in the words of the target population, in closed questions in the final questionnaire. It is always worth checking what other tools have been used in the literature to answer similar questions. Such questionnaires, or scales from these, may very well be appropriate candidates for inclusion. Box 3.1 lists examples of questionnaire-based research in the area of sociolinguistics.

Written surveys and questionnaires can be used for a variety of sociolinguistic problems. Dillman (1978: 80) differentiates between five types of question content: *behavior*, *beliefs*, *knowledge*, *attitudes*, and *attributes*. These may relate to sociolinguistics

Box 3.1 Examples of questionnaire-based research in the area of sociolinguistics

- *Language surveys* investigate what languages are spoken in a specific area, the sociolinguistic profile of ethnic minorities (e.g., Extra and Yagmur's 2004 Multilingual Cities Project), and in what domain certain varieties are spoken (e.g., Choi's 2005 study on bilingualism in Paraguay).
- *Regional variation surveys* investigate dialect variation. Traditional dialect surveys are often based on a questionnaire administered by a fieldworker. For example, the *Linguistic Atlas of England* (Orton, Sanderson, and Widdowson, 1978) is based on data from a long questionnaire that collected dialect vocabulary, pronunciation, morphology, syntax, and so forth. In other studies, questionnaires were sent by post; for example, Chambers (1994) developed a postal questionnaire for a dialectal survey of the Golden Horseshoe area of Canada. Even phonological variables are included in some questionnaires. Such items demand a high degree of introspection from respondents, which not all may have. Other methods are better suited for the elicitation of phonological variables. For example, Llamas (2007) has developed a set of questionnaires, which she used in combination with an interview to collect data on Teeside English.
- *Surveys of language use* explore the use of particular words and phrases in research that is not of a dialectological nature; for example, the use of loan words, swear words, certain color terms, or sexist/non-sexist language use. For example, Fuller (2005) developed a questionnaire on the uses and meanings of the word *Ms*. Such surveys provide us with some important data, but these data may be somewhat different from actual usage (e.g., see Beebe and Clark Cummings, 1996, on comparing discourse tasks and natural data).
- *Language attitude and perception studies* explore attitudes toward languages, dialects, accents, new vocabulary, or pronunciations. They cover a large breadth of topics ranging from work on ethnolinguistic vitality (Bourhis, Giles, and Rosenthal, 1981; Allard and Landry, 1986), to questionnaires used in matched and verbal guise tests (e.g., Lambert, 1967; Ladegaard, 1998; Clark and Schleef, 2010; Garrett, 2010) and work exploring the frequency (Labov *et al.*, 2011) or social meaning of specific linguistic features (Campbell-Kibler, 2007).
- *Acceptability judgments* probe whether a set of sentences or constructions are deemed grammatical. Judgments are normally reported in terms of categories such as *acceptable*, *marginally acceptable*, *unacceptable*, *good*, *terrible*, and so on. Bard, Robertson, and Sorace (1996) outline the method of magnitude estimation, which also allows graded acceptability to be measured: for example, that a sentence is five times more acceptable than another sentence.

in a variety of ways. *Behavior* relates to what respondents are doing or have done in the past (actions, habits, lifestyles). It may relate to what language or variety a person uses in a specific context, and with whom. *Beliefs* access what we think is true and may concern language beliefs and ideologies; for example, folklinguistic beliefs concerning what the standard language is, how it developed, and when it should be used.

Knowledge can relate to which languages we know and how well we know them. *Attitudes* concern how we evaluate languages, varieties, and linguistic features. Finally, *attributes* refer to information about the respondent's characteristics. It is very important to formulate questions that tap into the area in which we are interested (e.g., language behavior). Similarly, it is crucial to limit interpretations of answers to questions concerning – in this case, language behavior – this concept only. All too often researchers extrapolate from behavior to beliefs and attitudes.

Once a problem statement has been formulated, ideas about how to approach the research issue have been collected, and the type of question content has been selected, these should be translated into task-appropriate questions. In a first round, raw questions should be formulated, and these should later be refined and turned into questionnaire items.

Writing Questions/Items

Questions in a questionnaire usually do not take the form of actual questions, which is why the term *item* is often used. The two terms are used synonymously here. Most questionnaire items consist of (i) instructions, (ii) a question or statement, and (iii) possible answers. Questions should be separated very clearly from the instructions using different typefaces or fonts. Response options should cover a range of responses for a variety of respondents. Care should be taken to ensure that question options are not unbalanced in one direction or another. If there is a neutral position, there should be the same number of response options on either side. There are two main types of questionnaire questions: closed questions and open-ended questions.

Closed questions

Closed questions are those that provide a closed range of possible answers. These answers have been selected by the researcher, and respondents are asked to choose one or more of these answers or organize them in a multitude of other ways. Since possible responses are limited, closed questions can be analyzed easily once all data have been collected. They are suited particularly to collecting relatively simple information. There are different types of closed questions; the most suitable for sociolinguists are introduced below (see De Vaus, 2005, for illustrative examples of a host of other question types).

Checklists give a selection of possible answers, and respondents can select as many as they wish that apply to a particular statement or question, for example:

The following is a list of cities in England. In which of these do you think some locals speak a widely recognizable local dialect? Please circle.

London	Leicester	Liverpool	Leeds	Sheffield	Nottingham
Manchester	Birmingham	Northampton	Carlisle	Norwich	Plymouth

Rankings are an extension of the checklist. They ask respondents to place the options in terms of preference, frequency, or some other variable. For example,

Box 3.2 Multi-item scales

Question wording has been shown to influence an answer or different levels of agreement. Multi-item scaling is a method used to reduce the weakness of such idiosyncratic interpretation for some data types. At least four differently worded items are created that all focus on the same target (e.g., language ability, attitude toward a particular language policy), but are presented in different parts of the questionnaire. Once all the data have been collected and checked to see that these items really do tap into the same trait, the mean is calculated for the relevant items. It is assumed that idiosyncratic interpretations of a particular item are averaged-out during this process. See Dörnyei (2003) for more detail.

Should several bipolar adjectives refer to positive versus negative concepts, their poles should be varied within the task so as to keep respondents focused on the task and avoid superficial responses.

True-false questions are suitable when researchers are interested only in yes/no decisions. Some respondents, such as children, may not be able to give any more complex answers, so, for these, this is a very appropriate question type. The key sentence has to be short and should contain only one main idea, which must not be subject to debate. If there is room for debate, a *Don't know/Not sure* option should be given. The two examples below demonstrate this well:

Which of the following statements do you agree with? Please circle the correct answer.

I think women talk more than men	True	False	Undecided
I have more male than female friends	True	False	

Multiple-choice questions consist of a question or statement and a selection of possible answers. As much information as possible should be included in the stem item so that this does not have to be repeated in the options. Because of the split into stem and options across a sentence, multiple-choice questions are particularly liable to misunderstanding, so questions must be phrased clearly (see Box 3.3).

Based on the recording you've just heard, this person gives the impression of being (check all that apply):

- Reliable
- Educated
- Friendly
- Other (please specify): _____

It is, in some cases, possible that none of the options listed may apply. Respondents may simply leave all boxes blank in this case; however, to find out whether they were left blank because options didn't apply or because the respondent just didn't feel like answering this question, it is advisable to give a *Don't know* or *Other* option.

To make the questionnaire more efficient, it may be worth including questions that direct respondents to the next question applicable to them, based on a previous

Box 3.3 Writing good items

- Items should be short, simple, and natural-sounding.
- Avoid acronyms, abbreviations, technical terms, and colloquialisms.
- Avoid double-barreled questions. They ask about two different topics at the same time, while expecting only one answer; for example, *Do you think that bilingual education should be promoted by the government, or do you feel that only English should be used in classrooms?* Split such questions into two.
- Avoid items containing negatives as they can be confusing; for example, *Do you not agree that young people are under less pressure not to use non-standard forms of English?*
- Avoid ambiguous and unclear terms as they may be interpreted differently by different individuals; for example, non-specific adjectives like *many, sometimes, often, good, easy*, and so on.
- Avoid potentially loaded words and phrases; for example, *modern, free, don't you believe that*, and so on.
- Don't use biased or leading questions. These require respondents to accept an underlying assumption included in the question before it can be answered; for example, *Given that the government have given their best in supporting literacy, what do you think should be done to reduce the increase in illiteracy among the general population?*
- Include only questions where you can safely assume that respondents have sufficient background knowledge to provide an answer.
- Ask sensitive questions only if absolutely necessary, and renew the promise of confidentiality if you do. Such questions may include marital status and age.
- Mitigate questions about behavior that respondents may feel could meet with disapproval, such as swearing or the use of non-standard language. Dörnyei (2003: 58) suggests several strategies; for example, suggesting the behavior is quite widespread, assuming the behavior occurs and asking about details, using research authority (e.g., *Many studies have shown that ...*), casualizing the behavior, or including reasons to explain the behavior.
- The frame of reference of a question should be made clear. Simply asking, "How often do you use French?" is insufficient. An exact context and time frame should be established in the question and a range of appropriate answers provided.
- Avoid all-inclusive or all-exclusive words (e.g., *all, always, every, never, nobody, nothing*) in your questions, as such words do not allow exceptions and result in a lack of variability in the answers. They may be appropriate in answers as part of a variety of options organized on a continuum.

response. These are called contingency questions. For example, if a questionnaire includes a section on code-switching and the answer to a previous question was that a particular respondent does not code-switch, there is no point in asking this respondent to read through a section on code-switching behavior that asks for more detail. A note at the initial code-switching question simply directs respondents to the relevant section: "If you code-switch, please continue. If you never code-switch, please go to section X."

Finally, many questions about biographical or personal information are, essentially, closed questions (marital status, number of languages spoken, age). Answers can easily be anticipated. Narrow age categories should be offered, unless it is felt that more flexibility is needed for data analysis and that asking for the exact age is appropriate. Much thought should be put into how to elicit and create indicators for social variables – such as social class or social networks – in the most concise way possible.

Open-ended questions

In the open-ended question format, respondents do not select from pre-formulated answers but provide answers in the space provided. This may result in a more precise and personal response than those given to questions of the closed type. It may also result in no answer at all and difficulties when analyzing data, as a variety of very different answers have to be categorized in some way. This question type assumes that all respondents have the ability to express themselves in writing. It also uses time that could be dedicated to other topics. Open-ended questions should, thus, be used sparingly. They tend to be more successful if their scope is limited by giving respondents a certain degree of guidance. Open-ended questions should be placed toward the end rather than the beginning of the questionnaire, as they may discourage people from completing the questionnaire. It is also always a good idea to leave some space at the end of the questionnaire, asking “Do you have any other comments?”

There are different types of open-ended questions.

- Specific open-ended questions ask about a precise piece of information.
- Questions of clarification often follow specific closed questions when a particular answer was chosen; for example, *If you believe English should be the only language medium in school, could you explain why you believe this to be a good policy?*
- Sentence completion items ask respondents to complete a sentence that should point to a well-defined issue; for example, *one thing I like about bilingual education is ...*
- Short-answer questions ask for one concept or one idea; for example, *Please make two suggestions for how bilingual education could be improved at your school?*

Structuring the Questionnaire

Once they have been written, the questions and other important information have to be organized in a structured way. This section describes and exemplifies the standard structure of a questionnaire – introduction, mid-section, conclusion – and the elements that are normally found within them.

The introduction

This section of the questionnaire introduces the research to the respondents. It should minimally include: (1) the title of the questionnaire; (2) a *brief* explanation of the

purpose of the research and who is responsible for conducting the study; (3) a polite request to fill in the questionnaire fully and honestly; (4) a short outline of what the questionnaire will cover and how long it will take to complete; (5) a promise of anonymity and confidentiality (see Dörnyei, 2003: 93ff., for anonymity in longitudinal studies where data from the same individual have to be matched); (6) the researcher's name, institution, and contact details; and (7) an expression of thanks.

Point (5), the promise of confidentiality, should be displayed quite prominently and could include a phrase such as: *Your responses will be treated with absolute confidentiality and will not be passed on to third parties. You will remain fully anonymous and information identifying you will not be disclosed under any circumstances.* Point (2), the explanation of the purpose of the research, is often presented in a separate document – a participant information sheet. This is particularly appropriate if it is felt that participants should be provided with more detail. A participant information sheet usually begins with a short introduction and is then organized in a question-and-answer format to present information in a style that is easy to follow and understand.

The middle section

The middle section of the questionnaire comprises the questions. Various question formats should be utilized to keep the respondents interested. The questionnaire should also demonstrate a clear logical structure. Similar topics should be grouped together. When topics change within the questionnaire, this should be signaled clearly with headings or verbal signposts. In order to further highlight questionnaire structure and help with its flow, instructions should be clearly emphasized. Apart from the general instructions at the beginning of the questionnaire, there should be section introductions when it has been divided into subsections. There should also be question instructions that explain how respondents should answer. They should explain and exemplify what rating scales there are and how they work.

Early questions should be factual and undemanding. They should also be interesting and clearly relevant to the research topic in order to motivate the respondents to complete the questionnaire. Open-ended questions and more demanding questions are usually placed toward the end. Most scholars (e.g., Dörnyei, 2003; Dyer, 2006) recommend placing demographic questions (e.g., age, sex, marital status) at the very end of the questionnaire. Respondents usually find them off-putting and an intrusion into their private lives. The potentially sensitive nature of these items could be acknowledged by renewing a promise of confidentiality, such as: *Finally, could you tell us a bit about yourself as this would help us make sense of the data you've provided. All information will, of course, be treated with complete confidentiality.*

Achieving the best questionnaire length for your purposes is crucial. The temptation to cover as much ground as possible should be resisted. A questionnaire should not exceed 30 to 50 items. This usually amounts to some four pages and shouldn't take more than half an hour to complete (with the slowest writers in mind). Ideally, questionnaires should be below this limit! If the questionnaire turns out to be longer, questions of only peripheral interest should be eliminated. Should a longer questionnaire be necessary, some sort of compensation may be appropriate (e.g., payment, a gift card, a small present). Alternatively, the questionnaire could be split into two.

Box 3.4 Visual presentation of the questionnaire

A professional-looking, well-structured questionnaire in an attractive design can contribute to a high response rate.

- Questions should not appear too close together. This will make the questionnaire seem less work to fill in and easier to complete.
- On the other hand, too much white space should be avoided. It may intimidate respondents. The number of pages should be kept low, yet sufficient space should be left for open-ended questions.
- Various typefaces and highlighting options should be used. The structure and sequence of the questionnaire should be clearly marked.
- The questionnaire should be printed on good-quality paper.
- It should be printed on only one side of the paper to avoid respondents missing questions. Alternatively, Dörnyei (2003: 19) recommends the use of the booklet format: a folded double-sized sheet (A3 size).
- Listing alternative answers across the page makes them harder to recognize. If space allows, they should be listed vertically on the page.

The concluding section

The concluding section should include (1) an expression of thanks for taking the time to complete the questionnaire; (2) contact details, in case respondents have questions about the research later; and (3) a renewed promise of anonymity and confidentiality. Additionally, one may (4) ask the respondents to check all questions have been answered; (5) describe how questionnaires should be returned (if this is not clear); (6) explain how survey results can be obtained (e.g., via a web site) or promise feedback (in the form of a poster, a meeting, or an article); and possibly (7) invite respondents for a follow-up interview.

Finally, the draft version of the questionnaire must be proofread. For the questionnaire to be taken seriously, there must be no errors, and it should also be aesthetically appealing (see Box 3.4).

Testing the Questionnaire

Once a draft version of the questionnaire has been developed, it should be tested thoroughly before it is used on the target participants. Testing the questionnaire serves four purposes: (1) to ensure sufficient information is provided to the participants and instructions are clear; (2) to ensure all questions are understood and answerable in the intended sense; (3) to ensure the questionnaire is a reasonable length, and participants are motivated to complete all questions; and (4) to ensure the elicited data will be valid, complete, reliable, and can be analyzed efficiently. There are two basic methods for checking questionnaires: the read-through test and the pilot survey.

Conducting a read-through test simply involves asking several people to read through the finished questionnaire (but not complete it). They should think aloud about the form of the questionnaire, such as the meaning and appropriateness of items, the flow of contingency questions, the structure of the questionnaire, the information given, and so forth. Weaknesses identified in this test should be eliminated. In a pilot survey, the questionnaire is administered to a small number of individuals from the target population. The collected data should then be checked with a view to points (1) through (4) above, and the questionnaire should be altered accordingly.

Administering the Questionnaire

Next, the questionnaire can be distributed. Basic ethical principles should be adhered to at all times. The following sections describe briefly the three main questions my students ask me once they have a finished questionnaire in hand: *Who should I sample? How should I do this? How many people need to fill this in?* First, a good sample is one that resembles the target population in its general characteristics, such as ethnicity, speaker sex, age, social class, and so on. The sample should be a subset of this target population. (See De Vaus, 2002, and Dyer, 2006, for information on sampling methods.)

The size of the sample depends on a variety of factors. The sample should have a normal distribution. One way to achieve this is to include more than 30 people (Hatch and Lazaraton, 1991). However, if we know that there are distinct subgroups in our sample that may be expected to behave differently – for example, different educational backgrounds, or if, in fact, researchers are particularly interested in this difference – this minimum size should apply to the smallest subgroup. Since it is unlikely that all respondents will return their questionnaires, many more than this will have to be distributed. If participation is based on self-selection, researchers must also consider how this may influence the analysis, as results may be biased in some unknown manner (Aiken, 1997); for example, online surveys are restricted to people with computer and Internet access, and, hence, people of a particular socioeconomic status.

There are five main methods of questionnaire distribution. *Assisted completion* involves direct administration by the researcher. *Personal distribution* of the questionnaire is appropriate if access to the targeted population can be arranged. *Telephone surveys* make it necessary to design a questionnaire specifically for this oral medium. *Online, e-mail, or computer-based surveys* allow researchers to include voice samples relatively easily. They may also provide interesting options for item design, such as sliders instead of numbered rating scales. Social networking sites make advertising and distributing such surveys particularly easy. *Mail surveys* also require a questionnaire format adjusted to the specific genre. For a detailed comparison of methods, and their advantages, disadvantages, and expected response rates, see De Vaus (2002: 126ff.).

The major challenge is to ensure many respondents spend sufficient time and effort completing the questionnaire. Dörnyei (2003: 83ff.) discusses some tips and tricks in the field relating to how the quality and quantity of responses can be increased.

Processing and Evaluating the Questionnaire

Once all questionnaires have been collected, each should receive a unique identification number. Next, all answers should be transferred into a computer file (such as Excel). This must be double-checked for accuracy. The initial file *always* contains mistakes!

Data processing may make it necessary to convert all answers into a numerical score, depending on the needs of the statistical program used. Answers to open-ended questions will have to be categorized before they can be converted to quantifiable data. In both cases, a coding guide should be developed to record the meanings of various codes for each questionnaire item.

For data analysis, points on a scale are assigned successive numbers. Negative items are usually assigned a low score, while positive items receive a high score. Scores are summed up and averaged out. Scores should be assigned depending on what they test rather than whether they are *phrased* negatively or positively. Similar care must be taken when interpreting results. A high number does not necessarily mean that something is better; each item must be considered carefully.

Methods have been developed to check whether the data gathered with a questionnaire are valid and accurate (see Dörnyei, 2003, and Dyer, 2006,). For example, it must be ensured that items on a multi-item scale all correlate with each other as well as with the total scale score. This can be measured using the Cronbach Alpha coefficient (see Dörnyei, 2003: 112f.). Items that reduce the internal consistency of a scale should be removed. Factor analysis and computing correlation coefficients are two alternative ways to ensure scales are homogeneous.

Data analysis can now start, which may involve reducing or combining variables in the data file, and it should certainly involve appropriate statistical techniques. Limitations of questionnaires should always be kept in mind in order to keep expectations realistic and to avoid over-interpreting the data (see Box 3.5, based on Dörnyei,

Box 3.5 Limitations of questionnaires

Questionnaires are ...

- not particularly suited to delve deeply into an issue.

Respondents ...

- can be unreliable and misread or misinterpret questions.
- may not be able to read and write well.
- may (consciously or not) answer in a way that reflects what they believe is the desirable answer in order to present themselves in a good light.
- sometimes have a tendency to agree with a statement, especially when the statement is ambivalent or when they are unsure of the answer.
- tend to overgeneralize; for example, when they like/dislike an aspect of a person or thing, they overestimate/underestimate *all* their characteristics.
- get tired of filling in a questionnaire quickly and may give incorrect answers or leave questions blank.

2003). It is worth reflecting on these limitations when writing up the report, and when describing and justifying survey structure and tools in the methods section.

Since questionnaires produce mostly quantitative data, it is very easy to forget the people behind these numbers. Judicious use of data from open-ended questions can enliven the analysis and situate these numbers in real life. The questionnaire data may also be complemented by other methods of data collection to obtain a full and rounded picture of a linguistic context. Focus groups, ethnographic methods, and semi-structured interviews often give excellent insights into what questionnaire respondents may mean. The questionnaire is, thus, a research tool that can stand on its own, but can also be used in combination with other research methods.

Quagmires and Troubleshooting

- *My data don't answer my research question!* Sometimes, students try to answer a research question that cannot be answered with the data that were collected. For example, if it is the task to uncover a link between language attitudes and language use, data about both have to be collected. What is more, data should be collected in such a way that positive/negative attitudes result in a quantifiable score that can be correlated statistically with a similar quantifiable score for language use. Thinking about the research question, and about what data are needed to answer it, is extremely important before any attempt at questionnaire design is undertaken.
- *I'm not finding anything interesting!* Sometimes, not finding a difference between respondents can actually be quite exciting, particularly when it was assumed that a difference would be found or a difference had been shown elsewhere. It is still possible to write an interesting discussion about the lack of difference when one is able to show why this may be the case. However, sometimes lack of variability is due to bad questionnaire design. Questions may have been written badly (see Box 3.3), or questions may have been selected that do not elicit variation. More fine-grained items could be developed or the research question could be refocused.
- *Most respondents left a particular question blank. What should I do?* This is a serious issue, and it should ideally be picked up in the testing phase when changes can still be made to the questionnaire. Respondents may not understand the question, or it may ask for sensitive information. Rephrasing the item may help. The questionnaire may be too long, dull, or impersonal, so it could be shortened, refocused, rephrased, or an attempt could be made to motivate respondents better to fill in the questionnaire.

Advice

Similar to preparing a semi-structured interview, designing a questionnaire begins with a process of generating questions. However, questionnaire construction should result in a much more structured format than interview preparation. A wide range of closed questions has been developed for questionnaires. Remember that open-ended questions are less suited to the purposes of a questionnaire and should be used sparingly; however, they do have their place in questionnaire design and can fulfill important functions. Testing the questionnaire before general distribution is an important, yet widely underestimated, step in questionnaire design. Researchers should consider

carefully the choice of method for questionnaire administration, since some methods are more suited to particular situations. The choice of method can influence the return rate and can limit the population to a particular type of respondents.

Tips: The Stages of Questionnaire Design

Developing a questionnaire

- Compose a problem statement and research question.
- Create a set of theoretically driven ideas or topics.
- Identify the target population.
- Run a literature search to see whether a similar questionnaire has been developed.

Writing questions

- Write raw questions based on your ideas/topics.
- Refine the questions and turn them into questionnaire items, consisting of (i) clear instructions (with examples), (ii) a question/statement, and (iii) possible answers.
- Use a range of items, but avoid many open-ended questions.
- Observe the rules listed in Box 3.3 when writing items.
- Check questions for clarity, sensitivity, etc.
- Include multi-item scales (see Box 3.2).
- Keep the number of items asking for confidential information low.

Structuring the questionnaire

- Write an informative, reassuring, and polite introduction and conclusion.
- Order the items into a clearly structured, logical sequence to form the questionnaire.
- Make starter questions involving and interesting.
- Put open-ended and personal questions toward the end.
- Limit the questionnaire to a maximum of four pages or 30 minutes of completion time.
- Create an attractive and professional design for the questionnaire (i.e., see Box 3.4).

Testing the questionnaire

- Test the questionnaire informally (read and think aloud).
- Pilot the questionnaire.
- Change the questionnaire based on results of these.

Administering the questionnaire

- Decide on questionnaire distribution based on the target population and research goals.
- Make the sample representative of the target population and large enough for statistical analysis.
- Think of ways to increase the quality and quantity of responses.
- Observe ethical guidelines and, if applicable, apply for ethical approval.

Processing and evaluating the questionnaire

- Assign all questionnaires a number.
- Note down codes and processing steps in a coding guide.
- Enter all data into a spreadsheet.
- Double-check and, if applicable, reverse the scores of negatively worded items so they match other items that tap into the same concept.
- Check your data and consider carefully how to handle missing data.
- Consider reducing the number of variables.
- Evaluate the questionnaire for validity and reliability.

Analyzing the data

- Analyze the data and consider the type of respondents and extent of non-response, and how this may have affected any conclusions.
- Include technical data about the questionnaire and data collection in the methods section of your report.
- Use statistics, tables, and figures in your analysis and consider complementing the questionnaire data with other sources of information.

Project Ideas

- 1 *Gender and vocabulary*: Lakoff (1973: 49–52) argues that certain lexical items, such as *adorable*, *charming*, *sweet*, *lovely*, *divine*, certain color terms, and “weak” swear words are more likely to be used by women. Compile a list of words for investigation and design a questionnaire to elicit responses on the usage (or attitudes toward, or both) of *one set* of these words. Explore links of a set of these words to different age groups, educational level, or speaker sex by administering the questionnaire to a number of people. Quantify your results using inferential statistics and compare them with Lakoff’s claims, paying particular attention to the correlations between the forms used (or attitudes toward them) and the social characteristics of your respondents.
- 2 *Loss of dialect words*: Trudgill (2000: 123–125) suggests that words in certain domestic and/or informal areas of social life (e.g., food and drink, clothing, children’s games), and words and phrases in jocular, informal usage are more likely to be maintained in their regional form than other types of words. Devise a questionnaire and conduct interviews with three generations of local speakers (see Llamas, 2007). Focus your investigation on lexical items in these, and some other, semantic fields. Do older speakers know more regional lexical items than younger speakers? Do younger speakers still have an active knowledge of these words, or merely a passive knowledge, or do they not know them at all?

Further Reading and Resources

- Brown, J.D. 2001. *Using Surveys in Language Programs*. Cambridge: Cambridge University Press.
- De Vaus, D. 2002. *Surveys in Social Research*, 5th edn. London and New York: Routledge.
- Dörnyei, Z. 2003. *Questionnaires in Second Language Research: Construction, Administration and Processing*. Mahwah, NJ: Lawrence Erlbaum.
- Gillham, B. 2007. *Developing a Questionnaire*, 2nd edn. London and New York: Continuum.

References

- Aiken, L.R. 1997. *Questionnaires and Inventories: Surveying Opinions and Assessing Personality*. New York: John Wiley & Sons, Inc.
- Allard, R. and Landry, R. 1986. Subjective ethnolinguistic vitality viewed as a belief system. *Journal of Multilingual and Multicultural Development* 7: 1–12.
- Bard, E.G., Robertson, D., and Sorace, A. 1996. Magnitude estimation of linguistic acceptability. *Language* 72: 32–68.
- Beebe, L.M. and Clark Cummings, M. 1996. Natural speech act data versus written questionnaire data: how data collection method affects speech act performance. In *Speech Acts across Cultures: Challenges to Communication in a Second Language*, ed. S. Gass and J. Neu, 65–86. Berlin and New York: De Gruyter.
- Bourhis, R.Y., Giles, H., and Rosenthal, D. 1981. Notes on construction of a “Subjective Vitality Questionnaire” for ethnolinguistic groups. *Journal of Multilingual and Multicultural Development* 2: 145–155.
- Campbell-Kibler, K. 2007. Accent, (ING), and the social logic of listener perceptions. *American Speech* 82: 32–64.
- Chambers, J.K. 1994. An introduction to dialect topography. *English World-Wide* 15: 35–53.
- Choi, J.K. 2005. Bilingualism in Paraguay: forty years after Rubin’s study. *Journal of Multilingual and Multicultural Development* 26: 233–248.
- Clark, L. and Schleaf, E. 2010. The acquisition of sociolinguistic evaluations among Polish-born adolescents learning English: evidence from perception. *Language Awareness* 19: 299–322.
- De Vaus, D. 2002. *Surveys in Social Research*, 5th edn. London and New York: Routledge.
- Dillman, D.A. 1978. *Mail and Telephone Surveys: The Total Design Method*. New York: John Wiley & Sons, Inc.
- Dörnyei, Z. 2003. *Questionnaires in Second Language Research: Construction, Administration and Processing*. Mahwah, NJ: Lawrence Erlbaum.
- Dyer, C. 2006. *Research in Psychology: A Practical Guide to Methods and Statistics*. Oxford: Blackwell.
- Extra, G. and Yagmur, K. 2004. *Urban Multilingualism in Europe*. Clevedon, UK: Multilingual Matters.
- Fuller, J.M. 2005. The uses and meanings of the female title Ms. *American Speech* 80: 180–206.
- Garrett, P. 2010. *Attitudes to Language*. Cambridge: Cambridge University Press.
- Hatch, E. and Lazaraton, A. 1991. *The Research Manual*. New York: Newbury House.
- Labov, W., Ash, S., Ravindranath, M., Weldon, T., Baranowski, M., and Nagy, N. 2011. Properties of the sociolinguistic monitor. *Journal of Sociolinguistics* 15: 431–463.
- Ladegaard, H. 1998. National stereotypes and language attitudes: the perception of British, American and Australian language and culture in Denmark. *Language and Communication* 18: 251–274.
- Lakoff, R. 1973. Language and woman’s place. *Language in Society* 2: 45–80.
- Lambert, W.E. 1967. The social psychology of bilingualism. *Journal of Social Issues* 23: 91–109.
- Llamas, C. 2007. A new methodology: data elicitation for regional and social language variation studies. *York Papers in Linguistics* 8: 138–163.
- Orton, H., Sanderson, S., and Widdowson, J. 1978. *The Linguistic Atlas of England*. London: Croom Helm.
- Trudgill, P. 2000. *The Dialects of England*, 2nd ed. Oxford: Blackwell.

4 Experimental Methods in Sociolinguistics

Katie Drager

The Initial Stages	59
Matched-Guise Technique: What Social Information Do Listeners Attribute to a Speaker Based Only on Hearing Their Voice?	61
Identification Tasks: Can Expectations about a Speaker Affect How a Listener Will Hear Their Speech?	67
After Data Collection	71
Ethics in Experimental Work	71

Summary

There are a number of different experimental designs that can be used to explore sociolinguistically related questions, and the most appropriate depends on the research question. This chapter describes the “how to” of running two experiments each with different experimental paradigms: a matched-guise task and an identification task. The first method can be used to investigate what social characteristics are attributed to people who speak different languages or dialects (e.g., Pidgin versus English), and the second method is used to determine the degree to which expectations about a speaker (e.g., where they are perceived to be from) affect how their speech is processed.

Research Methods in Sociolinguistics: A Practical Guide, First Edition.

Edited by Janet Holmes and Kirk Hazen.

© 2014 John Wiley & Sons, Inc. Published 2014 by John Wiley & Sons, Inc.

The methods are discussed within the context of two research questions, stepping through how a researcher would embark on pursuing the research. The benefits and drawbacks of different methodological decisions (such as whether to use natural or resynthesized speech) and ethics in experimental work are discussed.

Traditionally, experimental methods have remained at the periphery of sociolinguistic work. In the past decade, however, sociolinguists have increasingly begun to use experimental techniques to investigate how language and social information are perceived by listeners. This chapter describes how to conduct two different kinds of experiments: a matched-guise experiment and an identification task. Knowledge of speech synthesis techniques and access to expensive experimentation software are not assumed.

The Initial Stages

The first step for any researcher interested in conducting a speech perception experiment is to decide the research question. The research question must be determined prior to deciding what type of experiment to run. Often, people have a Big Question, such as: Can listeners accurately identify a speaker's ethnicity based only on hearing their voice? Asking a Big Question like this is a good first step, but it needs to be narrowed down before you can really begin. For example, what linguistic variables are you interested in? It's a good idea to read literature reporting results from work conducted on speech production for ideas on how to proceed; if there's a well-established link between a linguistic variable and social characteristic in the production literature, then there's a higher likelihood of observing that link in perception. This is for two reasons: first, whether or not a variable is above the level of consciousness appears to play a role in perception, and second, sticking with well-established links means you're not searching for a relationship in perception that might not even exist in production.

One of the hardest parts of embarking on research that employs experimental methodologies is the task of keeping it simple, and when it comes to experiments, simple is better. As the number of variables increases, so does the complexity of your analysis and the difficulty of transparently explaining your results to the reader. Keeping an experiment simple may sound like it's easy. However, a lot of the Big Questions we're interested in are too big for a single (and simple) experiment. While it can be tempting to try to answer our Big Questions in a single blow, most experimental work is done in parts; it's not uncommon for a paper to report results from three or four related experiments, each new experiment building on results from the previous. To keep it simple, narrow your research question into something manageable and take consolation in promising yourself that you'll conduct follow-up experiments.

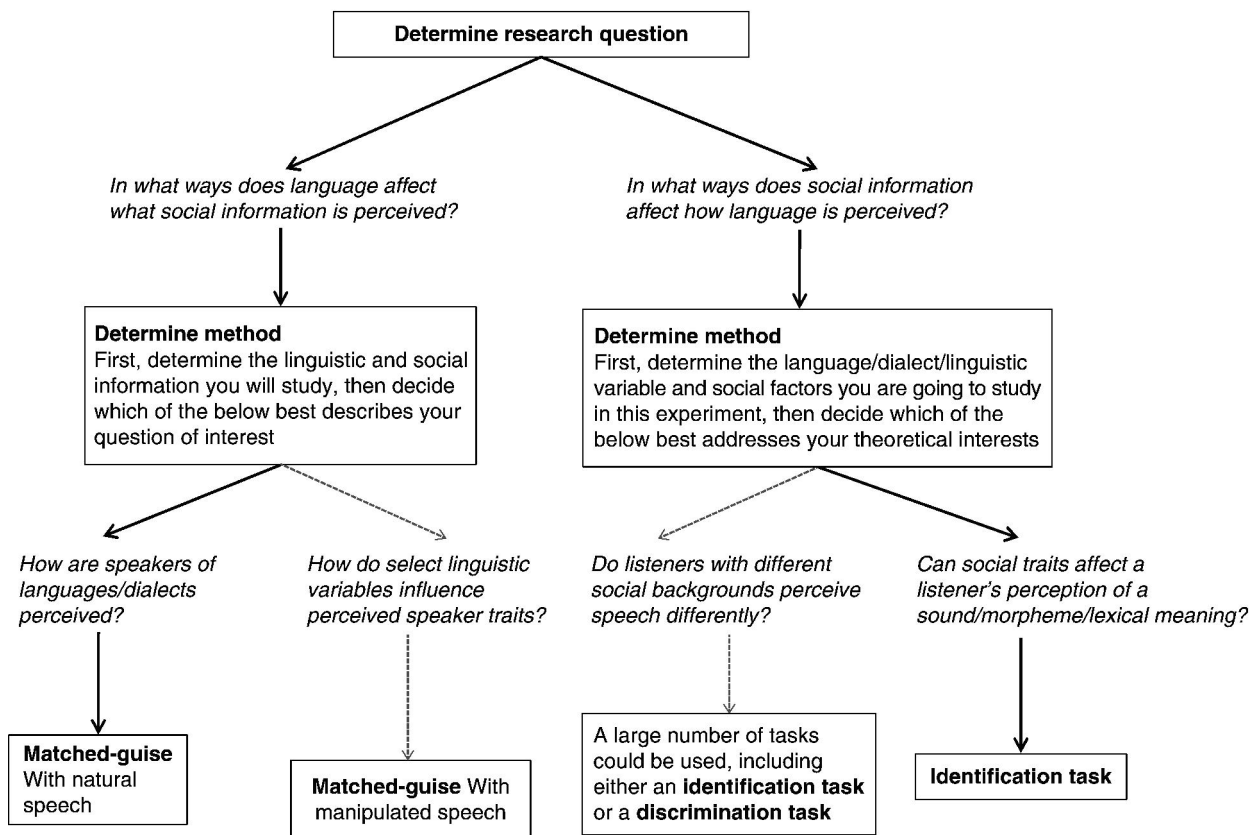


Figure 4.1 Flowchart of methodological decision making during experiment design.

There are two main directions for perception experiments in sociolinguistics: one examines how language variation influences what social information is attributed to the speaker, and the other investigates whether social information about a speaker can influence how a linguistic variable is perceived. For example, if I'm interested in a relationship between a linguistic variant and a speaker's age, I could investigate how different pronunciations of a sound affect perception of how old a speaker is (does language affect what social information is perceived?), or I might want to investigate whether a listener's expectations about a speaker's age can influence what word they believe the speaker produced (does social information affect how language is perceived?). Figure 4.1 presents some of the other decisions that must be made when designing an experiment, with bold arrows designating the decisions made for the two example experiments presented in this chapter. The first example experiment examines what social characteristics (e.g., laid-back) are attributed to speakers of Pidgin (also called Hawai'i Creole) versus English, and the second looks at how expectations of where a speaker is from influence listeners' accuracy at identifying a word.

If you're new to running experiments (and even if you aren't), it's a good idea to try to replicate other researchers' results. If someone has already conducted an experiment addressing your Big Question, there's a good chance that you're a fan of that study and/or you can see ways it could be expanded or improved. Sometimes the replication can just be a matter of running the experiment with new subjects, new stimuli, or in a new dialect region. This is worth doing! For science's sake, it's important for us to uncover whether a trend we have observed in an experiment is merely the one in 20 (or one in a 1000) trial where the trend occurred entirely by chance. Furthermore, fresh new researchers can bring fresh new perspectives, from ways to improve the methodology to new interpretations of experimental results. Some examples of experimental research that replicates previous studies include Munson (2011) (based on Strand and Johnson, 1996) and Hay, Nolan, and Drager (2006) (based on Niedzielski, 1999). When replicating an experiment, you should strive to change as few factors as possible from the original design. That way, if your results are different from those of the original study, you have a better chance of determining why the results might be different: the original results may have been due to chance or the design differed in some crucial way from that used in your study. As your research program progresses, you can then change more and more about the design, perhaps testing interpretations of your earlier results.

Matched-Guise Technique: What Social Information Do Listeners Attribute to a Speaker Based Only on Hearing Their Voice?

The matched-guise technique is a method in which there are pairs of stimuli that are produced by the same person but that vary in some domain. This method could be used to look at how a language, dialect, or linguistic variable affects what social characteristics are attributed to the speaker. For example, a researcher could ask: is L2 accented speech linked with stereotypes about the speaker's job, education, or intelligence?

Warning

Setting up an experiment usually takes much longer than expected. Don't be discouraged; it's worth taking the extra time to ensure that you have the correct experimental design, *stimuli*, *subject pool*, and *fillers*. A well-designed experiment not only runs more smoothly during data collection, but it will save a considerable amount of time, energy, and heartache during analysis.

Remember, the experimenter's goal is to control for everything except the factor being tested. This may require randomizing the *tokens* (which means that every participant hears the tokens in a different order so that observed trends cannot be due to token order) and balancing participants' traits across the different experimental *conditions* (which means that you should have roughly the same number of, for example, females in each condition).

What's that?

- *Experimental stimuli* are the triggers in the experiment that cause (or could cause) a response. In speech perception work, these usually include auditory tokens of sounds, words, or sentences, but they can also include images or video.
- The *subject pool* is the group of potential participants that you recruit subjects from.
- *Fillers* are tokens that are used to "fill in" the experiment. Fillers are necessary so that listeners aren't focusing too much on their responses to target tokens. *Target tokens* are the most important tokens; responses to target tokens are analyzed to test the hypothesis under investigation. In contrast, responses to fillers aren't analyzed.
- *Conditions* are different groupings of experimental stimuli. Across conditions, the stimuli should vary in some dimension of interest, known as the independent variable. Comparison across conditions provides a way to assess the effect of the independent variable on the participants' responses. Examples are given in the example experiments.
- In addition to conducting an experiment, you may wish to collect other kinds of data on the same phenomenon. *Triangulation* is when more than two methods are used in a study as a way of cross-examining the results.

For studies focused on differences across whole languages or dialects, a single multilingual/multidialectal speaker is recorded saying the same content in the two languages or dialects. The two different versions are the matched guises: they are matched for speaker and semantic content but differ in the linguistic domain of interest (i.e., the language or dialect). This method has been used to address questions about what kinds of traits are associated with speakers of a certain language or dialect and how discrimination may result from this kind of linguistic profiling (Lambert *et al.*, 1960; Purnell, Idsardi, and Baugh, 1999). To answer a

research question along these lines using the matched-guise technique, you must have access to at least one speaker who can produce the two languages or dialects; using the same speaker is important because it controls for physiological differences, such as vocal tract size and shape, that are known to affect speech production.

Sometimes, we might be interested in the effect of a single phonetic cue (e.g., intervocalic [r] versus [r^h] in words like *butter*). However, this method should not be used to answer these questions because matched-guise experiments, like all experimental techniques, should strive to control for everything except the variable of interest. For example, if you're interested in the social perceptions of speakers who produce aspirated /t/ between vowels versus speakers who produce a flap, then everything else in the utterance must be the same. This is because two different productions of an utterance vary in their realizations of multiple phonetic factors, even when produced by the same speaker in the same language and even when a stimulus is only a single word. Thus, matched-guise experiments that use natural, unmanipulated speech are best used to investigate subjective reactions to the cluster of variables found in the utterance, which together form the accent, dialect, or language (such as that done in Sample Experiment 1 below).

To answer questions regarding specific linguistic cues, computer software can be used to modify a clip of speech so that there are two versions of the clip that differ only in the target variable. Resynthesizing speech is the most common way to do this (e.g., Levon, 2007),¹ but it is also possible to splice sound segments from two different clips (e.g., Campbell-Kibler, 2007).

For stimuli, some experiments have entire passages while others have only a single word or sound. Certain linguistic cues (such as prosodic variables and entire accents) require that longer stretches of speech be used. Shorter tokens are most often used in cases where the researcher intends to conduct statistical analysis, since shorter stimuli mean that the researcher can collect many more responses from a single participant in a relatively short period of time. Additionally, a greater amount of control is more easily maintained with shorter segments.

In addition to an array of possible stimuli types, experiments that use the matched-guise technique can collect responses in a variety of ways. Which task is most appropriate depends on the research question, how the data will be analyzed, and how much is already known about the relationship between the linguistic variable and the social factor(s) being tested. A good place to start can be to hold focus groups, where groups of naïve listeners² comment on a speaker in one of the two guises. Then, after hearing both guises side by side, the listeners discuss their different perceptions of the speaker. The degree to which the listeners agree or disagree (and how the topic of conversation is negotiated) may help triangulate the Big Question, and their responses can be used to design an experiment that collects quantitative data.

A popular method of collecting quantitative data in matched-guise experiments is to use a rating task. In a rating task, listeners indicate their responses on a bipolar scale. These tasks are frequently based on the Likert scale, assessing how much a listener agrees with some statement made about the speaker (e.g., "I would be friends with this person": *strongly agree* – *agree* – *neutral* – *disagree* – *strongly disagree*). An alternative method is to scale perceptions of traits that are believed to form a continuum (e.g., *very friendly* – *friendly* – *kind of friendly* – *not friendly*).

Responses from focus groups may help determine the continua's endpoints or the statements to be judged.

Alternatives to using a rating task include using a binary forced-choice task (e.g., "Is this speaker friendly or not?" Circle one: *Yes/No*) or using open-ended questions. Open-ended questions can provide richly descriptive responses, but the data can be difficult to analyze statistically and usually necessitate collecting responses from a larger number of subjects. Which type of task you should choose will depend on your goals. If you are interested in knowing whether there's a relationship between a linguistic variant and a perceived social characteristic, then a rating task or a forced-choice task would be fine; if you're interested in clusterings of perceived traits or the wide range of characteristics perceived, you should opt for open-ended questions.

Another important decision to make is whether to use a within-subjects or across-subjects design. An across-subjects design compares responses across two (or more) groups of participants. In a matched-guise experiment, this means that each participant hears a voice in only one of its guises. Their response to that voice is then compared to another participant's response to that same voice in its opposite guise. In contrast, a within-subjects design compares responses made by a single participant; by the end of the experiment, a participant has responded to a voice in both of its guises. A within-subjects design is more robust because there is a greater amount of control: the subject and voice remain the same and the only things that vary are the token's guise and the point in the experiment where the response was given. Compared to an across-subjects design, experiments that use a within-subjects design require a larger number of fillers and voices to keep subjects from noticing that they are re-hearing some of the speakers. Therefore, to keep the experiment short, some researchers opt for an across-subjects design instead.

The first example experiment is a matched-guise experiment with both an across-subjects and within-subjects design. In Hawai'i, many people speak both Pidgin (a creole language which linguists call Hawai'i Creole or Hawai'i Creole English) and English. English is associated with economic wealth and high education, whereas Pidgin is valued for its close ties with local identity, but its use remains stigmatized in formal domains. This example experiment could be run to test the degree to which people's perceptions of Pidgin and English speakers align with ideologies surrounding the languages themselves. With minimal changes to the design, this experiment could be used to investigate the traits associated with two different languages or dialects, or with two different linguistic variants. For equipment, this experiment requires access to a computer that has Praat (software which is freely downloadable), good-quality headphones, and a printer. The experiment could be run in the field (or anywhere outside of the lab) using a laptop or a playback device.

Steps to conducting a matched-guise experiment using Sample Experiment 1

- 1 **Do your research.** Read about the kinds of traits that are attributed to speakers based only on hearing their speech. Read about the languages, dialects, or linguistic variables that you are interested in. This will help you articulate your research question, and it will also give you an idea of how other researchers are addressing similar questions.

- 2 **Design stimuli.** When designing your stimuli, you should control everything across the two guises except the factor that you're testing. This means that if you plan to compare responses to one token with responses from another, those tokens should have the same semantic content. For Sample Experiment 1, you need 16 Pidgin sentences with 16 corresponding sentences in English. For example, one of the Pidgin sentences could be "Guud da sho" for which the corresponding English sentence would be "The show is good." The 16 sentence topics should be as similar as possible; it's recommended that you ask people to rate the sentences in one of the languages (presented on paper, not aurally) using the questions from Step 3 to ensure their similarity.
- 3 **Design the task.** The type of task you should choose depends on your research question and on the type of analysis that you would like to do. When using a rating task, you should usually include some rating labels used in previous work (e.g., Levon, 2007). You might also like to add a few of your own.
- 4 **Apply for ethics approval.** I like to submit the application for ethics review after I have designed the experiment but before I have finished setting it up. That way, I can finish implementing the experiment while waiting for the forms to be reviewed and processed. Refer to the section "Ethics in experimental work" below for more information relevant to ethics review boards and experimental methods in sociolinguistics.
- 5 **Find speakers.** For Sample Experiment 1, you must find four speakers (two males, two females) who can speak the two languages. These four speakers will create your target stimuli. In a quiet room or sound booth, they should be recorded reading the 32 sentences from Step 2 using a high-quality recording device. You also need to record an additional four people who speak English and four who speak Pidgin. Tokens produced by these eight speakers will serve as fillers. Note: As a "just in case" measure, I like to have all speakers record all sentences, even if I don't plan to use all of the tokens as stimuli in the experiment.
- 6 **Prepare tokens.** You should splice the recordings so that there are separate sound files for each sentence. All of the sentences should be matched for amplitude and each sound file should have the same amount of silence at the beginning and end of the sentence as every other sound file. If using longer clips, you should edit out pauses, hesitations, and false starts, which can influence participant responses. Token preparation can be done easily using Praat or Audacity.
- 7 **Set up the perception task.** For Sample Experiment 1, the breakdown of the tokens is shown in Table 4.1. Within a group, there are two different sentences per target speaker, one in Pidgin and one in English. The guises are matched across the groups, meaning that each speaker says the same semantic content in Group 1 as in Group 2 but the language is different. Additionally, an individual participant's responses to a voice can also be compared across the different sentences (with differing semantic content) within a group. Sentences 9–16 are fillers.

The sample experiment will have a set order for the tokens, one that appears random. Rather than the order shown in Table 4.1, the order should be mixed so that there are an equal number of filler and target tokens in each quartile (25%) of the experiment. A set order is used because participants will respond on paper to tokens that have been combined into a single sound file. While the experiment should eventually be replicated with the tokens presented in a random order, the results from an experiment with a set token order can still be informative, particularly for the research question pursued here.

Table 4.1 Breakdown of tokens for Sample Experiment 1, prior to setting the token order

<i>Group1</i>			<i>Group2</i>		
<i>Speaker</i>	<i>Sentence</i>	<i>Language</i>	<i>Speaker</i>	<i>Sentence</i>	<i>Language</i>
1	1	Pidgin	1	1	English
1	2	English	1	2	Pidgin
2	3	Pidgin	2	3	English
2	4	English	2	4	Pidgin
3	5	Pidgin	3	5	English
3	6	English	3	6	Pidgin
4	7	Pidgin	4	7	English
4	8	English	4	8	Pidgin
5	9	Pidgin	5	9	Pidgin
6	10	Pidgin	6	10	Pidgin
7	11	Pidgin	7	11	Pidgin
8	12	Pidgin	8	12	Pidgin
9	13	English	9	13	English
10	14	English	10	14	English
11	15	English	11	15	English
12	16	English	12	16	English

If you know how to program or if you have access to an experiment-running program that can randomize the tokens (there are a growing number of freely downloadable programs, such as OpenSesame and PsyScope), the tokens should be presented in a different order for every participant. Randomization counterbalances for effects of token order, but for this experiment you must pseudo-randomize, ensuring that two tokens produced by the same speaker do not occur consecutively.

- 8 **Make the response sheet.** When designing a response sheet, the main thing to strive for is clarity. Participants should know how many questions they will answer for every voice and when they are about to hear a new speaker. For this experiment, participants respond to two open-ended questions for every voice: “What does this person do for a living?” “And what does this person do in their free time?” Once the experiment is set up, you should double-check that the response sheet and tokens are indeed in the order you intended. Then, pretend you are a participant and try the experiment.
- 9 **Run a pilot study.** For this study, 10 pilot subjects (five in each group) would be fine. Afterwards, talk with the pilot subjects to see whether they found anything strange or difficult about the experiment. Later, examine their responses to identify problems with your experiment and adjust it accordingly. Note: Your ethics review board must be informed of any changes that deviate from your initial application for ethics approval.

Use the data collected during the pilot study to catch any errors in the script, token order, response sheet, or sound files. For example, you may notice that responses to a question are surprising but, upon double-checking, discover that a

token was accidentally played twice in the Praat script. Or you might find that the pilot subjects were aware they were listening to some of the same voices. If this happens, it means you need to add more fillers. You should be able to observe your hypothesized trend in the pilot data. If you don't observe the trend, then change something about the experiment (like the questions you ask or the voices you use) and try running the pilot study again. If the trends are still not observed in subsequent trials, then you may need to modify your initial hypothesis.

Before a subject takes part, have them read an information sheet (and sign a consent form, if appropriate). The information sheet should explain the purpose of the experiment in simple, easy-to-understand terms (e.g., "Many people believe they can tell certain things about a speaker based only on hearing their speech. We are interested in what kinds of characteristics you attribute to the voices you are going to hear."). Make sure the subjects feel comfortable and understand the task. Ask them to fill out a Background Information Sheet where they indicate their demographic information (e.g., where they are from).

The participant should be assigned to one of the two groups. With a large sample size, random assignment into one group or the other would be ideal. However, smaller sample sizes require more control. The information provided on the Background Information Sheet can help with assigning the participants to groups; these groups should be matched as closely as possible in terms of the subjects' social characteristics. This way, everything is controlled across the two groups of subjects (e.g., the subjects' social characteristics, the tokens played, and the order in which the tokens are played). Because the only difference is the guise in which the token is played, differences in responses across the two groups can more safely be attributed to an effect of the guise.

During analysis, compare responses to the Pidgin tokens with responses to the English tokens. Begin by looking at each speaker within a single condition: are there listeners who shift their perceptions of the speaker depending on the speaker's guise? While this compares responses to the same speaker, the stimuli are still different sentences, so it's also important to look across conditions: Do listeners identify a speaker with one occupation for the Pidgin version and another job for the English version? If so, is the shift similar to the one observed within-subjects? This type of experiment can be useful for exploring what kinds of social meanings are associated with certain languages, syntactic structures, lexical items, and phonetic realizations. For example, we might find that listeners are more likely to identify the speakers as laid-back and outgoing when in the Pidgin guise. To investigate whether associations between social and linguistic information affect speech processing, we need to rely on a different kind of experiment design, such as an identification task.

Identification Tasks: Can Expectations about a Speaker Affect How a Listener Will Hear Their Speech?

In an identification task, listeners hear a word and then indicate which word they heard. A researcher can shift listeners' responses through exposing them to social information. The manipulation of social information can have many forms, from regions written at the top of the response sheet (Niedzielski, 1999) to photographs

of people of different ages (Hay, Warren, and Drager, 2006) to stuffed toys associated with different countries (Hay and Drager, 2010).

Identification tasks have been used to look at the perception of vowel mergers (Hay, Warren, and Drager, 2006), chain shifts (work by Sharon Ash described in Labov, 2010; Drager, 2011), and sounds where there are associations between phonetic realizations and the people who produce them (Strand, 1999). Studies that use identification tasks to examine the perception of vowel mergers have used natural tokens produced by speakers who maintain a distinction. Those who have looked at other sounds often use synthesized continua, with two different sounds as endpoints and intermediate steps between the endpoints that are ambiguous as to which sound they are. Researchers who wish to use this technique should observe a large amount of variability in pilot listeners' identification of the tokens. This high degree of variability leaves open the possibility of shifting the listeners' perceptions; if there's some ambiguity in the signal, it can be possible to influence how the sound will be identified, but if listeners hear a token as a certain sound no matter what, then (by definition) there will be no shift observed (and the results won't be very interesting).

Subtle differences in design

In an identification task, listeners hear tokens between which there is some distinction (e.g., *bad* vs. *bed*) and they identify what word (or sound) they heard. Other kinds of tasks include a discrimination task, a commutation task, and a coach task. All of these tasks have been used to look at the perception of vowel mergers (see e.g., Labov, Karen, and Miller, 1991). In a discrimination task, listeners indicate whether two words (e.g., *pin* and *pen*) sound the same or different. A commutation task, on the other hand, is a type of identification task but one in which listeners are played back their own (or similar) productions. The tokens in a commutation task are more similar than in other types of identification tasks and are thus more easily confusable. In a coach task, a listener hears a narrative in which the target sound appears in a word that – depending on how it's perceived by the listener – changes the interpretation of the narrative. The experimenter then asks the subject questions and, based on the answers, can determine how the target sound was perceived.

What's that?

- *Vowel mergers* occur when sounds that were previously distinct are no longer produced or perceived as different sounds. For mergers-in-progress, younger speakers are more likely to merge the vowels and older speakers are more likely to maintain a distinction, and it's possible that the vowels will be merged in some words or phonological contexts but not others.
- *Chain shifts* are ordered changes in the sound system of a dialect.

For simplicity, we will step through an example that uses natural, unmodified tokens of sounds that are undergoing a merger. This experiment is an example of a binary

forced-choice task because subjects are asked to circle which word they heard (subjects select their response from the options provided, so it is forced-choice), and there are only two choices provided (so it is binary). The research question that this experiment could answer is: Does exposure to two different regional labels affect listeners' accuracy in identifying words containing sounds that are involved in a merger in one of the regions?

This experiment design relies on listeners identifying the words inaccurately at least some of the time. Therefore, the experiment should be run in a region where the answer is not obvious to all listeners; namely, it should be run in an area where the merger is in progress.

Steps to preparing an identification task using Sample Experiment 2

- 1 **Do your research.** Make sure there is previous work from speech production that demonstrates a clear relationship between the sound undergoing change and the social characteristic of interest. For this example experiment, you must identify a region where a vowel merger is in progress and another region where that merger is not occurring.
- 2 **Identify minimal pairs.** Both words of the pair should be real words. Ideally, both words would be matched for token frequency; either both words are high-frequency words, or both are low-frequency words. If this isn't possible, then token frequency should be split evenly between the two sounds across the different word pairs. If fewer than five real-word minimal pairs have been identified, then a different experimental paradigm (or a different sound) should probably be used instead.
- 3 **Find speakers.** You will need to find individuals who maintain a distinction between the sounds and then record the speakers reading all of the tokens in isolation. For this experiment, a single speaker is fine.
- 4 **Design the perception task.** Determine the order that the files should be played, making sure that two words from the same word pair are not played consecutively. Tokens can be played more than once throughout an experiment so that you can test for consistency across responses by a single subject. Note: If tokens are repeated, repetition (whether or not a token has been encountered earlier in the experiment and, if so, how many times) should be tested as a predicting factor during analysis because it is possible that hearing a token more than once could affect participants' responses.
- 5 **Apply for ethics approval.** Refer to the section "Ethics in experimental work" below for more information.
- 6 **Prepare your tokens.** Splice the recordings so that you have separate files for each word. Name each separate sound file something concise and easy to remember. Obvious names (e.g., female1-pen-merged.wav) are good names.
- 7 **Set up the perception task.** Create a single sound file with all the tokens in the order determined in Step 4. If saved as a single sound file, it can be played on a portable player, which may be desirable if you plan to run the experiment outside a lab. Make sure participants are given enough time to answer each question.
- 8 **Design a response sheet.** This experiment uses paper response sheets, but it could also be conducted using form-fillable PDFs or experimental software. For each question, the order of the words should vary based on the vowel: for half of the

questions, words with one of the vowels should be listed first, and for the other half of the questions, the other vowel should be listed first. Make sure that the order of the minimal pairs on your response sheet matches the order in which the auditory tokens are played. Think your experiment is ready? Pretend you are a participant and try it.

- 9 **Design a production task**, even if you think you don't need it. It's better to have the data and not need them than to need the data and not have them (because if your results are surprising, it would be helpful to know how your subjects produce the sounds.) Subjects should read all of the words that were used as stimuli. Note: For work on mergers, we usually conduct the production task prior to the perception task so that the subjects aren't influenced by the voices used as stimuli.
- 10 **Run a pilot study**. Conduct your experiment with a small group of subjects. The number of pilot subjects will depend on your study. For this experiment, 10 subjects in the pilot study would be fine. Refer to Step 9 from Sample Experiment 1.
- 11 **Prepare the response sheets**. Once you have made the final changes based on the pilot data, it's time to prepare your response sheets. On half of the response sheets, write the name of the region where the merger is ongoing. On the other half of the response sheets, write the name of the region where speakers maintain a distinction. The region at the top of the response sheet is the experimental variable; by comparing responses across the two groups, you can test the degree to which the different regional labels affect participants' responses.

Now that you've prepared the experiment, you're ready to recruit participants. For this experiment, participants should be met one by one. You should strive not to produce any words that contain the vowels being investigated; it's possible that doing so will affect how the subjects produce and perceive the target sounds during your task. Thus, it may be a good idea to write a script ahead of time for interacting with participants.

When a participant comes in, have them read an information sheet that explains the purpose of the experiment in simple, easy-to-understand terms (e.g., "We are interested in how you hear sounds and what kinds of things influence how you hear them."). Invite the subjects to ask questions and make sure they feel comfortable. Ask them to fill out a Background Information Sheet where they indicate their demographic information and other information you believe could affect their perception of the sounds. Then ask the participant to complete the production task.

After the production task has been completed, the participant should be assigned to one of two groups. With a large sample size, random assignment into one group or the other would be ideal. However, smaller sample sizes require more control. The information provided on the Background Information Sheet can help with assigning the participants into groups; these groups should be matched as closely as possible in terms of the subjects' social characteristics.

Before beginning the perception task, one of the participant groups should receive the response sheets with one region at the top of the response sheet, and the other group should receive the response sheets with the other region at the top. This way, everything is controlled across the two groups of subjects (e.g., the subjects' social characteristics, the tokens played, and the order in which the tokens are played). Because the only difference is the regional label at the top of the response sheet, differences in responses across the two groups can more safely be attributed to an effect of the label.

After Data Collection

You shouldn't begin analysis too soon; it can be discouraging since responses from the subjects aren't likely to be very informative. However, you also shouldn't wait until the end; there may be problems in your design that were not identified during the pilot study, and it's better to discover the problems sooner rather than later.

Once all of the data have been collected, it can be tempting to run statistics immediately. However, it is important to familiarize yourself with the raw data first. What trends do you see? Are you finding what you expected? Only once you have observed some difference in participants' responses (across conditions, speakers, or subgroups of participants) is it meaningful to ask whether that difference is statistically significant.

Ethics in Experimental Work

Different countries and institutions have different steps to ensure that research with human subjects is being conducted ethically. Some countries have something equivalent to the Institutional Review Board (IRB), a board in the United States that sets guidelines for ethical research. Research institutions have committees that make sure proposed work adheres to the guidelines. Regardless of where the work is being conducted, it is important that the experimenter clearly explains the research to the subject so that the subject can make an informed decision about whether to take part in the research or not. Additionally, care should be taken to minimize stress for the subject. Be respectful and courteous when interacting with subjects and when designing your experiment.

Applying for ethics approval increases paperwork and may delay the research. However, these inconveniences are minor compared with the benefits. Review boards exist because there is a need; there have been cases of researchers conducting unethical research, causing physical and/or psychological harm to their subjects, some of whom were vulnerable populations (such as children or prisoners). It is important to remember that the review boards are set up to help you and your subjects; they can provide you with feedback and guidance to make sure that the human subjects with whom you are working are treated in a kind and just way.

Most of the experimental work we do in sociolinguistics has minimal risk. Provided that you don't need to collect identifying information (e.g., names and addresses) and there is no deception (e.g., lying to the subject about the purpose of the experiment), the paperwork and wait for approval is minimal. In the United States, most work along these lines falls under the Exempt category, which still requires review (you are not exempt from submitting an application) but is usually faster. The time it takes to receive approval varies depending on the institution.

Some institutions do not require ethics reviews before the collection of pilot data or research conducted for a class, provided that the results will not be published. However, I advise getting approval for three reasons: (i) it protects the researcher, (ii) it protects the subject, and (iii) there is then the option of presenting or publishing the research if the results are interesting.

Project Ideas

In addition to the two example experiments presented in this chapter, you could use these methods to explore the following questions:

- 1 What social characteristics are attributed to speakers who use different styles of speaking? (matched guise)
- 2 Are speakers who use pauses (or quotative *like* or who giggle) rated more negatively/positively as potential friends, workmates, or lovers than speakers who don't? (matched guise)
- 3 Do people from different regions (or socioeconomic backgrounds) perceive sounds differently from one another? (identification task)
- 4 Can listeners' expectations about a speaker's gender (or ethnicity or social class) affect their identification of sounds produced by that speaker? (identification task)

Go and get 'em, tiger! In experimental work, as in all research, prepare by reading previous literature and make sure you have a reason for doing things the way you have chosen to do them. Then, approach your results with an open mind because they might be different than what you expected, but this is not necessarily a bad thing. Surprises can lead to interesting research programs that push the field forward; let the data lead the way.

Further Reading and Resources

- Campbell-Kibler, K. 2010. Sociolinguistics and perception. *Language and Linguistics Compass* 4(7): 377–389.
- Clopper, C.G., Hay, J., and Plichta, B. 2011. Experimental speech perception and perceptual dialectology. In *Sociophonetics: A Student's Guide*, ed. M. Di Paolo and M. Yaeger-Dror, 149–162. New York: Routledge.
- McGuire, G. 2010. A brief primer on experimental designs for speech perception research. Unpublished manuscript downloadable at: http://people.ucsc.edu/~gmcguir1/experiment_designs.pdf (last accessed March 27, 2013).
- Thomas, E.R. 2002. Sociophonetic applications of speech perception experiments. *American Speech* 77(2): 115–147.

Notes

- 1 For synthesizing vowel continua, commonly used software is Akustyk (Plichta, 2012), a freely downloadable add-on to Praat, with excellent online tutorials. For manipulating pitch intonation contours, the Manipulation window in Praat can be used.
- 2 The use of the word “naïve” here means that the listeners were unaware of the specific purpose of the experiment before taking part.

References

- Campbell-Kibler, K. 2007. Accent, (ING), and the social logic of listener perceptions. *American Speech* 82: 32–64.
- Drager, K. 2011. Speaker age and vowel perception. *Language and Speech* 54(1): 99–121.

- Hay, J. and Drager, K. 2010. Stuffed toys and speech perception. *Linguistics* 48(4): 865–892.
- Hay, J., Nolan, A., and Drager, K. 2006. From fush to feesh: exemplar priming in speech perception. *The Linguistic Review* 23: 351–379.
- Hay, J., Warren, P., and Drager, K. 2006. Factors influencing speech perception in the context of a merger-in-progress. *Journal of Phonetics* 34(4): 458–484.
- Labov, W. 2010. *Principles of Linguistic Change*. Vol. 3: *Cognitive and Cultural Factors*. Oxford: Wiley-Blackwell.
- Labov, W., Karen, M., and Miller, C. 1991. Near-mergers and the suspension of phonemic contrast. *Language Variation and Change* 3: 33–74.
- Lambert, W.E., Hodgson, R.C., Gardner, R.C., and Fillenbaum, S. 1960. Evaluational reactions to spoken languages. *Journal of Abnormal and Social Psychology* 60: 44–51.
- Levon, E. 2007. Sexuality in context: variation and the sociolinguistic perception of identity. *Language in Society* 36: 533–554.
- Munson, B. 2011. The influence of actual and imputed talker gender on fricative perception, revisited. *Journal of the Acoustical Society of America* 130(5): 2631–2634.
- Niedzielski, N. 1999. The effect of social information on the perception of sociolinguistic variables. *Journal of Language and Social Psychology* 18: 62–85. .
- Plichta, B. 2012. AKUSTYK for Praat. <http://bartus.org/akustyk/> (last accessed March 27, 2013).
- Purnell, T., Idsardi, W., and Baugh, J. 1999. Perceptual and phonetic experiments on American English dialect identification. *Journal of Language and Social Psychology* 18(1): 10–30.
- Strand, E. 1999. Uncovering the role of gender stereotypes in speech perception. *Journal of Language and Social Psychology* 18: 86–99.
- Strand, E. and Johnson, K. 1996. Gradient and visual speaker normalization in the perception of fricatives. In *Natural Language Processing and Speech Technology*, ed. D. Gibbon, 14–26. Berlin: De Gruyter.

5 Computer-mediated Communication and Linguistic Landscapes

Jannis Androutsopoulos

Introduction	75
Data Collection in Computer-mediated Communication Research	76
Data Collection in Linguistic Landscapes Research	82
A Note on Research Ethics	87

Summary

This chapter discusses data collection methods in two new areas of sociolinguistic research. With *computer-mediated communication* (CMC) we cover text-based interpersonal communication via digital media, including e-mail and texting, as well as social networking sites and discussion forums. *Linguistic landscapes* (LL) cover language usage in public space, particularly on commercial and official signs. The chapter discusses procedures of data collection in these areas in terms of three *tensions*: (i) between methodological traditions and new domains of language and discourse, (ii) between focusing on language and its techno-social environment, and (iii) between text vs. participant oriented approaches to data collection. It suggests that CMC and LL extend what counts as *sociolinguistic data* and offer test-beds for the problems and challenges that arise as sociolinguistic scholarship moves on to examine language use in new environments.

Research Methods in Sociolinguistics: A Practical Guide, First Edition.

Edited by Janet Holmes and Kirk Hazen.

© 2014 John Wiley & Sons, Inc. Published 2014 by John Wiley & Sons, Inc.

Introduction

Computer-mediated communication (CMC) and linguistic landscape (LL) are two recent areas of sociolinguistic research. The first covers private and public communication via digital media such as e-mail, texting, social networking sites, and discussion forums. The second deals with language use on signs and other artifacts in public space. Although CMC and LL seem to have very little in common at first sight, they both differ from traditional sites of sociolinguistic inquiry in terms of the linguistic data involved.

In particular, both CMC and LL data consist of written language in close relationship to semiotic resources such as typography, image, and layout. Moreover, their ecological conditions challenge traditional linguistic units of analysis such as clause or turn. In CMC research, categories such as “message” or “post” must be taken into account when collecting and analyzing online data, and shop windows, billboard signs, and city walls form the context for written language in the linguistic landscape. In both areas, the social contexts of language production and reception are invisible or only partially retrievable from written language data itself. Information on participants in communicative encounters is limited at first sight, and sociodemographic categories may be of little use. Finally, CMC and LL offer access to overwhelming amounts of data. From a practical angle, these are problems for data collection and analysis, which can be addressed in terms of researcher decisions and methodological procedures. From a broader perspective, CMC and LL extend what counts as sociolinguistic data and offer test-beds for the problems and challenges that arise as sociolinguistic scholarship moves on to examine language and discourse in new environments.

Another similarity between the two areas, as will be suggested in this chapter, refers to the degree of researcher engagement. Data collection in CMC and LL research can be positioned on a continuum between a “purely textual” and a more “ethnographic” approach. On the one hand, it is perfectly possible to collect data without any contact with language users. Large amounts of digital language data can be collected automatically without ever visiting the web sites they originate from, and photographs of street signs can be shot in an unobtrusive manner. Other researchers may choose to elicit data in close contact and collaboration with language users, drawing on techniques from ethnography such as observation and interviews. In both areas, procedures of data collection range from minimal or no engagement on the part of the researcher to full-fledged familiarity with relevant language users and sites of discourse.

Although both CMC and LL research can draw on existing data pools such as photography web sites or annotated CMC corpora (see Beißwenger and Storrer, 2008), this chapter focuses on the collection of original data. Issues and procedures of data collection in each area are covered separately. Each section begins with a brief outline of the research area, followed by a discussion of general strategies of data collection. As it is practically impossible to neatly separate data collection from broader issues of methodology, parts of the discussion address conceptual, methodological, and analytic conditions that may affect data collection. I outline techniques and solutions of data collection in each area, including examples from

my own research on the Internet and in the city of Hamburg, Germany. The chapter concludes with a note on research ethics.

Data Collection in Computer-mediated Communication Research

Overview

Sociolinguistic research on CMC focuses on one or more of the following interests (see Thurlow and Mroczek, 2011):

- language variation and change, especially with regard to written language;
- constraints of digital media on language use and interpersonal interaction;
- language, identity, and interpersonal relations online;
- linguistic diversity, multilingualism, and code-switching;
- language, globalization, and mobility.

This research has drawn on variationist, interactional, and discourse traditions in the field, applying both quantitative and qualitative methods. Rather than straightforwardly transferring sociolinguistic methods to CMC data, researchers need to adapt familiar methods to the conditions of digital language use. For example, technological restrictions rule out conversational processes such as turn taking in Internet data, and the absence of sociodemographic information imposes limitations to variationist analysis.

It is important to keep in mind that Internet research evolves together with the rapid sociotechnological evolution of the Internet itself. In the last 25 years, digital media developed from a small set of text-only communication modes into a rich repertoire of multimodal and multimedia choices that are almost ubiquitous in the Western world (though issues of digital divide persist). Early linguistic scholarship dealt with CMC in the pre-Web era, which was largely restricted to interpersonal exchanges carried out on language-heavy modes such as mailing lists, newsgroups, and Internet Relay Chat. Current scholarship is situated in the era of the participatory Web, where anyone can draw on the rich infrastructure provided by blogs, social networking sites, media-sharing sites, and wikis to produce and consume digital content. These developments shape what is being perceived as typical “Internet language” and what counts as relevant online data.

Two distinctions that affect how we approach language online are whether we view CMC as “text” or “place,” and whether data are collected “on screen” or by contact with participants. *Screen data* are both produced and collected online, whereas *user-based data* are produced through direct contact with Internet users – for example, by means of interviews or focus groups. CMC research might seem obviously limited to screen data at first sight, but researchers are increasingly interested in the social activities in which CMC is embedded and in people’s own awareness and evaluations of their language practices. Research questions that focus on

linguistic variation rather than language practices may justify a restriction to screen data; nonetheless, it is common experience among CMC researchers that the analysis of digital language can benefit considerably from insights into social and situational contexts of the data at hand. Screen and user-based data are therefore best seen as complementary sites of data collection in new media sociolinguistics.

The second distinction comes from qualitative online research in communication studies. Milner argues that “the study of cultures online demands we decide whether we frame online interaction as ‘place’ or as ‘text’” (2011: 14). A “CMC as text” view approaches the Internet as a vast archive of written language, whereas from a “CMC as place” perspective, digital communication is a social process that unfolds in discursively created spaces of human interaction, which are dynamically related to offline activities. From a sociolinguistic angle, this binary echoes the familiar tension between *system-oriented* approaches that focus on linguistic variation and *speaker-oriented* ones that focus on interactional language practices (see Hazen, this volume). The example of Twitter can be used to illustrate how this distinction fits language analysis. Approaching “Twitter as text” would imply collecting a large set of data and focusing on specific linguistic features or categories, taking social variables such as, say, “private user” as opposed to “organization” into account. By contrast, a “Twitter as place” approach would examine how particular social actors use this medium in order to engage in social activities in the context of a particular event (say, a political rally), thereby shaping the course and social meaning of that event.

The “text vs. place” distinction identifies an epistemological perspective, which in turn is likely to entail a preference for particular research questions, techniques of data collection, and types of (quantitative or qualitative) analysis. A “CMC as text” approach may imply a tendency toward screen-based data, a view of digital modes as containers of written language, and a preference for *etic* (researcher-oriented) rather than *emic* (participant-oriented) categories. A “CMC as place” approach is more likely to prefer ethnographic observation and blended data collection, in which online language data from various modes and environments is collected, taking into account the digital literacy practices in which they originate.

Online observation

Online observation refers to the process of “virtually being there,” watching the digital communication you will eventually analyze as it unfolds on a web site or in a network of connections across sites. Though often not explicitly acknowledged in research publications, observation is the bottom line of any “virtual fieldwork” and the ground pillar of most linguistic CMC research. In my own experience, systematic online observation is particularly useful in public digital spaces, such as discussion forums or virtual worlds, where participants’ shared background knowledge is incomplete and fragmented anyway. Here, systematic observation is the key to gaining initial insights into participants’ language practices, such as their common discussion topics, usual pace of discursive activities, categories of participation (e.g., core and peripheral members), distribution of particular linguistic features among members, and so on. As in any ethnographic fieldwork, systematic observation allows researchers to acquire some of the tacit knowledge that underlies the semiotic practices of regular members. This knowledge can be used to interpret patterns of

usage, to identify new objects of analysis, or to articulate new research questions (Androutsopoulos, 2008; Garcia *et al.*, 2009).

Three practices of online observation can be distinguished: *revisit*, *roam around*, and *try out*. The first suggestion is to make regular and iterative visits to the target site of data selection, documenting routine activities as well as changes. A second suggestion is to explore the virtual ground, browsing around web sites and their sections, threads, or profiles. Whether to lurk or actively participate is open to debate (see Markham, 2008; Milner, 2011). What is important, in my view, is that researchers do not end up analyzing their own data or data that occurred as a direct outcome of their own contributions. A third suggestion is to explore all available resources of participation by trying out all options afforded by an online environment, such as search facilities, user lists, statistics, tags, and tag-related hit lists. For ethnographic field notes and collections of digital resources (e.g., web links and screenshots), software tools like Zotero or Evernote can be used.

Screen-data collection

Screen data refers to digital written language produced by people online. The practicality of collecting screen data depends on the options provided by various modes and environments as much as on the technological sophistication brought along by researchers. There are some common simple solutions:

- Applications for synchronous chatting and messaging often save conversations automatically in a time-stamped logfile.
- Web forum pages can simply be copy-and-pasted or downloaded in HTML format, but then have to be ‘cleaned up’ from HTML code in order to be fed into a concordancer or other software program for further treatment.
- Content from social networking sites can be saved in HTML format, as a PDF file, or as a screenshot, the latter being the least preferred option because it doesn’t allow exporting the language data.

At a more sophisticated and technical level, large portions of screen data can be mined by means of web crawlers, application program interfaces (APIs), customized scripts, or other resources (see Hundt, Nesselhauf, and Biewer, 2007). Digital data can also be delivered to researchers by users themselves (e.g., students or members of the general public who donate private digital data together with relevant sociodemographic information).

Depending on the research question, the selection of screen data may proceed on various sampling criteria. Susan Herring’s framework for computer-mediated discourse analysis distinguishes six criteria for data sampling (Herring, 2004: 351–354):

- 1 *Random sampling*, by which each unit from a set of data has equal chances of being selected, enables representativeness and generalizability. Researchers can select items at specified intervals (e.g., every tenth message from a newsgroup) or use a “randomizer” tool to select items from a numbered list of posts. Random sampling may result in loss of context and coherence, for example by truncating conversations.

- 2 *Sampling by theme* is useful for selecting data from discussion forums or other thematically organized streams of online discourse (e.g., hashtagged tweets). Thematic samples from two or more sources can be compared in terms of language style or language choice. This criterion excludes other co-occurring discourse activities (e.g., other topics discussed by the same users) and is therefore less useful for the study of language style across various modes and genres.
- 3 *Sampling by time* is necessary for any kind of longitudinal analysis. A common procedure is to select samples at regular intervals from the archives of a newsgroup or forum. It offers data that are rich in context but may result in large samples and truncated interactions.
- 4 *Sampling by phenomenon* focuses on particular features or patterns of language use. Features such as emoticons or non-standard spellings can often be automatically selected by means of a concordance or customized script. Discourse-level phenomena such as joking or conflict negotiation (Herring's 2004 examples) involve qualitative analysis and so must be identified manually. This is the method of choice for features that are rare in a sample. It enables in-depth analysis of the selected phenomenon, but it may rule out a systematic control of independent variables and result in loss of context.
- 5 *Sampling by individual or group* can draw on sociodemographic information, if available, or explore member categories in the relevant online environment, such as forum member rankings. It enables focused analysis of selected users and user networks, but it may exclude the study of interactional exchanges.
- 6 *Sampling by convenience* means selecting "whatever data are available" (Herring, 2004: 351). This was popular with some early CMC research, but it obviously lacks a principle of systematic selection and may yield unsuited samples.

These criteria do not preempt the type of analysis to be carried out. Some (notably 2, 3, and 5) roughly correspond to familiar independent variables and yield data sets that will be later scanned for linguistic features of interest. In practice, combinations of two or more criteria are common.

Research with participants

Depending on the research question and the type of data, contacting Internet users can be either an initial or a later step of the research process. In research on private or semi-public data such as e-mails, text messages, or social networking sites, contacting people and obtaining their permission to use the data is a precondition to further analysis. In research on publicly accessible language data (e.g., unrestricted web forums or blogs) where such permission is not legally required, contact with participants can be initiated at a later point after a period of online observation, in which the researcher can identify core members or users who "stand out" in some way in their online community. In the next step, screen data can be collected and preliminary analyses can be carried out, preparing the ground for contacting selected participants. Such contact will obviously follow criteria of feasibility and pay due attention to how relations of power and/or solidarity between researcher and participants are negotiated (Androutsopoulos, 2008).

Box 5.1 Discussing samples of online writing with participants

In research on the language practices of German hip-hop artists and fans on the Internet (Androutsopoulos, 2007, 2008), a productive technique for eliciting participants' awareness of language style online was to have them discuss excerpts from hip-hop web sites or discussion forums. Asking them to identify what they saw as "typical features of hip-hop writing" helped me understand the categories and distinctions that mattered to them in tailoring their language style. This approach can sometimes confirm the analyst's interpretations but can also offer new, unexpected insights. A case in point are stylized "hip-hop English" features, such as the spelling variant <z> for the noun plural marker <s>, which was very popular among German hip-hop fans at that time. Discussions with my informants revealed that their knowledge about this feature was variable, focused on aesthetics and social values rather than linguistic aspects, and overall more localized than I initially assumed. For example, a 15-year-old girl who used spellings such as *friendz* on her home page said that <z> "is what Wu Tang use," thereby alluding to a rap group, whereas a 19-year-old boy explained, "this is how my buddies write." Rather than linking <z> to the "global hip-hop nation," as I was expecting them to, these youngsters foregrounded quite specific sources of inspiration and digital literacy practices in their local community.

Research with CMC users can draw on interviews, group discussions, or questionnaires. Interviews in particular can be semi-structured or narrative, and conducted face to face or via Skype or e-mail. A useful prompt in order to elicit participants' awareness of and attitudes to language use online are samples of online content that are already analyzed by the researcher (see the example in Box 5.1). Participant observation of user activities can focus on their online practices at home or in Internet cafés, but it can also take the researcher far from the computer to people's offline activities, which they later entextualize online.

In linguistic CMC research, user-based data are typically not the single source of available data but a complement to screen data that is collected before or after contacting participants. Collecting blended data – that is, combined sets of online and offline data – is typically a cyclical process, oscillating between screen/online and users/offline contexts. An interview or other form of user contact follows up on screen-data analysis and can help to deepen and contextualize the analyst's interpretation of those data. In turn, insights gained in the interview can also trigger further screen-data collection.

In my own research I have experimented with various sequences of screen and participant data. In early research on multi-party Internet Relay Chat (IRC), a period of familiarization involving observation of and some active participation in the channel of choice was followed by contact with selected individuals by means of the one-to-one ("whisper") mode afforded by chat software; disclosing my researcher identity, I could then discuss language issues with these individual chatters or ask them to fill in a short questionnaire. In research on private home pages and discussion forums, the strategy was to observe these sites first, then contact and interview their producers or webmasters,

then return to and refine screen-data analysis. In research on social networking sites, the first step is an initial contact with likely participants, by which permission to access their social network profiles is sought. This is then followed by a period of observing profile activities, in which digital language samples are collected and preliminary analyses carried out. This is followed by individual interviews or group discussions.

Inter- and intra-mode designs

In CMC research, modes of digital communication such as instant messaging, Internet Relay Chat, and e-mail often serve as invariant parameters for digital data selection. Much data reported in the literature is restricted to particular modes, for example IRC, Instant Messaging, or e-mail. Analysis of CMC data by mode ties in with the practice of dividing “Internet language” to mode-specific components, which are then discussed in separate textbook chapters, and so on. In sociolinguistic practice, modes have also played the role of independent variables, based on the assumption of more or less stable relations between modes and patterns of online language use. In such an *inter-mode* analysis, data from two or more CMC modes (e.g., messaging vs. e-mail or chatting vs. newsgroups) are compared in terms of one or more sociolinguistic variables while controlling for other social and situational factors. Here, the data collection design is primarily defined by user networks and subdivided by mode, as in the following examples:

- In research on CMC by university students, their instant messaging conversations (synchronous, among students) are compared to e-mails (asynchronous, addressed to lecturers; Lee, 2007).
- In research on Punjabi-background users, their language use on IRC (synchronous) is compared to a newsgroup (asynchronous; Paolillo, 2011).
- In research on German hip-hop on the Internet, various genres on a big hip-hop web site are compared: for example, amateur artist home pages (asynchronous, unidirectional) and forum discussions in the same online community (asynchronous, interactive; Androutsopoulos, 2007).

By contrast, an *intra-mode* design compares data from the same CMC mode and varying social and/or situational conditions, as in the following examples:

- A corpus of e-mails among university students can be compared to a corpus of e-mails exchanged between students and lecturers.
- A data set with informal (non-moderated) public chat sessions can be compared to a data set of institutional (moderated) chat sessions, for example with a politician.
- A study of spelling variation in instant messaging compares data sets that vary by interlocutors’ gender (female–female, male–male, and female–male conversations; Squires, 2012).

Provided the primacy of mode effects on language over social and/or situational factors is not assumed by default, modes offer an invaluable handle for CMC data collection and exploration. However, their usefulness is weakened by the growing importance of participatory web environments, such as social networking sites and

content-sharing platforms, which integrate old modes and give rise to new genres which cannot be distinguished on the criteria of synchronicity and publicness alone. Due to their sheer size and diversity of participants, genres, and interactive applications, participatory online environments create new problems of comparability. Developing meaningful comparisons depends here on systematic online observation, by which relevant types of content, genres, or users within a web environment can be identified prior to screen-data collection.

Social identity variables

CMC complicates the process of social identity ascription for both researchers and participants. Digital communication, especially of the public type, is often carried out anonymously and among interlocutors who lack cues for mutual social categorization. This is a problem for any sociolinguistic analysis that depends on clear-cut sociodemographic information on gender, social class, and so on. It can be addressed or circumvented in a number of ways. First, researchers can contact relevant users and collect relevant sociodemographic information post hoc, though this is not always practically feasible, especially in public domain CMC. Second, researchers can work with the social identity cues offered by users themselves. Depending on mode and genre, these include propositional information and indexical cues such as screen names and associated “virtual identity” signs such as avatars and member signatures. The theoretical and analytical challenge here is how to handle the tension between online and offline identities and whether to conceive of users as “behaving like” or rather “performing” a particular social identity. Alternatively, researchers can abandon external sociodemographic categories altogether and turn to online-specific categories such as types and degrees of membership (regulars vs. newbies, admins vs. normal users) to which sociolinguistic variation is then correlated. Another alternative could be to focus on the discourse practices by which participants ascribe and negotiate social identities to selves and others, which however usually implies an interpretive approach and rules out a quantitative analysis of language variation.

In sum, the main challenges of data collection in new media sociolinguistics are the shift to written language data and the lack of information about language users. I argued that a degree of ethnographic engagement can help researchers gain contextual knowledge that might help with making data collection decisions, as well as with developing research questions and interpreting findings. In the next section we will see how research on linguistic landscapes follows a similar trajectory from an exclusive focus on public written language to increasing ethnographic engagement with the community.

Data Collection in Linguistic Landscapes Research

Overview

Linguistic landscapes (LL) is a recent area of sociolinguistics and interdisciplinary scholarship that focuses on how language constructs public space. Its main empirical object is language use on street signs. According to one oft-cited definition, “The language of

public road signs, advertising billboards, street names, place names, commercial shop signs, and public signs on government buildings combines to form the linguistic landscape of a given territory, region, or urban agglomeration” (Landry and Bourhis, 1997: 25). Building on earlier work on minority languages and multilingual urban environments, LL has now become the dominant paradigm in the study of visible language in urban settings (for state-of-the-art publications see Shohamy and Gorter, 2009; Jaworski and Thurlow, 2010; Shohamy, Ben-Rafael, and Barni, 2010; Shohamy, 2012).

We begin by reviewing theoretical and empirical developments in LL scholarship that have had an impact on data collection strategies. Early LL research focused on minority languages and coined a distinction between “communicative” and “symbolic” uses of minority languages in the linguistic landscape (Ben-Rafael *et al.*, 2006), by which the use of a minority language either indexes the spatial presence of its ethnolinguistic community (communicative use) or is intended as a symbol of that community (symbolic use). Later research suggested that the relation between linguistic landscape and minority communities is more complex, depending among other things on strategic entrepreneurial decisions and power relationships among majority and minority groups. The empirical scope of contemporary LL research encompasses all linguistic resources in the landscape, notably including globalized uses of English.

Moreover, LL research is going beyond its early exclusive concern on linguistic signs to include their visual, material, and spatial properties. Questions about how signs are designed, how they coexist in urban space, and how various semiotic resources contextualize language choices are now part of the LL research agenda. This shift foregrounds issues of materiality (i.e., how the material a sign is made of indexes types of institutional authority) and granularity (i.e., how design encodes different viewing distances, which correspond to different types of recipients) (Auer, 2010). Finally, the relation between textual data and ethnographic research is changing too. Early LL research was restricted to photographic documentation and content analysis of street signs drawing on the coding categories discussed below (see the section “Coding categories”). Contacts with the people who design the linguistic landscape and encounter it in their daily lives were limited. However, ethnographic research revealed that shop owners are not always aware of the semiotic choices of their own shop signs (Malinowski, 2009). Involving participants is now increasingly seen as necessary in order to understand the relation between semiotic choices on signs and their social context (Shohamy, Ben-Rafael, and Barni, 2010).

Data collection phases in LL research

LL research resembles CMC research in its “tension” between textual data and participant-driven research, but it differs in that all data collection depends on physical fieldwork. In his study of the LL in Tokyo, Backhaus (2007) followed a sequence of three steps in fieldwork focused on textual data: determine the survey area, the items to be surveyed, and the coding categories. We discuss these below. In ethnographic fieldwork focusing on participants rather than the signs themselves, Garvin (2010) suggests the following data collection stages:

- selection of sites;
- photographic documentation;

- selection of and contact with participants;
- conducting individual “walking tour” interviews on the selected site;
- transcription and analysis of interviews and field notes;
- follow-up meetings with participants in order to validate findings and offer opportunities to continue the dialogue with the researcher.

While it is possible to do LL fieldwork on a single site, such as a public monument, LL data collection is typically carried out in a vast urban environment that cannot be surveyed exhaustively. LL research therefore begins by determining a survey area together with the institutional domains and types of sign to be covered. The survey area is often a district or neighborhood, specified down to a set of street blocks or a trajectory in urban space, which can be determined by a set of orientation markers such as subway stations. Comparative designs are common, by which similarities and differences in LL patterns within a city or across different cities are explored.

Linguistic landscape fieldwork in Hamburg

Figures 5.1 and 5.2 are data collected during LL fieldwork in Hamburg, Germany. The fieldwork design included a comparison of shopping streets in various districts: trendy inner-city neighborhoods, working-class immigrant areas, and affluent suburbs. A research hypothesis was that the frequency of various languages, notably German, English, and various migrant languages, would vary across the LL of these areas. Figures 5.1 and 5.2 were taken in St Georg, an inner-city multi-ethnic neighborhood. Both types of shops shown here – that is, an ethnic supermarket and a “cheap phone calls” shop – are common in this area (see Scarvaglieri *et al.*, in press).



Figure 5.1 Front of “Persepolis Supermarket” in St Georg, Hamburg.



Figure 5.2 Multilingual call shop sign in St Georg, Hamburg.

Decisions on the institutional domains to be surveyed involve the established distinction between “top-down” signs (those issued by public authorities) and “bottom-up” signs (those produced by commercial businesses). To these, the domain of transgressive signs, notably graffiti, is sometimes added. Regarding commercial signs, decisions with an aim to narrow down the sample can be linked to research assumptions about the degree of linguistic innovation, semiotic creativity, or ethnocultural stereotyping that can be expected in certain business sectors. In LL research on minority languages, we often find examples from gastronomy (restaurants, food shops), so-called “ethnic” shops, and telecommunications (cheap call shops, Internet cafés), which, for partially different reasons, are likely to draw on multilingualism and ethnocultural stereotypes on their signage.

Determining the unit of analysis for data collection involves a complex set of procedural decisions, including questions like the following:

- Is the unit of analysis the individual sign, the shop window, or a specific chunk of space on the street?
- What aspects of the materiality (physical shape) of signs shall be taken into account in analysis?
- Are multilayered shop windows documented in their entirety or do we just focus on the main signboard?
- Are mobile signs (e.g., those placed on the street for the day) to be included?

Decisions of this sort are closely related to the research questions and, at the same time, impact directly on the photographic documentation to be carried out. An example for comprehensive coverage is Backhaus (2007), who documented “anything from the small, handwritten sticker attached to a lamp-post to huge commercial billboards outside a department store” (2007: 66), including stickers at entrance doors and lettered foot mats.

Photographic documentation

Photographic documentation lies at the heart of LL data collection. Besides some basic hardware requirements such as a digital camera with sufficient resolution, an adequate documentation will strive for sequential completeness under favorable contextual conditions. Within the selected area to be surveyed, it is important to document complete sequences of signs, one by one. Adequate conditions for doing this are sometimes hard to meet, especially when research is carried out on a busy commercial street. In Hamburg, researchers went to these streets on early Sunday mornings so as to obtain the best possible shots, being as unobtrusive as possible. Archiving and displaying the collected data is part of the documentation process. Besides photo storage software, Google Maps or other web-based map services can be used in order to display the photos at their topographic location (see Barni and Bagna, 2009).

Coding categories

Being aware of the coding categories that will be applied to the collected data is useful in anticipating certain details of the photographic documentation. The three examples below illustrate the range of coding criteria that are employed in the research literature:

- Cenoz and Gorter (2006) focus their coding on linguistic aspects of signs. Main categories include: type of sign; branch; number of languages on the sign; and the distinction between top-down vs. bottom-up signs. Multilingual signs are additionally coded for the following variables: first language on the sign; amount of information per language; semantic relation between the two languages on the sign; and fonts used on the sign.
- Backhaus (2007) categorizes his items for the following criteria: monolingual vs. multilingual; languages on the sign; top-down vs. bottom-up; geographic distribution; and semantic relations between language elements on a sign.
- Barni and Bagna (2009) used five main criteria to enter their items into a database: mono- vs. multilingual signs; textual genre (e.g., advertisement, warning sign); location; domain (e.g., educational or work-related); and place (e.g., catering places, including kiosks and bars).

Collecting language policy documents

When LL is studied from the angle of language policy, access to policy documents is an important additional dimension of data collection. Relevant policy documents can relate to any institutional decision by which language use on public signs is regulated. Examples are legislation acts or public authority manuals that regulate top-down signs at an airport or a city's subway system. Some countries or regions also control by law the languages that may be used on commercial signs. Language policy documentation can also be an important resource for historical research on the linguistic landscape (Backhaus, 2007; Pavlenko, 2010).

Involving participants in LL research

LL research that involves participants draws especially on interviews, but telephone questionnaires and field notes of fieldwork observations are also used. Participant numbers are usually small, and the overall approach is qualitative. An example of how various methods can be combined is Malinowski's (2009) research in California, featuring interviews with local business owners, participant observation, photograph and media analysis, and interpretive walking/driving tours.

Participant research can focus on either producers or recipients, or both. Research with the people who commission and/or design signs can examine their motivations for the choice of particular languages and other semiotic resources, their own interpretations of shop signs, and the impact of factors such as business sector, district, or target customers. Interviews with shop owners can feature questions such as: Who makes these signs? Who decides on their language choice, naming patterns, design, material, and so forth? What is the division of labor between commissioners and designers? In designing the interviews, researchers can draw on their analysis of relevant photographic data, and participants can be asked to share their views on the analytic findings.

Research with local residents and/or passersby uses a range of techniques. In a study of the LL of San Sebastian, Basque Country, Aiestaran, Cenoz, and Gorter (2010) did short interviews with randomly selected local people. Their questions covered the respondents' backgrounds and their views on the city's linguistic landscape, including their observed frequency of the relevant languages (Basque and Spanish) and their preferences on the language that they thought ought to be used in public space. Other researchers use so-called "walking tour" interviews, where interviews are conducted while walking (or driving) through the selected area. In research on LL in Memphis, Tennessee, Garvin (2010) did walking tours with a small sample of local residents, thereby eliciting their "self-reported emotional understandings and visual perceptions" (2010: 258) of the LL around them. Questions included: "How do you feel when you see languages other than English?" and "Do you go into stores that advertise in languages other than English?" as well as "What do you think these languages say about the people in this area?" Here, too, it makes sense to have photographed the signs on these routes prior to the walking interview itself.

A Note on Research Ethics

Both CMC and LL research face ethical issues related to the tension between privacy and publicness. Respecting and protecting the privacy of informants is a basic legal and ethical requirement in social-scientific fieldwork, and our research must observe legal requirements of "privacy." At the same time, our considerations should not marginalize informants' own understandings of the boundaries between privacy and publicness.

There is no general consensus on how to protect individual privacy in CMC research, and the relevant ethics guidelines for researchers and students vary considerably by country and institution. It should be common sense among CMC researchers that

protecting the anonymity of our informants entails avoiding disclosure of their offline identities and the publishing of any clues that may lead to their identification. Various CMC modes and user groups pose different conditions for achieving this aim. Maintaining anonymity for private online data is easier than for public and semi-public data. Asking participants for permission to use private data is the rule, but it is not always feasible for data collected from or available on public sites of CMC. Moreover, the researcher's (technical) definition of what constitutes publicness may not be shared by participants themselves, resulting in diverging interpretations of what data can be treated as "public domain." Some scholars treat publicly posted screen names (e.g., on YouTube) as publishable. However, these can be easily traced back to other publicly available utterances posted under the same screen name. Even when screen names are anonymized, verbatim quotations from publicly accessible material may also lead back to original posts via web search. A complete anonymization of public CMC data may even be technically impossible. On the other hand, we have to consider that not all online communicators may wish to stay anonymous in academic publications; famous bloggers could be a case in point. This should not be understood as an excuse not to anonymize but, rather, it should act as a reminder that participant and researcher views do not forcibly coincide. (Readers are also referred to the ethics guidelines of the Association of Internet Researchers; latest review draft at <http://aoirethics.ijire.net>.)

Linguistic landscape is part of the public space, and its basic documentation technique – photographing shop signs on the street – should be legally unproblematic in most parts of the world. There are, however, limitations to this. Photographing certain kinds of top-down signage, such as military sites, is strictly forbidden in many countries. Likewise, photographing individuals without their permission may be against the law. Photographing on the streets, especially by zooming in on shop windows, can be felt as offensive by shop owners, particularly when the researcher is clearly not part of the local community. However, asking each and every shop owner for permission could be unrealistic under certain fieldwork conditions. Doing the documentation at an unobtrusive time of day is a practical solution to this. Overall, issues of ethics in LL research seem to depend on local legislation as much as on sensitivity to local concerns and habits in the community to be surveyed.

Project Ideas

In addition to the findings presented in this chapter, consider doing a small project to explore the following questions:

- 1 *Collect a small data sample* to compare an individual's CMC writing style in one synchronous and one asynchronous mode. Identify the linguistic variables that best reflect inter-mode differences in your sample, taking into account inter-mode differences in addressee and topic.
- 2 *Collect tweets* that comment on a specific media event, such as a television show or a sporting event, as it happens. You will need to know the particular hashtag (#) for that event and could use a collecting service such as TwapperKeeper (now to be found at HootSuite: <http://hootsuite.com>). Examine your data in terms of what stances they express to that event and how they reflect different phases of the event as it unfolds.

- 3 *Document and compare* the linguistic landscape of two main streets in different neighborhoods of your city or town. To keep this feasible, you may want to limit your documentation to a small number of street blocks and the main sign of each shop. Work out the linguistic repertoire and language ranking for each street, taking variation in branches into account, and draw on sociodemographic data, if available, to interpret your findings.

Further Reading and Resources

- Herring, S.C. 2004. Computer-mediated discourse analysis: an approach to researching online communities. In *Designing for Virtual Communities in the Service of Learning*, ed. S.A. Barab, R. Kling, and J.H. Gray, 338–376. Cambridge and New York: Cambridge University Press.
- Shohamy, E. 2012. Linguistic landscapes and multilingualism. In *The Routledge Handbook of Multilingualism*, ed. M. Martin-Jones, A. Blackledge, and A. Creese, 538–551. London: Routledge.
- Shohamy, E. and Gorter, D. (eds) 2009. *Linguistic Landscape: Expanding the Scenery*. London: Routledge.
- Thurlow, C. and Mroczek, K. (eds) 2011. *Digital Discourse: Language in the New Media*. Oxford: Oxford University Press.

References

Computer-mediated communication

- Androutsopoulos, J. 2007. Style online: doing hip-hop on the German-speaking Web. In *Style and Social Identities*, ed. P. Auer, 279–317. Berlin: De Gruyter.
- Androutsopoulos, J. 2008. Potentials and limitations of discourse-centered online ethnography. *Language@Internet*, 5. www.languageatinternet.org/articles/2008/ (last accessed March 27, 2013).
- Beißwenger, M. and Storrer, A. 2008. Corpora of computer-mediated communication. In *Corpus Linguistics*, Vol. 1, ed. A. Lüdeling and M. Kytö, 292–309. Berlin: De Gruyter.
- Garcia, A.C., Standlee A.I., Bechkoff, J., and Yan, C. 2009. Ethnographic approaches to the internet and computer-mediated communication. *Journal of Contemporary Ethnography* 38(1): 52–84.
- Herring, S.C. 2004. Computer-mediated discourse analysis: an approach to researching online communities. In *Designing for Virtual Communities in the Service of Learning*, ed. S.A. Barab, R. Kling, and J.H. Gray, 338–376. Cambridge and New York: Cambridge University Press.
- Hundt, M., Nesselhauf, N., and Biewer, C. (eds) 2007. *Corpus Linguistics and the Web*. Amsterdam: Rodopi.
- Lee, C.K.M. 2007. Linguistic features of email and ICQ instant messaging in Hong Kong. In *The Multilingual Internet*, ed. B. Danet and S.C. Herring, 184–208. New York and Oxford: Oxford University Press.
- Markham, A.M. 2008. The methods, politics, and ethics of representation in online ethnography. In *Collecting and Interpreting Qualitative Materials*, ed. N.K. Denzin, 247–284. Los Angeles: SAGE.
- Milner, R.M. 2011. The study of cultures online: some methodological and ethical tensions. *Graduate Journal of Social Science* 8(3): 14–35.

- Paolillo, J.C. 2011. "Conversational" codeswitching on Usenet and Internet Relay Chat. *Language@Internet*, 8. www.languageatinternet.org/articles/2011/ (last accessed March 27, 2013).
- Squires, L. 2012. Whos punctuating what? Sociolinguistic variation in instant messaging. In *Orthography as Social Action: Scripts, Spelling, Identity and Power*, ed. A. Jaffe, J. Androutsopoulos, M. Sebba, and S. Johnson, 289–323. Berlin: De Gruyter.
- Thurlow, C. and Mroczek, K. (eds) 2011. *Digital Discourse: Language in the New Media*. Oxford: Oxford University Press.

Linguistic landscapes

- Aiestaran, J., Cenoz, J., and Gorter, D. 2010. Multilingual cityscapes: preferences of inhabitants. In *Linguistic Landscape in the City*, ed. E. Shohamy, E. Ben-Rafael, and M. Barni, 221–236. Clevedon, UK: Multilingual Matters.
- Auer, P. 2010. Sprachliche Landschaften. Die Strukturierung des öffentlichen Raums durch die geschriebene Sprache. In *Sprache intermedial: Stimme und Schrift, Bild und Ton*, ed. A. Deppermann and A. Linke, 271–300. Berlin: De Gruyter.
- Backhaus, P. 2007. *Linguistic Landscapes: A Comparative Study of Urban Multilingualism in Tokyo*. Clevedon, UK: Multilingual Matters.
- Barni, M. and Bagna, C. 2009. A mapping technique and the linguistic landscape. In *Linguistic Landscape: Expanding the Scenery*, ed. E. Shohamy and D. Gorter, 126–140. New York: Routledge.
- Ben-Rafael, E., Shohamy, E., Amara, M.H., and Trumper-Hecht, N. 2006. Linguistic landscape as symbolic construction of the public space: the case of Israel. *International Journal of Multilingualism* 3(1): 7–30.
- Cenoz, J. and Gorter, D. 2006. Linguistic landscape and minority languages. *International Journal of Multilingualism* 3(1): 67–80.
- Garvin, R. 2010. Postmodern walking tour. In *Linguistic Landscape in the City*, ed. E. Shohamy, E. Ben-Rafael, and M. Barni, 254–276. Clevedon, UK: Multilingual Matters.
- Jaworski, A. and Thurlow, C. (eds) 2010. *Semiotic Landscapes: Language, Space, Image*. London: Continuum.
- Landry, R. and Bourhis, R.Y. 1997. Linguistic landscape and ethnolinguistic vitality: an empirical study. *Journal of Language and Social Psychology* 16: 23–49.
- Malinowski, D. 2009. Authorship in the linguistic landscape: a multimodal, performative view. In *Linguistic Landscape: Expanding the Scenery*, ed. E. Shohamy and D. Gorter, 107–125. New York: Routledge.
- Pavlenko, A. 2010. Linguistic landscape of Kyiv, Ukraine: a diachronic study. In *Linguistic Landscape in the City*, ed. E. Shohamy, E. Ben-Rafael, and M. Barni, 133–154. Clevedon, UK: Multilingual Matters.
- Scarvaglieri, C., Redder, A., Pappenhagen, R., and Brehmer, B. In press. Capturing diversity: linguistic land- and soundscaping. In *Linguistic Super-diversity in Urban Areas – Research Approaches*, ed. I. Gogolin and J. Duarte. Amsterdam and Philadelphia: Benjamins.
- Shohamy, E. 2012. Linguistic landscapes and multilingualism. In *The Routledge Handbook of Multilingualism*, ed. M. Martin-Jones, A. Blackledge, and A. Creese, 538–551. London: Routledge.
- Shohamy, E., Ben-Rafael, E., and Barni, M. (eds) 2010. *Linguistic Landscape in the City*. Clevedon, UK: Multilingual Matters.
- Shohamy, E. and Gorter, D. (eds) 2009. *Linguistic Landscape: Expanding the Scenery*. London: Routledge.

Part II Methods of Analysis

Focusing on Features of Language from a Sociolinguistic Perspective

6 Sociohistorical Analysis

Terttu Nevalainen

The Past Is a Foreign Country?	94
Approaching the Past	95
Implementation	96
Analyzing Change	98

Summary

Many sociolinguistic methods and approaches apply to the present and the past alike, but there are also issues that are of particular concern in analyzing earlier periods. This chapter gives some background, ideas, and tools for the study of historical topics. It discusses the plusses and minuses of engaging with historical data by looking at how language change can be observed in real time. It introduces the relevant principles of data collection and shows how the research approach influences the kind and amount of data needed to study both individuals and groups of people. The two illustrative case studies in this chapter represent sociopragmatic and variationist approaches.

The Past Is a Foreign Country?

The sociolinguistics of the present has many advantages compared to the sociolinguistics of the past. In principle, anything can be studied at present including any features of spoken and written language, and the language of people of all ages and of any social group. Researchers can obtain data by interviewing and recording people, observing them in their speech communities, and eliciting data by means of questionnaires. Researchers are familiar with the society they study and know how to obtain the relevant contextual information for their analysis. One thing they pay attention to is the role that the standard language plays in speakers' linguistic repertoires.

In several respects, things look different when we move back in time. Historical sociolinguistic studies are typically based on written evidence. They can focus on any aspect of grammar and lexis but, except for very recent times, only to a limited extent on phonological variation. What is more, the written material available is often randomly preserved and represents the language of literate people. Present observers are usually unfamiliar with past societies and communities, and they must gather information on them from disciplines such as social history. Neither can the significance of language standardization be taken for granted in the past. For example, in Chaucer's time there was no standard English in the sense that we understand it today. However, unlike their colleagues studying the present, historical sociolinguists usually know the outcome of linguistic changes. Table 6.1 summarizes these major differences between the study of the present and the study of the past.

With languages such as English that have a long written history, a student can ask a wide variety of research questions and adopt a range of theoretical and methodological approaches. Some studies can span centuries, as the relevant data sources go as far back as the Middle Ages. For languages that have less well documented histories only the more recent past can be studied. Languages and language varieties that do not have an established written form – and that includes most non-standard varieties – can be

Table 6.1 Dimensions of sociolinguistic research (modified from Raumolin-Brunberg, 1996: 18)

<i>Issues</i>	<i>Present</i>	<i>Past</i>
<i>What can be studied?</i>	Spoken and written language Phonology, grammar, lexis	Mostly written language Grammar and lexis
<i>What kind of material?</i>	Authentic speech, writing; observation, elicitation	Randomly preserved texts; commentary on language
<i>Who can be studied?</i>	All people	Mostly literate people
<i>How much context is recoverable?</i>	Familiar society; rich context available	Unfamiliar society; access to context information varies
<i>Relevance of standardization?</i>	Significant element	Significance varies
<i>Outcome of change?</i>	Unknown	Known

studied only insofar as there are records that document the speech of earlier generations. The shortage or total lack of evidence is a problem that the student of any language encounters the further back in time they go. Historical linguistics is indeed, in the words of William Labov (1994: 11), “the art of making the best use of bad data.”

This chapter looks at how sociopragmatic and variationist methods can be used to answer research questions about the past. My examples are from English, but the methods I discuss apply across languages.

Approaching the Past

Common ground

Although I have implied that the past may be like a foreign country, it is not necessarily the case that they do everything differently there. Historical linguistics, or the study of the past in general, would not be possible unless there were some common ground that humans can expect to share when they are communicating with each other. In fact, sociolinguists argue that what we know about the present can also be used to explain the past. One way to test this “common ground” principle is to ask whether the sociolinguistic generalizations that obtain for the present also apply to earlier times.

One particularly robust generalization based on present-day studies is the role of gender in language change. Sociolinguists who study language change agree that women have a key role to play in establishing linguistic features that become part of the standard language. Labov (2001: 293) goes further and talks about a *gender paradox*: “Women conform more closely than men to sociolinguistic norms that are overtly prescribed, but conform less than men when they are not.” Applied to language change, this means that when people are aware of a change in progress, women use the incoming form more than men do if it is positively evaluated in the community. When a change advances without people being consciously aware of it, women are usually ahead of men even when the incoming form is a non-standard one.

As a student developing a research paper using historical sociolinguistic methods, three things should catch your attention at this point. First, as indicated by Table 6.1, the significance of standardization varies, and its role cannot be taken for granted in earlier periods. Secondly, and related to this, when there was no universal schooling and the overall rate of literacy of the population was low, not all men and women had access to the same linguistic repertoires even in the same community. Finally, just like today, we can expect to find a good deal of individual variation in language use in the past.

Example: seventeenth-century England

It is the business of historians to explore how similar or different earlier societies were compared to their modern counterparts. Let’s take a plunge into an earlier society and ask how people addressed each other 400 years ago. It will be helpful to start by looking at a historian’s account of the social order at the time.

Table 6.2 Social system in seventeenth-century England (based on Laslett, 1983: 38)

GENTRY:

Nobility: Duke, Archbishop, Marquess, Earl, Viscount, Baron, Bishop
(*Lord, Lady*)

Gentry (proper): Baronet, Knight (*Sir, Dame*); Esquire, Gentleman (*Mr, Mrs*)

PROFESSIONS: between the gentry and the common people

Army Officer (*Captain, etc.*), Lawyer, Medical Doctor (*Doctor*), Merchant, Clergyman, Teacher, etc.

COMMON PEOPLE:

Yeoman, Husbandman (*Goodman, Goodwife*); Craftsman (*Carpenter, etc.*), Tradesman, Artificer, Laborer, Cottager, Pauper

Table 6.2 presents in a nutshell Peter Laslett's (1983) account of the social hierarchy in seventeenth-century England based on contemporary sources. You immediately notice that terms such as upper, middle, and lower class were not used ("class" was only introduced in the eighteenth century). Instead, the main distinction was made between the gentry and the non-gentry, and it divided the population into two unequal sections: landowners, who did not need to work manually for their living, and the common people, who did. Within these sections, social ranks formed a graded hierarchy: knights, for example, were higher up than ordinary gentlemen. The titles shown in parentheses apply to the ranks to their left. *Mr* (short for *Master*) and *Mrs* (short for *Mistress*) were originally applied to the lowest status group of the gentry, that is, gentlemen and gentlewomen. Educated professionals often qualified as gentlemen but usually had occupational titles. Among the common people, yeomen and husbandmen and their wives had titles (*goodman, goodwife*): a yeoman farmer owned his farm, and a husbandman was a free tenant farmer. The rest of the common people had occupational names, if any.

The social system in Table 6.2 certainly looks unfamiliar to a modern sociolinguist. But, just like modern social systems, past societies can also be constructed and analyzed at different levels of abstraction. The seventeenth-century system can be viewed, for example, as bipartite (gentry – non-gentry) or tripartite (gentry – professions – common people). Despite this flexibility, we should not expect to find automatic correlations between group membership and language use. Any such links need to be established by looking at the actual usage of the day. With the benefit of hindsight we know that *goodman* and *goodwife* (*goody*) went out of use, and *Mr* and *Mrs* were generalized among all status groups. The goal is to use the data sources that have come down to us to find out when, where, and how this happened.

Implementation

Finding material

A historical sociolinguist's tool kit includes sets of texts, usually electronic corpora, and software such as concordance programs for data retrieval. The use of corpora is recommended because these structured data sets aim at representativeness of a given

period, language variety, genre, a group of people, or an individual (see Baker, this volume). Since our access to the language of the common people of earlier times is severely limited, we have to base our studies on the records left behind by those who could write, that is, members of the upper ranks and educated professionals. Luckily there is always the odd exception such as Henry Machyn, a citizen and merchant-tailor of London, who kept a diary (1550–1563) that has been preserved. It says something about the rarity of such records that the other personal diary that has been preserved from the mid-sixteenth century is that of the young King Edward VI (1547–1553).

Personal records like diaries and correspondence have been sampled for digital corpora, as have dramas, novels, and many other genres of writing. One way to study language change is to compare an identical set of genres in a given period or in successive periods. These stretches of time vary, as processes of language change themselves are of variable duration. The Helsinki Corpus of English Texts (HC), for example, covers 1000 years of the history of English from the eighth to the eighteenth century and is divided into three major sections, Old, Middle, and Early Modern English. The Early Modern English section (1500–1710) has three subperiods, each represented by 15 genres. Historical sociolinguists can make fascinating discoveries on linguistic repertoires, their diversification and specialization, by comparing a range of genres over time. Drama and trial records can be identified as speech-like data sources, whereas statutes, for example, come at the opposite end of the continuum (cf. Culpeper and Kytö, 2010).

Diachronic corpora such as the Helsinki Corpus and ARCHER (A Representative Corpus of Historical English Registers) are “long” in terms of coverage but “thin” in terms of size. The original version of the Helsinki Corpus is only 1.5 million words, roughly the same size as ARCHER 3.1, which covers the years from 1650 to 1999, and represents British (1.3 million) and American English (0.5 million). In recent years much larger register corpora have become available, notably the 400-million-word Corpus of Historical American English (COHA), which runs from 1810 to 2000. Half of its material comes from fiction in each decade: the rest consists of popular magazines, newspapers, and non-fiction books. There are also large corpora based on trial records, such as the Proceedings of the Old Bailey (1674–1913), which, when completed, will cover 134 million words and provide access to the language of a large number of semi-illiterate or illiterate people (Huber, 2007).

Studies of the past can closely replicate modern sociolinguistic methods by using authentic data such as personal correspondence, which is produced by individuals who may be analyzed and grouped in different ways to test hypotheses on language variation and change over time. As suggested by Table 6.1, the outcome of language change is usually known to those who study the past. What is not known beforehand are the pathways a change has taken as it has spread, or failed to spread, in time and space.

The material I discuss in the following sections is mostly drawn from the Corpus of Early English Correspondence (CEEC), which covers the period from the first surviving personal letters that were written in English to the aftermath of the English Civil War (*c.*1410–1681). Information about the letters and their writers has been recorded in a separate database. The published parsed version of the corpus (PCEEC) comes with information about the author’s age and gender, the date of the letter, its recipient, and the relation between the author and the recipient. The corpus data can

be flexibly grouped into periods of varying lengths. The work on language change carried out on the corpus typically uses 20- or 40-year periods (e.g., Nevalainen and Raumolin-Brunberg, 2003).

A word about editions

Corpora would not exist unless the data they contain had been edited from manuscripts or early printed books or, indeed, transcribed from recorded speech. Edited texts vary according to the principles adopted by the editors. What are known as diplomatic editions have the aim of rendering the originals as faithfully as possible, including their spelling and punctuation, whereas other kinds of edition can modernize them to varying degrees. Some corpora come in several formats, in both original and modernized spelling, as plain text, and incorporating grammatical annotation. We cannot study, for example, spelling variation using a modernized text or keywords using an original spelling version, where each spelling variant of a word form counts as a separate word. Most corpora are, however, accompanied by manuals that present the principles followed in the compilation process and the editions used. Make sure you consult these manuals carefully before beginning your analysis.

Analyzing Change

Change and the individual

An ongoing language change can usually be observed in individual speakers. However, the reverse is not the case: a speaker innovation not picked up by others fails to become a language change. Think of child language or literary creativity, such as Shakespeare's use of words like *discandy*, *immoment*, and *unseminared* in *Antony and Cleopatra*. But when there is a change in progress, such as the generalization of forms of address discussed above, we can try to get as close as possible to when and where it is happening. The use of titles and forms of address has to do with individual and group identities and the ways in which these are made relevant or salient in discourse. In a study of address forms, one can adopt one of several approaches: (i) analyze the typical usage of a group, (ii) compare a person's self-identification with the attribution of a given title to him/her by others, or (iii) follow the construction or manipulation of the identity of an individual or a group by means of address forms. I will give examples of all three below.

To get an overall view of how a form of address is used, you can run a concordance program on the text or corpus you have and look up the form(s) you are interested in. This standard *corpus-based method* is useful when you know the object of your investigation, either word or construction.

So, to tackle the "when" question and to find out whether the titles *Mr* and *Mrs* had percolated down the social scale before the seventeenth century, I looked for a group of people below the gentry in the social hierarchy (recall that *Mr* and *Mrs* were originally titles of the lower gentry). I selected a set of mid-sixteenth-century merchant letters in

the CEEC and created a concordance of *Master* and *Mistress*, including their abbreviations and variant spellings. It transpired that they were commonly applied to members of this well-to-do merchant community, both *Mr* and *Master* when addressing or talking about men and the unabbreviated *Mistress* with reference to women. John Johnson, the head of the family enterprise, used *Mistress* when addressing or talking about the women merchants that he did business with. The concordance, produced in part below, shows his regular usage: *Mistris* plus family name. There is one exception, in line 23, where he addresses his own wife by using her first name, *Mistris Sabyne*:

N Concordance

16 }] Jhesus, the same day, at Callais. **Mistris** Fayrye, After dew
 17 unto your mastership, and unto my **mistris** your wif, yt maie please you to
 18 grace) from tyme to tyme sertyfied. **Mistris** Dacres rode home to Cheston on
 19 London. In my hertiest manner (gentle **Mistris** Baynham) I have me comendid
 20 the 17 daie of February, at London. **Mistris** Baynam, With all my hart I have
 21 ij barrelles of white heiring, whiche **Mistris** Baynham of her gentylnes dyd
 22 to looke on Mr. Brudenelle's fellis at **Mistris** Baynam's hanges, and when
 23 1545, the 15 in November, at Calles. **Mistris** Sabyne, I hertely comend me

Adopting a *corpus-driven approach*, you can also start from the letters themselves and record the various forms of address the correspondents use at the beginning of their letters. This approach is particularly useful when you do not yet know what exactly to look for and what you want to explore. This is typically the case with private usage. By simply relying on a word list, one would hardly find all the familiar terms used, for example, by Elizabeth of Bohemia when writing to Sir Thomas Rowe in the 1620s and 1630s. These ranged from *Good Sr Thomas Roe* and *Honest Thom Roe* to *Honest fatte Thom*.

We can of course combine these two methods. Moving from the concordance lines back to the letters, we find the contexts in which the exchanges listed occurred. The excerpt in (1) below shows how John Johnson used the title *Mistris* when addressing his wife. Her reply in (2) suggests that she felt that the title was inappropriate either because of the family's social status or because of a wife's subservient position vis-à-vis her husband at the time (in modern spelling: "master I should say, because it does become me better to call you master than you to call me mistress"). She may also have been playing with the polysemy of the word. One thing is clear, though: the use of this title was subject to negotiation in the mid-sixteenth century.

(1) Jhesus anno 1545, the 15 in November, at Calles.

Mistris Sabyne,

I hertely comend me unto you, praing you I maie be the same to all our freindes when ye be, etc. Your lettre of the 8 of this present moneth I have receavid, and will according to your counsaill kepe myself for your sake the best I can ... (CEEC, John Johnson 1545, 481)

(2) Jhesus anno 1545, the 28 in November, at Glapthorne.

In moest loving wise, **welbeloved husband (master** I shold saye, because yet doyth becom me baetter to call you **master** than you to call me **mystres**), your letter of 15 of this present I have receyved this day, for the which I thancke you, trustyng that you well kepe yourself well, as you wryt you well do for [my] sacke, and even so well I for your saike ... (CEEC, Sabine Johnson 1545, 515)

However, higher up on the social scale, certain distinctions were less negotiable. Minna Nevala (1998) studied how upwardly mobile government officials were addressed in the early sixteenth century. This is another example of the corpus-driven approach, enriched with information that makes it possible to combine social factors with linguistic practice. Using the CEEC metadata files, Nevala selected a group of men who rose several rungs on the social ladder compared to their fathers. Thomas Cromwell (1485–1540) was one of them. The son of a Putney blacksmith and cloth merchant, he studied law and became the legal secretary to Cardinal Wolsey, King Henry VIII's chief minister. He was made the Lord Privy Seal and a Baron in 1536, and finally, the Earl of Essex in 1540. His rise to the nobility in 1536 marked a watershed in the titles people used when writing to him. The letter corpus shows that, prior to that, he was recognized as a gentleman and a professional, and he was called *Master Cromwell*, *Master Secretary*, or sometimes *Right Worshipful Sir*. But following his elevation to the peerage, his correspondents switched to *My very good Lord*, *Your Lordship*, or *Your good Lordship*. The two letter excerpts in (3) and (4), by Sir Thomas Elyot, written a few months apart, show this abrupt change:

(3) [March 6, 1536]

Master Secretary in my right humble manner I have me recommendid unto you. **sir** all be it that it were my duetie to awayte on you ... (CEEC, Thomas Elyot 1536, 26)

(4) [autumn (after July 2), 1536]

To **my speciall goode lorde My lord Pryvy Seale**.

My moste speciall goode Lorde Where as by your contynuell exercise in waigthy affayres, also frequent access of Sutars unto **your goode lordship**, I could not fynde oportunity to gyve to **your lordship** due and convenyent thanks for your honorable and gentill report to the kinges majesty on Wenysday last passid in my favor ... (CEEC, Thomas Elyot 1536, 30)

When carrying out a study like this and analyzing changes during the life span of an individual, you need to pay attention to whether the correspondents are family members, close friends, or more distant acquaintances. In the latter case, the communication may be quite formal, as in (3) and (4); but, in the family, even Cromwell was addressed as *Most dere* [dear] *father* by his son Gregory!

Change and gender

Let's move from individuals to the groups of which they are members. Variationist sociolinguistics provides methods for studying how different social groups make use of alternative ways of saying the same thing. Applied to the past, one of the key issues is how we can observe language change in *real time*, or, to put it simply, how A becomes B in the course of time. The short answer is that we can observe language change in real time by going through an intermediate stage when both variants, AB, are used; schematically:

Stage 1: AA > Stage 2: AB > Stage 3: BB

A basic method to find out how this process advances in the community is to calculate the proportion of each variant out of the total of A + B in similar groups of speakers in successive time periods. You can apply this approach to lexical, morphological, and syntactic changes to explore issues like Labov's gender paradox or indeed any other social distinction. However, the thing to bear in mind is that any data we gather on group usage ultimately comes from individuals. Personal letters can be used to show the extent to which individuals participate in an ongoing change. Paying attention to individual variation is important because different ways of calculating group averages will give different results.

Applying Labov's idea about a gender paradox to real data, let's study how women and men used third-person singular present-tense verb forms in the mid-seventeenth century. By that time the southern suffix *-(e)th* (*the child playeth*) had mostly given way to the northern *-(e)s* suffix (*the child plays*). But, since morphological change tends to be sensitive to word frequency, we also find that some high-frequency verbs such as *have* and *do* commonly continued to occur with *-th* (*hath, doth*). Table 6.3 shows how often contemporary male writers used *hath* as opposed to *has* between 1660 and 1681. In the first column, noblemen are shaded; in the second column, clergy are shaded; in the third column, merchants are shaded.

Since these writers produced different amounts of data in the first place, it is not surprising to find that their overall frequencies of *hath/has* vary. Two things are, however, worth noting here. First, there is a good deal of variation: more than half of the writers use only the old form, fewer than a third use both, and those who have totally gone over to the incoming form are in the minority. It therefore matters how much data these individuals contribute to the period average. If we simply add up the frequencies of *hath* and *has*, respectively, the outcome is that *hath* is used in 58 percent of the 863 cases and *has* in 42 percent. However, since one person, Samuel Pepys, who contributes a large number of instances to the total, prefers *has*, he substantially raises the average in favor of the incoming form. One way to avoid this bias is to count individual averages for each person who has a minimum of, say, six instances of the variable (*hath + has*) and calculate an average of these averages for the group as a whole. Alternatively, when there is plenty of data, a quota of (for example) 30 instances could be fixed for each individual (Nevalainen and Raumolin-Brunberg, 2003: Appendix I). However, in this case a quota of 30 instances per person would mean that the number of writers contributing to the average would be radically reduced.

Comparing the first two ways of counting, Table 6.4 shows the results for both male and female writers in two subsequent 20-year periods, 1640–1659 and 1660–1681. The second method, averaging of averages, gives lower frequencies for the male writers in the second period and for the female writers in the first, where there was one notable outlier, Dorothy Osborne, with a large number of instances of *has*. Happily, the two methods produce very similar results for male authors in the first period and female authors in the second.

The results support the idea of women leading ongoing processes of change. Following the second method, we find that women used the incoming form almost half of the time in the first period, while men barely reached the 30 percent level in the second. Women continued in the lead despite the fact that their average frequency in the second period was lower than in the first. This drop between the periods can be put down to individual variation; after all, there were fewer women than

Table 6.3 CEEC data on *hath* vs. *has*, 1660–1681, male writers

<i>Writer</i>	<i>hath</i>	<i>has</i>	<i>Writer</i>	<i>hath</i>	<i>has</i>	<i>Writer</i>	<i>hath</i>	<i>has</i>
Stuart Charles II	5	28	Marvell Andrew	0	24	Andrews Phineas	3	0
Wilmot John	2	17	Hatton Charles	23	0	Corie Thomas	7	6
Carey Anthony	1	0	Longueville William	3	1	Pepys John jr	1	0
Conway Edward	19	0	More Henry	1	59	Turner John	4	0
Villiers George	0	2	Oxinden Richard jr	4	0	Haddock Richard	4	0
Windsor-Hickman Th.	1	0	Oxinden Thomas	1	10	Pepys Samuel	13	354
Capel Arthur	37	11	Swan Edward	10	0	Basire Isaac jr	0	4
Harley Edward	7	0	Straylton Miles	8	0	Basire Peter	2	0
Isham Justinian	12	0	Duppa Brian	8	0	Mickleton	1	0
Oxinden Henry of D.	1	0	Fell John	0	4	Christopher	3	0
Temple William	0	3	Sheldon Gilbert	3	0	Tempest John	3	0
Wyche Cyril	17	0	Smith Thomas	12	9	Caulier Peter	0	3
Browne Thomas	43	3	Cosin John	29	2	Richards George	16	0
Finch John	7	0	Sterne Richard	5	0	Skinner William sr	6	0
Lyttelton Charles	0	58	Dixon Thomas	0	43	Goodfellow Charles	3	0
Petty William	43	8	Fleming Henry	4	0	Lannoy Samuel	4	1
Southwell Robert	1	4	Machell Thomas	0	1	Lannoy Timothy	6	0
Williamson Joseph	1	4	Nichols Charles	11	0	Newland Benjamin	2	0
Dugdale William	4	0	Oxinden Henry of B.	20	1	Tillard Isaac	1	0
Scroggs William	0	2	Prideaux Humphrey	50	0	Wright Thomas	1	0
Fleming Daniel	8	1	St. Michel Balthasar	13	0	Pepys John sr	8	0
						Bawden Humphrey	1	0

Table 6.4 Two methods of calculating frequencies: pooling (method 1) and averaging of averages (method 2)

Period	Men (%)		Women (%)	
	<i>bath</i>	<i>has</i>	<i>bath</i>	<i>has</i>
1640–59				
Method 1	92	8	17	83
Method 2	91	9	47	53
1660–81				
Method 1	58	42	59	41
Method 2	72	28	57	43

men in both periods in the corpus. In the mid-seventeenth century there was no prescriptive grammar to censure or promote this process, and it continued its unmonitored progress in the following decades.

Comparing group averages is a useful way of mapping changes in progress over time at an abstract level. But as we have seen, individuals can behave differently, and both male and female outliers were detected within their respective groups. More thought should therefore be given to grouping individuals in terms of (i) their age, (ii) their social status, and (iii) their roles in their social networks. You could continue analyzing the data in Table 6.3 by considering the social status of these writers: those highlighted in the left-hand column were all noblemen (including one member of royalty), those highlighted in the middle column were members of the clergy, and those in the right-hand column were merchants. The gentry come between the nobility and the clergy, and educated professionals between the clergy and merchants.

Quagmires and Troubleshooting

Gaps in data sources present serious problems for historical sociolinguistic research. I mentioned the limited access we have, in English, to the lower social ranks until the late modern era. There are two ways to deal with this issue. First, corpus data can be supplemented with other kinds of evidence. Studying past tense forms of strong verbs, Anderwald (2012), for example, compares COHA data with nineteenth-century normative grammars to find out whether these grammars influenced actual usage. Secondly, when assessing your findings, it is important to be aware of what is *not* there in order to avoid overgeneralization.

The problems of applying corpus methodology to sociolinguistics that Paul Baker mentions in his chapter in this volume also apply to the study of the past. I discussed calculating frequencies in the previous section. Other corpus linguistic issues have to do with uneven amounts of data in general and small samples in particular. Baker (2010: 19–20) shows how to normalize word counts when corpora are uneven in size, and Hinneburg *et al.* (2007) give advice on how to cope with small samples, comparing, for example, pooling and averaging of averages.

When it comes to the faithfulness of historical corpora to their original sources, much depends on the edition. Ideally, a text edition should come with images of the

original manuscripts or early printed books, but for various reasons, databases like that are still rare. To better appreciate the transcriber's work, it is worth having a look at the manuscript images of the Diary of Henry Machyn, available online. You may also compare the facsimiles of the Early English Books Online (EEBO), another useful resource, with its full-text version (<http://quod.lib.umich.edu/e/eebgroup/>).

Tips

- Preferably, select your data from existing corpora. Before moving on to your data selection, study the manual of your corpus.
- Get the feel of your data by reading texts. Reading aloud helps make sense of spelling variation.
- Pilot first with a small test sample.
- When in doubt about a frequent word, look it up in a historical dictionary.
- Consult earlier work on your topic to get more ideas and avoid pitfalls.
- Above all, trust your data. You may not find what you expected – but you may find something even more exciting!

Project Ideas

- 1 Go to the Diary of Henry Machyn (Bailey, Miller, and Moore, 2006; <http://quod.lib.umich.edu/m/machyn/>), and use the search function on the web site to find out how he referred to his contemporaries in mid-sixteenth-century London. Who qualified as *Master/Mr* and who as *Mistress/Mrs*? Refer to Table 6.1 to analyze their social status. Is Machyn more polite when talking about women than when he is referring to men?
- 2 Compare the use of *Mr.* and *Mrs.* (with full stops at the end!) in COHA between 1810 and 2000, both raw frequencies and frequencies normalized per 1 million words. How could you interpret your findings in terms of (i) chronology and (ii) gender? To explore further, run similar searches by genre and in relation to third-person pronouns (*he* vs. *she*). Do pronoun frequencies correlate with those of *Mr.* and *Mrs.*? For analysis on this topic over the last 75 years, see Baker (2010: 68–75).
- 3 Study the use of the second-person pronouns *you* and *thou* in your favorite historical play. Discussing Shakespeare, Busse (2002) gives pointers to distinctions relevant in dramatic dialogue.
- 4 Nevalainen and Raumolin-Brunberg (2003) use the CEEC to study a dozen processes of change in English between the fifteenth and seventeenth centuries. Select one and study another genre included, for example, in the Helsinki Corpus to find out how the change unfolds in a different register.
- 5 The kinds of project suggested by Baker in the corpus linguistics chapter that follows this one can also be carried out using historical data sources within the limits of the data available from earlier periods. However, when doing keyword searches, for example, make sure you use corpora with modern spelling or with older spelling normalized – unless of course you want to explore spelling variation.

Further Reading and Resources

For broad overviews of historical sociolinguistics, see Hernández-Campoy and Conde-Silvestre (2012) and McColl Millar (2012).

For many research purposes, digital corpora provide the easiest way of accessing systematically gathered data with metadata on the people who produced them. Like Machyn's Diary, some of these materials are freely available online; others have been deposited in electronic archives such as the University of Oxford Text Archive (OTA; <http://ota.ahds.ac.uk/>); and yet for others, the user needs to purchase a license. One such suite of corpora is the Penn Parsed Corpora of Historical English, available on CD-ROMs (www.ling.upenn.edu/histcorpora/).

A useful first port of call for information on English historical corpora is the Corpus Resource Database (CoRD) at www.helsinki.fi/varieng/CoRD/index.html, which provides information on a number of historical resources, including the CEEC family of corpora discussed in this chapter. For corpus software, see Baker's chapter in this volume.

Corpora and Databases

ARCHER=A Representative Corpus of Historical English Registers, version 3.1. 1990–1993, 2002, 2007, 2010. Compiled under the supervision of D. Biber and E. Finegan at 14 consortium universities. www.llc.manchester.ac.uk/research/projects/archer/.

Bailey, R.W., Miller, M., and Moore, C. (eds) 2006. *A London Provisioner's Chronicle, 1550–1563, by Henry Machyn: Manuscript, Transcription, and Modernization*. Ann Arbor, MI: MPublishing, University of Michigan Library. <http://quod.lib.umich.edu/m/machyn/>.

CEEC=Corpus of Early English Correspondence. 1998. Compiled by T. Nevalainen, H. Raumolin-Brunberg, J. Keränen, M. Nevala, A. Nurmi, and M. Palander-Collin. Department of English, University of Helsinki. www.helsinki.fi/varieng/CoRD/corpora/CEEC/index.html.

COHA=Corpus of Historical American English. 2010–. Compiled by M. Davies. Brigham Young University. <http://corpus.byu.edu/coha/>.

HC=Helsinki Corpus of English Texts. 1991. Compiled by M. Rissanen (Project leader), M. Kytö (Project secretary); L. Kahlas-Tarkka, M. Kilpiö (Old English); S. Nevanlinna, I. Taavitsainen (Middle English); T. Nevalainen, H. Raumolin-Brunberg (Early Modern English). Department of English, University of Helsinki. www.helsinki.fi/varieng/CoRD/corpora/HelsinkiCorpus/index.html.

PCEEC=The Parsed Corpus of Early English Correspondence. 2006. Annotated by A. Taylor, A. Nurmi, A. Warner, S. Pintzuk, and T. Nevalainen. Compiled by the CEEC Project Team. University of York and University of Helsinki. Distributed through the Oxford Text Archive. www.helsinki.fi/varieng/CoRD/corpora/CEEC/pceec.html.

Proceedings of the Old Bailey, London's Central Criminal Court, 1674–1913. www.oldbaileyonline.org/

References

- Anderwald, L. 2012. *Throve, pled, shrunk*: the evolution of American English in the 19th century between language change and prescriptive norms. In *Outposts of Historical Corpus Linguistics (Studies in Variation, Contacts and Change in English, Vol. 10)*, ed. J. Tyrkkö, M. Kilpiö, T. Nevalainen, and M. Rissanen. Helsinki: VARIENG. www.helsinki.fi/varieng/journal/volumes/10/anderwald/ (last accessed March 29, 2013).

- Baker, P. 2010. *Sociolinguistics and Corpus Linguistics*. Edinburgh: Edinburgh University Press.
- Busse, U. 2002. *Linguistic Variation in the Shakespeare Corpus: Morpho-syntactic Variability of Second Person Pronouns*. Amsterdam: John Benjamins.
- Culpeper, J. and Kytö, M. 2010. *Early Modern English Dialogues: Spoken Interaction as Writing*. Cambridge: Cambridge University Press.
- Hernández-Campoy, J.M. and Conde-Silvestre, J.C. (eds) 2012. *The Handbook of Historical Sociolinguistics*. Oxford: Wiley-Blackwell.
- Hinneburg, A., Mannila, H., Kaislaniemi, S., Nevalainen, T., and Raumolin-Brunberg, H. 2007. How to handle small samples: bootstrap and Bayesian methods in the analysis of linguistic change. *Literary and Linguistic Computing* 22: 137–150.
- Huber, M. 2007. The Old Bailey Proceedings, 1674–1834: evaluating and annotating a corpus of 18th- and 19th-century spoken English. In *Annotating Variation and Change* (Studies in Variation, Contacts and Change in English, Vol. 1), ed. A. Meurman-Solin and A. Nurmi. Helsinki: VARIENG. www.helsinki.fi/varieng/journal/volumes/01/huber/ (last accessed March 29, 2013).
- Labov, W. 1994. *Principles of Linguistic Change*. Vol. 1: *Internal Factors*. Oxford: Blackwell.
- Labov, W. 2001. *Principles of Linguistic Change*. Vol. 2: *Social Factors*. Oxford: Blackwell.
- Laslett, P. 1983. *The World We Have Lost – Further Explored*. London: Routledge.
- McColl Millar, R. 2012. *English Historical Sociolinguistics*. Edinburgh: Edinburgh University Press.
- Nevala, M. 1998. *By him that loves you*: address forms in letters written to 16th-century social aspirers. In *Explorations in Corpus Linguistics*, ed. A. Renouf, 147–157. Amsterdam: Rodopi.
- Nevalainen, T. and Raumolin-Brunberg, H. 2003. *Historical Sociolinguistics: Language Change in Tudor and Stuart England*. London: Pearson Education.
- Raumolin-Brunberg, H. 1996. Historical sociolinguistics. In *Sociolinguistics and Language History: Studies Based on the Corpus of Early English Correspondence*, ed. T. Nevalainen and H. Raumolin-Brunberg, 11–37. Amsterdam: Rodopi.

7 Corpus Linguistics in Sociolinguistics

Paul Baker

Introduction	108
Corpus Linguistics	108
Building a Corpus	109
Research Questions	111
Comparing the Speech of Younger and Older Adults	111

Summary

Corpus linguistics is a method of analysis that can be used for almost any form of linguistic inquiry. Researchers examine large amounts of naturally occurring language data, using computer software to help them to identify unexpected patterns or confirm their hypotheses. This chapter describes some of the main analytical techniques of corpus linguistics, outlines the principles behind building corpora, discusses the sorts of research questions that are most appropriate to this method, and demonstrates its capability with a small study comparing age differences in language use. Finally, a few points of concern associated with the method are highlighted.

Research Methods in Sociolinguistics: A Practical Guide, First Edition.

Edited by Janet Holmes and Kirk Hazen.

© 2014 John Wiley & Sons, Inc. Published 2014 by John Wiley & Sons, Inc.

Introduction

This chapter outlines a range of ways that methodological techniques from the field of corpus linguistics can be used in order to conduct sociolinguistic analyses. Corpus linguistics is a method of analysis that relies on large collections of naturally occurring data, stored in electronic form, which can be analyzed with the help of computer software.

The chapter begins with a description of corpus linguistics and a discussion of the benefits of using this method. We will then look at how corpora are built and the sorts of questions that we can answer once we have a corpus. Following on from that, I describe a small case study, designed to demonstrate various corpus techniques and how they can be used to answer sociolinguistic research questions. The study involves comparing the speech of younger and older adults. We will see how corpus-driven techniques like keywords can be used in order to compare the language of social groups, and how such techniques offer a different perspective to hypothesis-driven techniques in that they can uncover differences (and similarities) which researchers may not have considered in advance. The chapter ends with a discussion of some of the limitations of using corpus methods.

Corpus Linguistics

The word *corpus* is Latin for “body,” and in linguistics a corpus is a body (or a large collection) of texts, carefully chosen so that they are representative of a particular language or language variety. Corpora can therefore consist of millions or even billions of words, although some corpora which aim to represent a very specialized type of language might be much smaller. The texts in a corpus are stored in electronic form and are analyzed with the help of specialist computer software. The computer software is useful because it can count and perform calculations on very large amounts of language data quickly without making mistakes. A very basic type of analysis involves counting words in a corpus, so we get an idea of what types of words are frequent. However, we may not be interested in words alone. We could look at fixed patterns of words, like “I’m very sorry” (these are sometimes referred to as clusters, *n-grams*, or lexical bundles) or, we could examine the frequencies of other phenomena, such as the number of nouns or adjectives in a corpus or the number of words which refer to certain concepts like time or size. However, to do this we would first need to assign additional information to words (this is referred to as tagging). Fortunately, computer programs can also do the tagging for us.

A frequency list (a list of all of the words in a corpus and how many times they occur) can be useful when comparing the frequencies of different words together. We can also take into consideration measures of dispersion – does a word occur in lots of different texts in a corpus, or is it concentrated in just one place? We may also be interested in comparing two or more corpora or different parts of corpora together, particularly to get an idea about whether certain types of language contain more (or less) of a certain word or feature, when compared against something else. Corpus

programs can therefore compare two frequency lists together and then identify all of the words which are statistically significant in one of those lists when compared against the other. These “significant” words are referred to as *keywords* in corpus linguistics, and are helpful because they can direct researchers to aspects of language in a corpus that we may not have realized were especially important. For example, in a corpus of newspaper articles, keywords might include *yesterday* and *quizzed*.

Another aspect of frequency relates to the idea of collocation. A collocate is a word which frequently occurs next to or near (usually up to around four or five words away) another word. So these two words occur together more than we would expect them to appear together due to chance, and this suggests that there is a special relationship between the words. Corpus tools can tell us all of the collocates of a word, and an analysis of collocates helps to reveal something about how words acquire meanings. For example, in one corpus the word *elderly* may have collocates like *ill*, *infirm*, and *disabled*, which tells us about the other sorts of groups or qualities that elderly people are associated with.

Finally, we may want to examine more carefully how words occur in the context of the sentences that they appear in, so we could conduct a concordance analysis. This would involve looking at a table that shows every occurrence of a word or phrase in a corpus, with a few words either side. We can sort concordances alphabetically (based on the word which occurs to the immediate left or right of the search word), which makes it easier to spot similar uses of the search word. Analyzing concordances that have been sorted in different ways helps researchers to identify patterns that may have been otherwise missed. In some cases, there may be hundreds or thousands of concordance lines to examine, and researchers may ask the corpus software just to give them a smaller, randomized sample of say 50 or 100 lines, which is easier to work with. Work on concordances often involves quite a lot of detailed qualitative analysis, as each line needs to be carefully read and made sense of. Sometimes we need to go beyond the concordance line and read the whole paragraph or even look at the whole text before we can fully understand how and why a word is used.

One benefit of using a corpus approach is that it helps us to make claims that are (i) based on actual language use and (ii) based on a lot of language use. Studies that use introspection (thinking about what we know about language) can result in inaccurate claims, due to various cognitive biases that all humans have. Other studies, which use only a small amount of data, are more difficult to generalize from. We don't know if a small amount of data are typical of that data type or not. There is also the possibility that we could be accused of “cherry-picking” a small amount of data in order to prove a particular point (Mautner, 2007: 54). It gets harder to make this accusation if we are working with millions of words.

Building a Corpus

In building a corpus, it is often helpful to begin by thinking of the sorts of research questions that you want to answer, and then deciding what constraints can be placed on data collection.

For example, imagine your research question is “Are women politer than men?” Here you’d probably be most interested in collecting spoken language data, although you might also want to consider other interactional language such as e-mails or online chat-room data. You would need to collect data from both women and men, and from a wide range of contexts and settings, and also make sure that the women and men you collect data from are also from a wide range of backgrounds. So one concept that needs to be borne in mind during data collection is that of representativeness. Does the corpus actually do a good job of representing the wider population? A related concept is to do with balance. So when collecting our corpus of male and female speech, we should try to ensure that there are roughly equal numbers of males and females, and roughly equal samples of data from each person. When we sample from written texts, we may also try to include equal-sized amounts of data, to ensure that larger texts don’t have an unwanted influence on findings. One way of doing this is to simply take equal-sized (say 2000-word) samples from lots of different texts. However, even here we would need to be careful that we didn’t just select all of our samples from the starts of books or conversations. Otherwise, we would end up with a corpus of “beginnings.” Therefore we should try to sample from different places – beginnings, middles, and ends.

We should also try to balance as many factors as we can when we carrying out sampling (so when collecting spoken data to compare sex differences, as well as having equal amounts of male and female speech, we should also try to have equal amounts of public and private conversations too). Sometimes the job of building a perfectly balanced corpus proves to be difficult, and so we have to make compromises, settling for what we can get rather than what we would like to have, and we may need to adjust our research questions to reflect that.

Once collected, corpus data then need to be saved electronically. Often it is quite easy to do this with written texts (from magazines, books, or newspapers, for example), and many corpus builders turn to large online archives that already have their data in electronic form. For sociolinguists, who often want to work with transcripts of spoken data, this can be a longer task, involving first recording and then transcribing the conversations (see the section on troubleshooting for further discussion). We may also want to use a coding scheme to transcribe other features like pauses, laughter, loud voices, and so on, particularly if we are interested in these features. Once acquired, corpus data are also often “tagged,” allowing more sophisticated analyses to be carried out. One form of tagging simply involves recording information about what the text file is about. So we may want to assign a “header” file to it, with information about the file’s name, date, name of the author, and other information such as the sex of the author. This can be useful when using corpus software – for example, we could tell the software to only count the frequencies of words in files that are tagged as having female authors.

With spoken corpora, we could tag the speech of each speaker if we have collected information about the speaker’s age, sex, social class, and so forth. This would also allow comparisons to be quickly made. Thus we could tell computer software to only count or show us cases of a particular word if they were made by females aged under 20. Additionally, if we were interested in carrying out more complex analyses – of grammatical or semantic features, say – we could tag words accordingly. Tagging is not essential, especially to researchers working on a small corpus for their own projects (although it is important to keep records about your files), but is often useful, especially if the corpus will be used by other people for a wide range of purposes.

Research Questions

One type of research question that corpus linguists ask is based on testing an existing theory (such as “Does the age of a speaker impact on the way that people apologize?”). This type of question refers to corpus-based research (Tognini-Bonelli, 2001) in that the analyst knows what to look for in advance of starting the analysis (apologies), and the corpus forms the basis of the analysis. Another approach is corpus-driven and exploratory in that the analyst may not really know what they should be analyzing in advance, but their analysis of frequencies or keywords drives them toward certain lines of investigation. Such a question may be left open – for example, “What is distinctive about this corpus?” – or slightly more specific: “In what ways does male and female language differ?” In reality, many research projects blur the lines between corpus-based and corpus-driven research. So for example, with the question asking whether age relates to apologies, we may begin with a predetermined list of apologies to look for in the corpus, but as a result of engaging with the data, we may start to find new apologies that we hadn’t thought of originally. Therefore, the corpus itself will alter the analysis, making us take new directions.

Sociolinguists who use corpora might want to ask questions that are focused on a particular linguistic feature or dependent variable (such as “How do people swear?”) or a particular social group (“How do women swear?”). They may also ask questions which involve a set of independent variables (such as gender), which often results in comparison-type questions (such as “Do women do x more than men, or differently to men?”). Perhaps because we find differences interesting, there can be a tendency to focus more on questions that identify differences, so researchers might want to consider phrasing questions that acknowledge that social groups may actually have a lot in common with each other linguistically – and their similarities may actually be greater than their differences.

Questions may initially be descriptive, although it is also possible to ask other research questions which require more detailed analysis of context or even explanations: for example, “In what contexts do men and women use feature x differently?” or “Why do they use feature x differently?” Such questions may be answered by analyzing concordance lines, although in other cases researchers may need to consult information outside the corpus in order to get a full answer.

Comparing the Speech of Younger and Older Adults

The analysis in this section is centered around the spoken section of the British National Corpus. The BNC consists of 100 million words of British English, sampled from a wide range of sources. Approximately 10 million words contain spoken transcripts of conversations, and much of this spoken data is tagged so we know the sex, social class, age, and region of the speaker. The BNC can be accessed via an online system called BNCweb (see Further Reading and Resources).

We are going to use these spoken data to compare the language of different types of speakers together. To keep the analysis simple, I am only going to focus on age as a variable, and I intend to compare two age groups, adults aged 25–34 and older

people aged over 60. My research question is: What will a keyword analysis tell us about lexical differences between these two groups?

It is important in corpus linguistics to report exact frequencies within your corpora as this allows others to more carefully scrutinize your findings. In total there are 1,120,516 words of speech from the 25–34 group (with 351 speakers contributing text), and 1,137,433 words of speech from the 60+ group (with 318 speakers contributing text). These figures are roughly similar, so present good conditions to calculate keywords.

I first built frequency lists of these two groups of speakers, and then compared the two frequency lists together in order to obtain keywords – words which occurred in the speech of one group significantly more often when compared against the other group. When obtaining keywords, we often have to make decisions with regard to what counts as “statistically significant,” as the more data we have to begin with, the more keywords will be elicited. Here, I used BNCweb’s default cut-off for significance (at 0.01%) and I have only considered the 50 strongest keywords that were found.

Table 7.1 shows the keywords in each group. I have categorized these mainly based on the grammatical categories that each word was given in the BNC. It should be noted that the BNC counts punctuation marks as “word” units, and that it splits some words up into component morphemes (so a word like *gonna* will be split into *gon* and *na*). Additionally, for ethical reasons, some words and phrases are anonymized in the data and noted with tags. These are also counted as “words.” There were some cases where certain forms had more than one possible meaning. For example, *'d* could be an auxiliary verb, standing for *had* as in “he’d gone home,” or it could be a modal verb standing for *should* or *would* as in “he’d be home now.” In those cases I made a categorization decision based on the most frequent grammatical tag that the form received in the corpus.

The majority of these keywords are also very frequent, occurring hundreds or thousands of times in the corpus, and widely dispersed across many speakers; so,

Table 7.1 Keywords comparing 25–34 and 60+ speakers in the BNC

<i>Category</i>	<i>Key in the 25–34 group</i>	<i>Key in the 60+ group</i>
Codes and names	Tim	[gap:name], [gap:address]
Fillers and discourse markers	okay, erm, yeah, right	er, yes, aye, well, mm
Auxiliary verbs	's, is, 're, are, do	was, were, had
Modal verbs	can, 'll, need	'd
Other verbs	gon	used, see, went, came
Concrete nouns	daddy	man, father
Conjunctions		and
Pronouns		they, he
Adverbs	actually, sort (of)	(of) course, when, never
Articles		the
Abstract nouns		war, days
Adjectives		old
Punctuation	?, !	
Swear words	fucking	
Infinitive to	na	
Determiners	what	

initially, I was fairly confident that most of these keywords indicated reasonably generalizable differences. One keyword which is not particularly generalizable is *Tim*, which was only spoken by 12 out of 351 of the 25–34 age group speakers, who collectively used it 244 times. When concordances of *Tim* are examined, it appears that there are speakers in the corpus named *Tim*, and also someone reads a story to a child about a mouse called *Tim*.

However, when examined more closely, other words revealed differences about the context of the data collection. For example, *war* is used 414 times by the 60+ speakers (and only 79 times by the 25–34 group). It is reasonably well distributed among the older age group with 71 out of 318 people using it. However, a concordance analysis of *war* reveals that it tended to occur in interview settings for oral history projects, where old people recounted their lives (see Concordance 1). This was a specific type of corpus data that was included in the BNC, and there is no equivalent for the 25–34 group. So while it would first appear to make sense that older people in the corpus would talk about the war (as many of them would have experience of war), it appears that this occurred because they were specifically asked to recollect certain experiences by interviewers, and not because they would automatically bring up this topic in casual conversation.

Concordance 1 Sample of *war* for 60+ speakers

See [gap:name] he was the man what brought in decasualization during the	war	. Mm. That's when you had a coalition government and
n't badly [pause] Me father at th-- er at the beginning of the	war	he worked [pause] he worked at the Grove pit, down the mine
Morris, we had all these agencies at the end of the	war	, and yet we couldn't get enough cars. But er
n't think, I [unclear] think they stopped using them during the	war	and I cr-- see that used to be like the gasworks,
really came into their own. And certainly during the Second World	War	where they kept things going an-- and could prove that they were
. What during the war? During the War, Second World	War	[gap:name] number two. Was she carrying anything at the time?
. I know some people did but no. See during the	war	we had, we had a lot of er minesweepers down here
n't it. And then the camps you see, during the	war	, you see people were out of work during the war e--

Other keywords also seemed to be related to this interview context of the older speakers. The fact that the younger speakers seem to use more present tense forms of the verb *to be* – *'s*, *is*, *'re*, *are* – while the older speakers use past-tense forms – *was*, *were* – was also linked to older people recollecting their memories, as were some of the other 60+ keywords like *never*, *days*, *when*, and *used*.

Interestingly, the 25–34 speakers use the word *daddy*, not because they are talking about or to their fathers, but because they are talking to their children, as in the following example: “Now it's five o'clock. What time do you think daddy is going to get home today? Shall we guess?” This suggests another type of contextual difference, that the younger speakers are more likely to be looking after young children and so their speech will contain more child-focused language. However, not all of the younger speakers are around children. The use of the swearword *fucking* also indicates

another difference between the older and younger adults in the corpus. This is used 584 times by the younger adults and only 18 times by the older ones.

Another interesting difference involves the use of certain discourse markers. While both groups make use of discourse markers which have similar functions, the forms that they use seem to differ. The younger adults are more likely to show agreement by saying *yeah*, *okay*, or *right*, whereas the older ones will say *mm*, *yes*, or the dialectical form *aye*. It is also notable that the younger speakers are transcribed as saying *erm*, whereas a similar form, *er*, is more common for the older speakers.

Keywords are useful in that they tell us about the most important lexical differences between two subsets of corpora. But they are less helpful in telling us about similarities. Therefore, it is often a good idea to supplement a keyword analysis with further analyses which take other sorts of frequencies into account. Table 7.2 shows the most frequent 25 words in each of the two corpora. Words which are present in the top 25 of both corpora and occur in the same rank are in dark grey. Words which are present in the top 25 of both corpora but do not have the same rank are shown in light grey.

Table 7.2 indicates that there are numerous similarities between the most frequent words in the two subsets of corpora. The first four “words” in the list (including the two punctuation marks) are in identical order, and in fact both lists share 20 of their top 25 words. The table therefore acts as a useful balance to Table 7.1, which only emphasized differences.

Due to space limitations, this study can only be partial, instead showing us the potential that corpus linguistics approaches have for sociolinguistic analysis. It is unlikely that we would have been able to accurately predict some of these lexical differences before we began the research, although some of the findings did confirm my expectations (such as the use of *fucking* by the younger adults). The analysis here also shows the importance of examining context via concordance lines – otherwise erroneous conclusions could be reached. The presence of oral history interviews in the older data set certainly needs to be taken into account, and it might even make sense to repeat the analysis, taking out the oral history interviews to see if some of the differences still hold.

Quagmires and Troubleshooting

- *Corpus linguistics methods might not always be the best option to use.* It is easy to carry out a search on a word or a phrase, but some uses of language are more complicated and variable, and, as a result, it can be difficult to know exactly what to enter into a search box. For example, imagine if you wanted to compare how males and females tell stories, argue with each other, or use metaphors. It would be difficult to think of a search term that would accurately show such features in a corpus. Some researchers have tried to find ways round these problems. So one way of identifying conflict might be to carry out searches on words and phrases like *no*, *disagree*, *wrong*, or *not right*. However, these searches are likely to give lots of unwanted cases as well as missing plenty of others that are wanted. Another option would be simply to abandon a search tool and read through the whole corpus line by line. This was done by Hasund and Stenström (1997) when they wanted to find cases of conflict in a 40,000-word spoken corpus of teenage girls’ speech. The relatively small size of this corpus made reading the corpus feasible, although it would still have taken a very long time and remains a subjective process.

Table 7.2 The most frequent words for each age group

	25–34 group		60+ group	
	Word	Frequency	Word	Frequency
1	.	67,749	.	67,524
2	,	60,349	,	62,891
3	the	37,457	the	42,810
4	I	36,202	I	38,399
5	you	33,089	and	33,077
6	it	30,479	you	31,205
7	's	25,767	it	29,808
8	that	24,023	to	24,072
9	and	23,884	that	23,625
10	?	22,414	a	23,396
11	a	22,212	's	21,311
12	to	22,208	n't	16,922
13	[unclear]	17,517	[unclear]	16,790
14	of	16,519	?	15,761
15	n't	16,418	of	15,690
16	in	14,003	was	15,523
17	yeah	12,607	they	15,465
18	do	12,370	er	15,138
19	is	10,845	in	14,607
20	we	10,723	he	12,306
21	they	10,157	we	10,503
22	what	9368	do	10,435
23	he	9088	there	10,142
24	!	9072	yeah	10,135
25	on	8954	well	9692

- *The problem of getting hold of corpus data in the first place.* It is easier to build written corpora, because written data is much easier to get hold of, particularly as lots of written texts like newspaper articles or books are archived online. However, spoken data is much more time consuming to collect and transcribe, and it also raises ethical issues regarding anonymity and consent. As a result, spoken corpora tend to be smaller than written corpora, which means that it is more difficult to generalize findings to a wider population. As noted above, the spoken component of the British National Corpus contains 10 million words, although these are data that were collected in the early 1990s, so they cannot tell

us much about present-day language use. This does not mean that we cannot use small spoken corpora or large “out-of-date” corpora, but that we need to be careful about how we report our findings, and ensure we discuss their potential limitations. A larger spoken corpus, the Corpus of Contemporary American English (COCA), contains 90 million words of transcribed speech, although this is taken from radio and television broadcasts. While such speech contains many uses of unscripted language which appear naturalistic, such as phrases like “and I’m like” and “I guess that,” it also contains scripted phrases like “we’ll go now to a commercial break.” The spoken component of the COCA reveals a great deal about public speech produced in the media and intended for a large audience, but we would need to be careful about claiming that it represents how Americans speak in more private contexts.

- *Be careful not to overgeneralize about language differences based on one type of distinction.* For example, in the BNC, females say *lovely* more than three times as much as males. This suggests a general difference, although when we look more closely, other aspects of identity also seem to play an important role. For the males, their use of *lovely* is fairly evenly distributed across age groups. But for females, use of *lovely* appears to be age-graded, with older speakers using it the most and younger speakers using it least. Knowing how age interacts with sex will give a more nuanced depiction of usage of *lovely* across social groups. The difference does not appear to be that important for younger speakers, so a finding like “females use *lovely* more than males” does not tell the full story. Unfortunately, though, once we start dividing up speakers into more detailed social groups – for example, males aged 25–34 from social class AB in northern England – then the amounts of data in each group get smaller and smaller, making it even more difficult to generalize. It is therefore always sensible to be very cautious when making generalizations, even from corpus data.
- *How widely is a feature distributed across the speakers from the same social group?* It could be the case that a feature appears to be very frequent, due to the fact that it is used often by a small number of speakers. Harrington (2008) found that women tended to engage more in reporting other people’s speech than men, although this was due to a small number of female speakers who had a much higher rate of reporting other people’s speech. The majority of the other female speakers had similar rates as males. It is therefore important to take distribution of features into account, rather than concluding that a “difference” has been found between group x and group y. Differences within group x may be of much more interest.
- *How do we interpret information from corpus data?* There is a danger that we can reach inaccurate conclusions if we simply examine word frequencies that are taken out of context. An example I have used before (Baker, 2010) relates to the word *hi*. If we search for the distribution of *hi* in the British National Corpus, it transpires that the word is used more by younger speakers than older speakers. However, we need to be careful in concluding that every use of *hi* is actually a greeting. In fact, *hi* is used variously in the BNC, as a false start for the words *his* or *hire*, as part of the word *hi fi*, and even in the Seven Dwarves’ song “hi ho, hi ho, it’s off to work we go.” Additionally, *hi* can occur in reported speech, such as “she said hi,” or meta-uses, where people talk about the word *hi* but do not actually use it as a greeting. It is only by examining each concordance line in detail that we are able to uncover these unexpected, non-greeting uses of *hi*.

Tips

- Go online to see if you can use an existing corpus or collection of transcribed spoken texts, rather than building your own from scratch (some suggestions are given below).
- If you are tagging your own corpus, bear in mind that some corpus tools use characters like the asterisk *, the full stop, and brackets as special symbols to allow you to carry out complex searches, so try to avoid these characters as codes when transcribing your spoken data.
- If you are building your own corpus, don't save the files as Word or PDF documents. Most corpus tools work best if the files are saved as text only documents (with a .txt extension).
- If you are collecting data from the Web, make sure you strip out "noise." You don't want to include a menu that occurs on every web page of a site, as this will skew certain word frequencies.
- Read the Help documentation that often comes with online corpora or corpus tools in order to get a good idea of how to conduct effective searches and carry out more complex analyses.
- Check to see whether your corpus tool is capable of uncovering the linguistic feature that you want to study. Unless such features have already been identified in the corpus, you can't automatically tell a corpus tool to show you every metaphor or case of disagreement in a corpus, for example.
- Do not assume that a word or phrase is always used in a consistent way – *hi* is not always a greeting! Always check concordance lines.
- Sometimes concordance lines need to be expanded so you can see an entire utterance, or even check backwards or forwards in a conversation, so you can be certain that a word or phrase is being used in the way you think it is being used.
- If you are comparing frequencies of a feature between two or more groups of speakers (say males and females), then bear in mind that the total number of words spoken by each group may not be the same. Therefore, you should compare proportional frequencies (such as occurrences per million words), rather than raw frequencies.
- Consider the dispersion of a linguistic feature. Even if it is very frequent in one group, is this because only one or two people use that feature a lot?

Project Ideas

- 1 *Build two small corpora*, one containing speech between groups of males, the other with speech containing speech between groups of females. Use a corpus analysis tool like AntConc or WordSmith to compare the keywords between the two corpora. To what extent do the keywords reveal anything about sex differences in language use?
- 2 *Choose an easily searchable linguistic feature* and compare it across the different demographic groups (age, sex, social class) in the spoken section of the British National Corpus. Are there any quantitative differences (in terms of frequencies) or qualitative differences (in terms of how and why the feature is used) across the groups? Remember to consider how widely dispersed the feature is across the speakers of a particular group.

- 3 *Experiment with different search queries* to find cases of the following features in the spoken section of the British National Corpus, the Corpus of Contemporary American English, or any other spoken corpus:
- (a) farewells
 - (b) agreement
 - (c) apologies
 - (d) jokes

Which feature was easiest/most difficult to find? How certain can you be that you managed to find every occurrence of that feature? What problems did you encounter?

Further Reading and Resources

Baker, P. 2010. *Sociolinguistics and Corpus Linguistics*. Edinburgh: Edinburgh University Press.
 Murphy, B. 2010. *Corpus and Sociolinguistics: Investigating Age and Gender in Female Talk*. Amsterdam: John Benjamins.

The British National Corpus is available online from Lancaster University: see <http://bncweb.lancs.ac.uk/bncwebSignup/user/login.php>.

Mark Davies at Brigham Young University has also made the 100 million word BNC (containing 10 million words of transcribed speech) freely accessible online at <http://corpus.byu.edu/bnc/>. Davies has also created a number of other free-to-use corpora, such as the Corpus of Contemporary American English (which includes 90 million words of transcribed speech from television and radio programs) – a full list is at <http://corpus.byu.edu/>. While it is possible to use the BYU corpora to conduct searches on spoken texts, it is not possible to compare different social groups or speakers together.

The Santa Barbara Corpus of Spoken American English is available from www.linguistics.ucsb.edu/research/sbc/corpus.html.

Antconc, created by Laurence Anthony, is a free piece of corpus analysis software, allowing users to upload their own texts to derive frequency lists, concordances, keywords, collocates, and dispersions. It is particularly useful for beginners and can be downloaded from www.antlab.sci.waseda.ac.jp/software.html. WordSmith, created by Mike Scott, is another corpus analysis tool, which has many advanced features. A free demo version can be downloaded at www.lexically.net/wordsmith/. HTTrack is an online web crawler tool which allows web sites to be downloaded to your computer: www.htrack.com/. TotalHTMLConverter can convert .html to .txt format to enable processing by corpus linguistics software: www.coolutils.com/TotalHTMLConverter. A similar tool converts PDFs to .txt: www.coolutils.com/TotalPDFConverter.

References

- Baker, P. 2010. *Sociolinguistics and Corpus Linguistics*. Edinburgh: Edinburgh University Press.
 Harrington, K. 2008. Perpetuating difference? Corpus linguistics and the gendering of reported dialogue. In *Gender and Language Research Methodologies*, ed. K. Harrington, L. Litosseliti, H. Sauntson, and J. Sunderland, 85–102. Basingstoke: Palgrave Macmillan.
 Hasund, I.K. and Stenström, A.B. 1997. Conflict-talk: a comparison of the verbal disputes between adolescent females in two corpora. In *Corpus-based Studies in English*. Papers from the 17th International Conference on English Language Research on Computerized Corpora, ed. M. Ljung, 119–133. Amsterdam: Rodopi.
 Mautner, G. 2007. Mining large corpora for social information: the case of *elderly*. *Language in Society* 36: 51–72.
 Tognini-Bonelli, E. 2001. *Corpus Linguistics at Work*. Amsterdam: John Benjamins.

8 Phonetic Analysis in Sociolinguistics

Erik R. Thomas

Introduction	119
Implementation	121

Summary

It is crucial today for a sociolinguist working with any phonetic or phonological variable to know how to conduct acoustic analyses. The discussion here explains a few of the most commonly used techniques and identifies some others that could be useful. Although vowel formant analysis has dominated past sociophonetic work, analyses of consonants and prosodic phenomena are growing areas. Many methods involve measurement of formants or the fundamental frequency (F_0), but other features can also be measured. A brief overview of signal processing is included. Common sources of measurement errors and steps that can be taken to avoid them are also presented.

Introduction

Acoustic analysis is examination of the physical properties of sound. The use of acoustic analysis methods has grown increasingly important in sociolinguistics over the past few decades. It has become essential for any sociolinguist to have a good

Research Methods in Sociolinguistics: A Practical Guide, First Edition.

Edited by Janet Holmes and Kirk Hazen.

© 2014 John Wiley & Sons, Inc. Published 2014 by John Wiley & Sons, Inc.

grounding in acoustic phonetic techniques. In fact, the overlap of sociolinguistics and phonetics has become so pervasive that the name for this interface, *sociophonetics*, now has wide currency. Textbooks detailing sociophonetic techniques have recently appeared (Di Paolo and Yaeger-Dror, 2011; Thomas, 2011), and readers should refer to them for greater depth about the methods covered here and other useful methods. In this chapter, we will discuss some of the most commonly used techniques and identify a few others that could be applied to frequently studied variables.

Sociolinguists first began using acoustic phonetic analyses when Labov, Yaeger, and Steiner (1972) introduced vowel formant measurement to the study of sound change. The methods at their disposal seem primitive today: they had to estimate formant values from harmonic values that they measured with a ruler on printed spectrograms. Formants are resonances produced by cavities in the vocal tract, such as the space between the vocal folds and the ridge of the tongue or between the tongue and the lips. Harmonics include the fundamental frequency, or F_0 – the tone representing the rate of vocal fold vibration – and all the overtones of F_0 . Harmonics that do not lie near a formant will be damped. In spite of the now-antiquated methods, Labov *et al.* (1972) irrevocably changed sociolinguistics by demonstrating that acoustic analysis could not only be used for vowel variation and sound change, but also that it could reveal details that traditional auditory analysis missed.

In subsequent years, vowel analysis proceeded by leaps and bounds. Technical innovations from signal processing played an important role. The introduction of linear predictive coding, or LPC (Atal and Hanauer, 1971) made the estimation of formants easier, though LPC introduced some new problems (see “Quagmires and Troubleshooting” below). Computer programs replaced the large, cumbersome spectrographs. (Spectrographs were machines, whereas spectrograms are the corresponding visual displays.) These programs have steadily become faster and more user friendly, and, importantly, some can now be downloaded for free. Sociophonetic analysis has also become decentralized. Before 1990, almost all acoustic analysis of linguistic variation was conducted by Labov and his students, but since 1990 many other researchers have adopted it. For years, too, vowels held a virtual monopoly on the kinds of variables that were studied. However, since 2000, acoustic studies of non-vocalic variables, such as intonation (Grabe *et al.*, 2000), consonants (e.g., Purnell *et al.*, 2005; Scobbie, 2006), and lexical tone (e.g., Stanford, 2008), have become commonplace. Nevertheless, acoustic analysis of variation is still limited in the languages to which it is applied. Vocalic variation analysis is still largely confined to English and Dutch. Analysis of intonational variation has been more successful in breaking those boundaries, having been applied to numerous European languages (e.g., Gilles and Peters, 2004).

The theoretical reach of sociophonetics is expanding as well. In the past, sociophonetic studies tended to focus on mechanisms of sound changes and on finding correlations between linguistic variation and social structures within communities. As noted in Thomas (2011), linguistics in general concerns itself with two important issues: (i) how and why language varies and changes, and (ii) how language is structured, especially with regard to the mind/brain. Variation studies have always been heavily involved with the first issue, but have exhibited much less interest in the second. Meanwhile, the rest of linguistics has focused for decades on the second issue. Nonetheless, more variationists are attending to the relationship between cognition and language now. This new focus can accomplish two things. First, it will provide a means to connect the two general issues of linguistics by exploring how

crucial variation is to linguistic cognition. Second, by demonstrating the importance of variation to cognition, it can make sociolinguistics theoretically central to linguistics.

Sociophonetics thus affords a means for shepherding sociolinguistics into cognitive studies. While much cognitive study depends on speech perception experiments, which are covered in Drager (this volume; see also Thomas, 2011: 61–87), speech production is vital as well. Uncovering the cognition of language variation is a two-step process. The first step is to determine what variation occurs in a community, region, or idiolect; and analysis of speech production is necessary for that. This step flags processes that may be cognitively encoded. Acoustic analysis can facilitate the process for any phonetic variable. Only when the variation in production is understood can one move on to the second step, the perception experiments that test the saliency and cognitive processing of different variables.

Implementation

Modern acoustic analysis starts with a digitized sound signal. Signals have to be digitized, that is, set into discrete 0 and 1 coding, so that computers can handle them. By contrast, an analog signal, which is continuous, cannot be understood by a computer. In digitization, the energy in the signal is measured at intervals, and this process is called sampling. A signal has to be sampled at a high enough rate to capture all the small kinks in the sound waves that our ears can process. A rate of about 22,000 samples per second, or 22 kHz, would be sufficient except that the computer also has to break the complex sound waves into simple, sinusoid waves. It does so through a process called Fourier analysis. The problem is that Fourier analysis will yield false sound frequencies because of what is called aliasing. To prevent aliasing, the sound has to be sampled at twice the rate of the highest frequency of interest – for example, at about 44 kHz – and then the sampled sound has to be filtered to remove frequencies that are at least half the sampling rate.

The digitized and properly filtered signal is then ready for linguistic analysis. The most commonly performed acoustic analysis in sociolinguistics is that of vowel formants. Vowel formant analysis is useful for languages such as English, Dutch, German, and Swedish that exhibit a great deal of vowel variation. Formants are resonances of the cavities in the vocal tract, and they apply to both vowels and consonants. When the tongue makes a constriction, as for any consonant and for mid and high vowels, it divides the vocal tract into two cavities: one between the vocal folds and the constriction and the other between the constriction and the lips. For nasal consonants and nasal vowels, the nasal cavity constitutes a third cavity. As the tongue moves, it changes the length of the cavities and thereby their resonances. The resonances affect sound coming through the vocal tract. For vowels, the sound is actually produced by air moving through the vibrating vocal folds – not by the resonating cavities. The resonances are simply sound frequencies favored by a cavity, and what happens is that frequencies of the incoming sound that are disfavored are damped, leaving the favored frequencies as the loudest parts of the signal.

A representative wideband spectrogram is shown in Figure 8.1. The x-axis represents time and the y-axis frequency. The vowel, in the center, is the darkest part of the

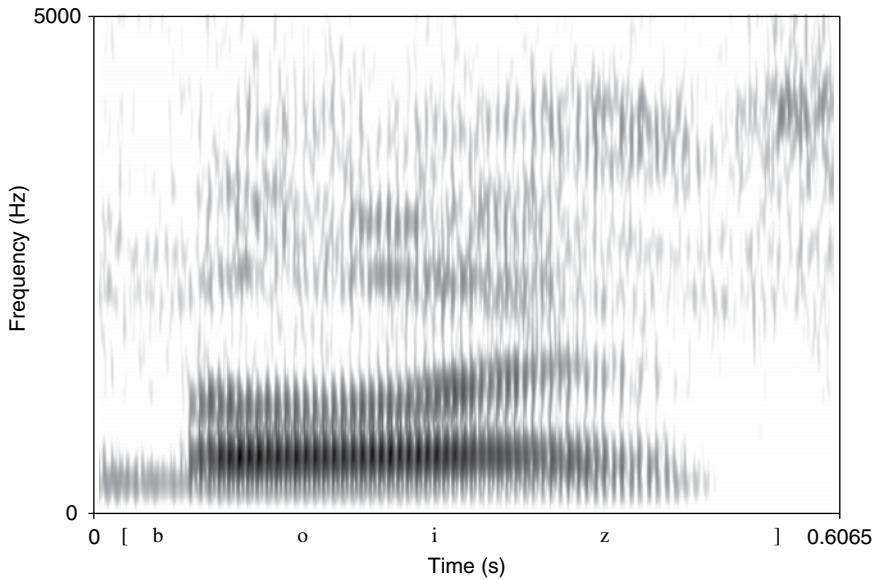


Figure 8.1 An example of a wideband spectrogram illustrating the word *boys*.

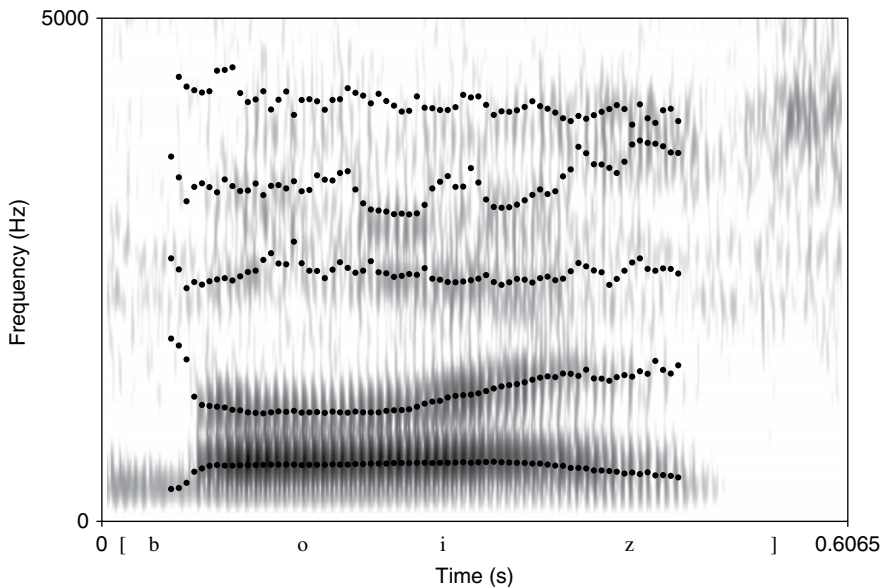


Figure 8.2 The same spectrogram as in Figure 8.1, but with LPC formant tracks added.

spectrogram, indicating its higher amplitude. The formants are the horizontal dark bands within the vowel. For vowel measurement, we need to determine what frequency lies at the middle (vertically) of each band. LPC, as noted earlier, is the method most often used today for estimating that frequency. Figure 8.2 shows the same spectrogram, but with LPC tracks to indicate the formant values.

Another issue with vowel formant measurement is what part of the vowel to measure. A simple method is to take the formant readings halfway through the vowel – that is, at the point halfway between the onset (beginning) and offset (end) of the vowel. For diphthongs, though, you will need at least two measurement points. You can take more complex trajectory readings by using even more measurement points. For more details and options, see Thomas (2011: 145–154).

Ordinarily, you should measure many tokens of each vowel to ensure that you haven't just measured a few unusual examples. You want to identify representative tokens. Some idiosyncratic tokens are due to errors by the speaker, such as if he or she was unsure of what word to say and changed mid-word. However, the two factors that account for most of the unrepresentative tokens are *coarticulation* and *undershoot*. Coarticulation involves overlapping of sounds, which occurs between any two adjacent segments. Certain consonants, particularly approximants (liquids and semivowels) and nasals, show especially strong coarticulatory effects on neighboring vowels. Undershoot occurs when a segment fails to reach its “intended” realization, and it results from short duration, weakening of stress, or both. When undershoot occurs for a vowel, what usually happens is that the vowel is pulled toward adjacent consonants because their articulatory effects extend throughout the vowel, leaving no central part of the vowel where the coarticulation is minimal.

Once the vowels are measured and checked for representativeness, they can be plotted. Plotting allows you to see the relative positions of different vowels. There are numerous ways to plot vowels, each appropriate for different research questions. One option is to plot all the individual tokens. It shows the spread of each vowel and is most useful for examining variation within a single vowel phoneme or for determining whether a merger is present, as in Figure 8.3, but it can be hard to read if several phonemes are shown. It is also useful for showing trajectories of individual vowels. Another option is to plot mean values of each phoneme or allophone, as in Figure 8.4. This method is easier to read and is most useful for showing the overall tendencies of vowels, such as for vowel shifting, but of course it cannot show the spread of the individual tokens. Error bars can be added for that purpose, though they can clutter the plot as much as showing individual tokens does.

Speakers have oral cavities of different lengths, so formant values for the “same” vowel will differ among speakers. Hence, it is usually necessary to normalize vowel formant measurements if different speakers are compared. If adult males are compared with adult females or either one with children, normalization is imperative. Numerous normalization methods have been developed, but only a few are commonly used. See the NORM web site (<http://ncslaap.lib.ncsu.edu/tools/norm/>) for a discussion. NORM can also normalize your data with several common methods.

Formants are important for consonants as well as for vowels. Formants are visible throughout most approximants in spectrograms. Consequently, approximants often look much like vowels. They can be analyzed like vowels as well. An example is the amount of velarization of laterals, often referred to as “dark” (more velarized) and “light” (less velarized) /l/. Figure 8.5 shows examples. For the “dark” /l/, F_1 and F_2 lie quite close to each other. For “light” /l/, F_2 is much higher than F_1 . The amount of velarization can be assessed by measuring either the value of F_2 alone or the distance between F_1 and F_2 . If you analyze more than one speaker, though, you'll need to apply a normalization technique just as you would for vowel analysis.

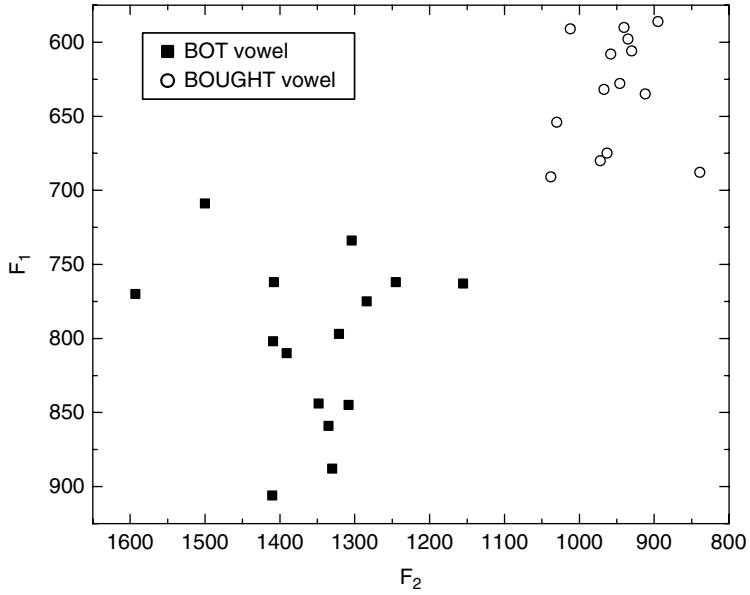


Figure 8.3 A formant plot showing measurements of individual tokens, in this case to demonstrate that the speaker, an African American male from Ohio, makes a clear differentiation of the BOT and BOUGHT vowels.

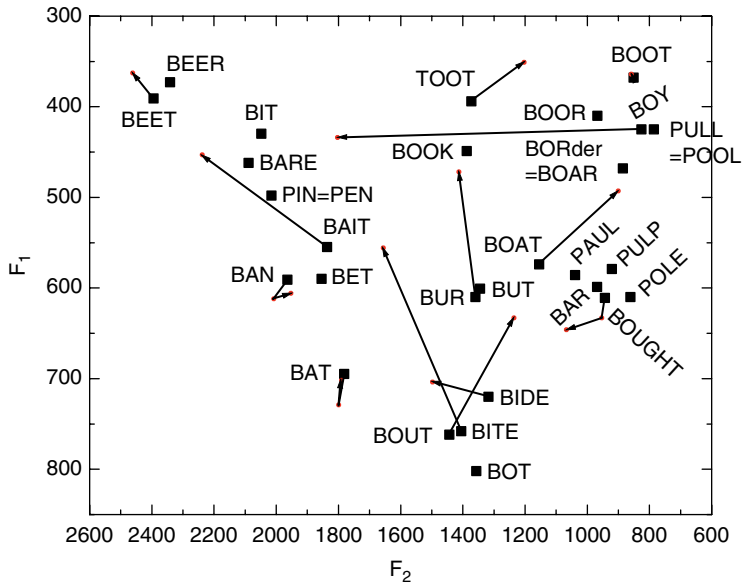


Figure 8.4 A formant plot showing the mean values of all the vowels for the same speaker as in Figure 8.3. Arrows indicate the gliding of dynamic vowels, such as diphthongs.

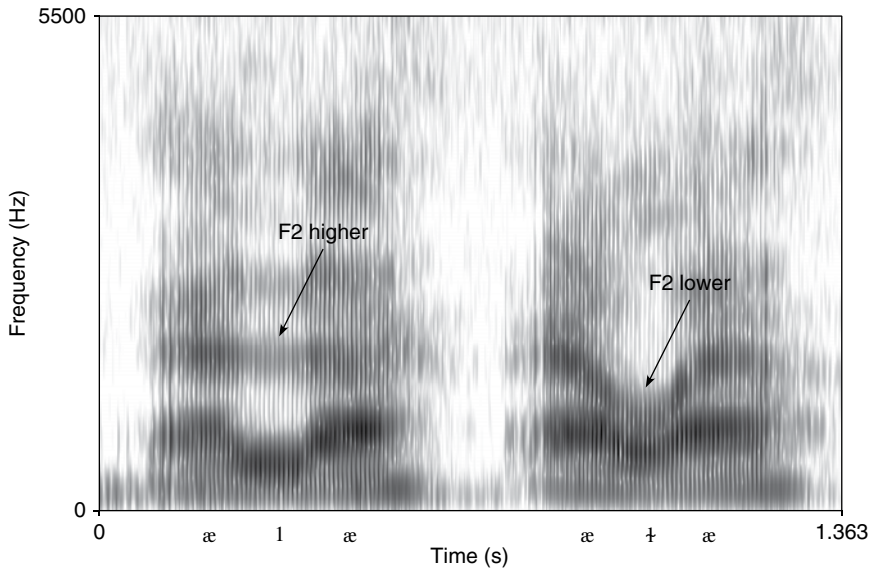


Figure 8.5 Examples of “light” (non-velar, left) and “dark” (velarized, right) [l], both in an [æ_æ] frame. Note the difference in F_2 .

Another kind of consonant for which formants are crucial is stops. Formants aren't normally visible during the stop occlusion itself. The distinctive formant properties of stops appear in the transitional areas between stops and vowels. Each place of articulation – for example, velar, palatal, alveolar – shows a different pattern of formant movement. See Thomas (2011: 98–104) for a discussion. An example is shown in Figure 8.6, which compares alveolar and retroflex stops. This distinction is an important variable in communities with a substrate influence from languages of India (e.g., Sharma and Sankaran, 2011). The formant tracks bend as they move from the first vowel to the consonant and then back to the second vowel. F_1 and F_2 bend in similar directions for alveolar and retroflex stops, but F_3 bends down for the retroflex stop and up for the alveolar stop. This difference can be measured by subtracting the F_3 value right at the point where it disappears at the stop occlusion from the F_3 value somewhere within the vowel. As for where to take the within-vowel measurement, you can do that either a certain distance away from the stop occlusion, such as 50 ms, or in the very center of the vowel. For other places of articulation, figure out which formant(s) is/are most diagnostic and then use the same subtraction technique.

Formants are also important for fricatives, but there are some differences. Most importantly, the source for frication noise differs from the source for voicing. With voicing, the sound comes from vibration of the vocal folds, but frication noise originates near the place of articulation. The air rushing through the narrow constriction produces turbulence, which creates some noise, and for most fricatives even more turbulent noise is produced when the airstream hits an obstacle downstream. For [s], for example, the obstacle is the front teeth. Frication noise doesn't look as neat on spectrograms as vocal pulsing. It looks like static. Nevertheless, the resonating cavities affect it just as they affect the sound from vocal pulsing: they damp some frequencies and not others. As a result, frication noise shows peaks, and different fricatives show

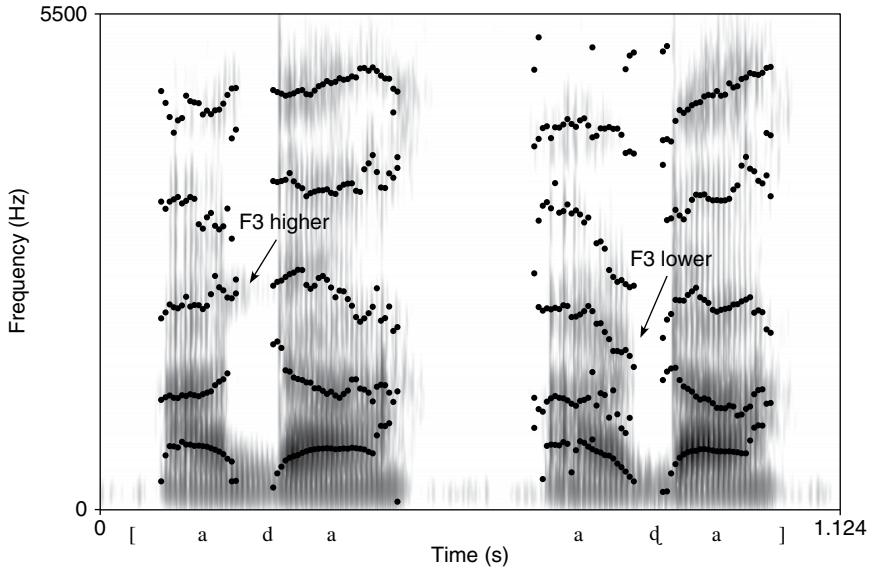


Figure 8.6 A comparison of alveolar (left) and retroflex (right) stops in an [a_a] frame. Note the difference in F_3 at the boundary between the stop and adjacent vowels.

peaks at different frequencies. For sibilant and dorsal fricatives, the frication is prolonged enough that you can make a useful power spectrum of the noise to find out where the peaks are. Figure 8.7 compares two sibilants, [s] and [ʃ]. The highest-amplitude point occurs at a higher frequency for [s] than for [ʃ]. This method has been used to distinguish fricatives that lie on a continuum from [s] to [ʃ], such as for /str/ clusters in English (e.g., Baker, Archangeli, and Mielke, 2011). For dorsal fricatives such as [x], more than one peak may be important.

Formant frequencies do not cover all relevant variables. A variety of other factors may distinguish variants. These factors can be assessed acoustically, however. One common variable in English is the alternation of /θ/ and /ð/, as in *thistle* and *this'll*, respectively, between fricative and stop sounds. Stops consistently show a burst, which is a small pop of air, when they are released. When /θ/ or /ð/ falls before a vowel, you can examine spectrograms to determine whether the stop is present, indicating a stop sound ([t] or [d]), or is absent, indicating a fricative sound ([θ] or [ð]). Figure 8.8 shows a comparison of [d] and [ð].

In many British dialects, /t/ commonly becomes a glottal stop [ʔ] in syllable codas. Again, formant values are of little help here. In this case, you should look for glottalization, which is realized as slowed vocal pulsing. Usually you'll see it in the vowels just before and after the glottal stop. Sometimes, the slow pulses may continue through the area where you'd expect a stop occlusion.

Segmental length can be important at times. It is manifested as differences in the duration of segments. Some dialects and languages possess phonological length distinctions for vowels or consonants that others lack. Another important factor that affects duration is that vowels average longer before voiced consonants than before voiceless consonants, whereas voiced consonants themselves average shorter than their voiceless counterparts. Duration is relatively simple to measure. The only difficulty is

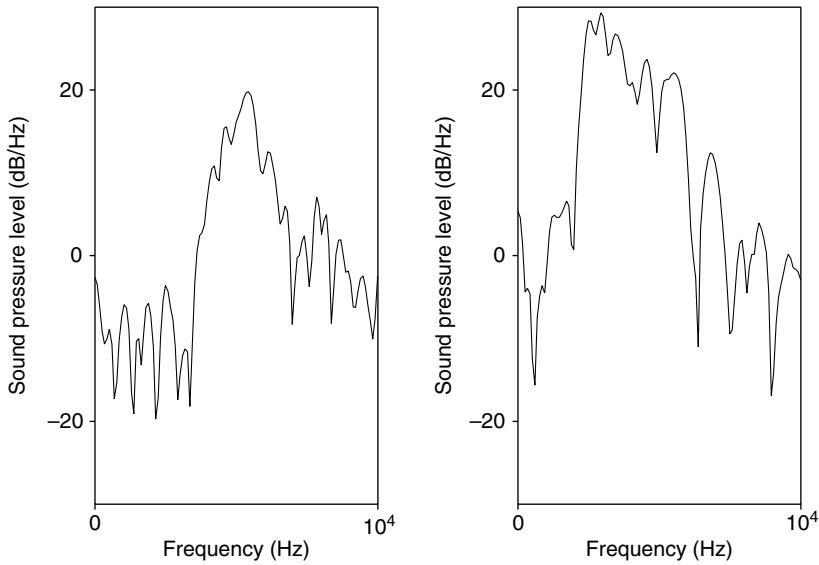


Figure 8.7 Power spectra for [s] (left) and [ʃ] (right). The peak amplitude (represented by the sound pressure level) occurs at a higher frequency for [s] than for [ʃ]. Note that frequency is shown on the x-axis, not on the y-axis as in a spectrogram.

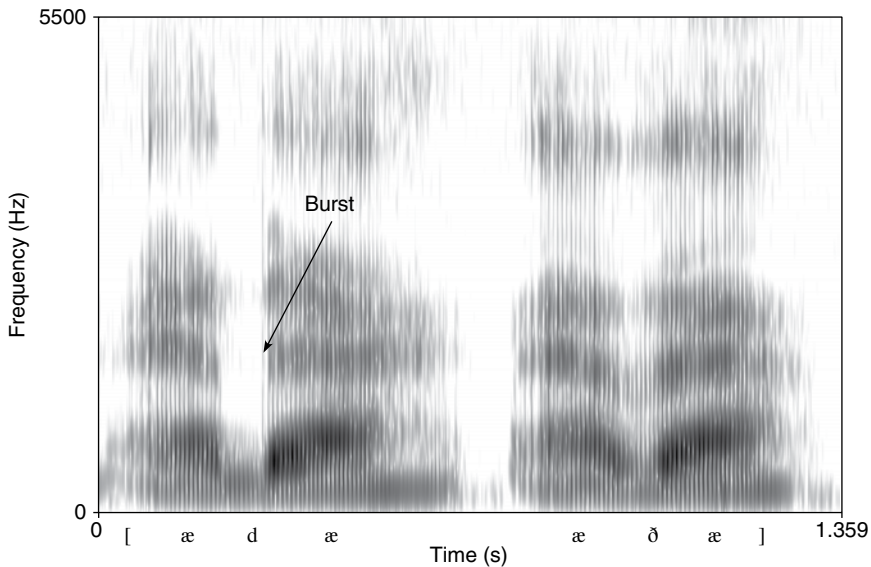


Figure 8.8 A comparison of [d] (left) and [ð] (right) in an [æ_æ] frame. [d] shows a burst that is absent from [ð].

determining the onset and offset of a segment: see Thomas (2011: 139–143) for details and tips. Once you've done that, simply subtract the time point of the onset from that of the offset.

Quite different from segmental analysis is analysis of prosody. Prosody includes a diverse set of variables involving timing, pitch, and sometimes loudness. Overall rate

of speech is one. It can be gauged by counting the number of syllables per unit of time. The metric is called *speaking rate* if it includes silent periods in a person's speech and *articulation rate* if the pauses are omitted (Kendall, 2009).

Another kind of rate analysis examines prosodic rhythm. In the narrow sense used here, prosodic rhythm refers to the relative timing of particular syllables or segments. When syllables have roughly the same durations, a language or dialect is said to be *syllable-timed*. When syllables, especially adjacent ones, typically have heterogeneous durations, a language or dialect is said to be *stress-timed*. Most Romance languages are syllable-timed, giving them a staccato sound. Germanic languages are generally stress-timed, which gives them an uneven rhythm, with the stressed syllables showing longer durations than the unstressed syllables. However, substrate languages may alter the tendency in some dialects. Mexican American English, for example, often exhibits a rhythm intermediate between stress-timed mainstream varieties of English and syllable-timed Spanish.

Numerous methods of assessing prosodic rhythm have been developed, but two have the widest currency. The nPVI method, developed by Low, Grabe, and Nolan (2000), involves comparisons of vowels in adjacent syllables. The difference in duration for a pair of adjacent vowels is divided by the mean of the durations of the two vowels. Each vowel within an utterance is paired with both the preceding vowel and the following vowel, and then all the comparisons are averaged. Higher values reflect more stress-timing and low values more syllable-timing. The other method, developed by Ramus, Nespor, and Mehler (1999), uses three metrics. ΔC is the standard deviation of all consonantal intervals uttered by a speaker, ΔV the standard deviation of all vocalic intervals, and %V the percentage of the total duration taken up by vowels. Of these metrics, high ΔC and low %V reflect stress-timing, while low ΔC and high %V reflect syllable-timing.

Intonation involves fluctuation in pitch that is not due to word stress or (as in Mandarin) to tones assigned to particular syllables. It ranks among the most complex of prosodic phenomena. The currently predominant system for transcribing intonation is called the Tone and Break Index (ToBI) system (see Beckman and Hirschberg, 1994; Beckman and Elam, 1997). Three elements of ToBI are important for variation studies. The three elements are the *phrasal categories*, the *edge tones*, and the *pitch accents*. Phrasal categories are the most overriding. Speech is divided into phrases. In any language, the highest phrasal level is called the Intonational Phrase (IP) level. Some languages have lower phrasal levels as well; English has one called the intermediate phrase (ip).

At the end of each phrase is an edge tone, usually designated as H (high) or L (low). For an Intonational Phrase, the edge tones are indicated with %: that is, H% and L%. Prolongation of the final syllable or foot, a resetting of pitch to a higher level when the next phrase begins, and (sometimes) a pause also mark the end of an Intonational Phrase. Because the end of an Intonational Phrase in English is also the end of an intermediate phrase, there are $2 \times 2 = 4$ kinds of tones at the end of an Intonational Phrase: L-L% for most statements, H-H% for yes/no questions and to denote excitement, and H-L% and L-H% to indicate that the speaker has more to say. The H and L combinations in each one mostly reflect the pitches contained in each one, but in English, H-L% actually represents a final level tone.

Pitch accents fall inside Intonational Phrases, not at the end. They are denoted by *. A pitch accent is a tone that stands out from the surrounding pitch contours, being

either noticeably higher or noticeably lower. Not every stressed syllable has a pitch accent. Common pitch accents in English are H^* , in which the pitch rises very rapidly to the peak, and $L+H^*$, for which the pitch rises more gradually. Less common are L^*+H , for which the rise in pitch is so gradual that the peak usually falls on the next syllable, and L^* , which is often seen before the $H-H\%$ edge tone in yes/no questions. Successive H^* , $L+H^*$, and/or L^*+H pitch accents within an Intonational Phrase normally drop off in pitch, but if the drop is especially great, called *downstepping*, the one after the downstep is denoted with ! (e.g., $!H^*$, $L+!H^*$).

Languages and dialects can differ in their inventories of phrasal types, edge tones, and pitch accents. Some of this variation can be measured acoustically. Such analysis requires a measure of F_0 . The most common method of gauging F_0 is auto-correlation pitch tracking. If it is set properly, it will provide a line, called the pitch track, across the spectrogram indicating F_0 at each point. With the pitch track, you can perform other comparisons. One relatively easy comparison measures *peak delay*. As you may have guessed, there's no clean division among H^* , $L+H^*$, and L^*+H . Peak delay is a numerical scale for that continuum. A pitch accent has to be associated with a stressed syllable, even if the peak falls on the following syllable. For peak delay, you determine where the onset of the host syllable is. Then you calculate how many seconds or milliseconds later the highest F_0 value associated with that pitch accent falls. An example is shown in Figure 8.9. A related method involves dividing the distance in milliseconds from the onset of the host vowel to the peak by the duration of the vowel. Peak delay differentiates dialects within English, German, Spanish, and undoubtedly other languages. In English, for example, Scottish English has markedly greater peak delay than English English (Ladd *et al.*, 2009), and African American English averages greater peak delay than European American English.

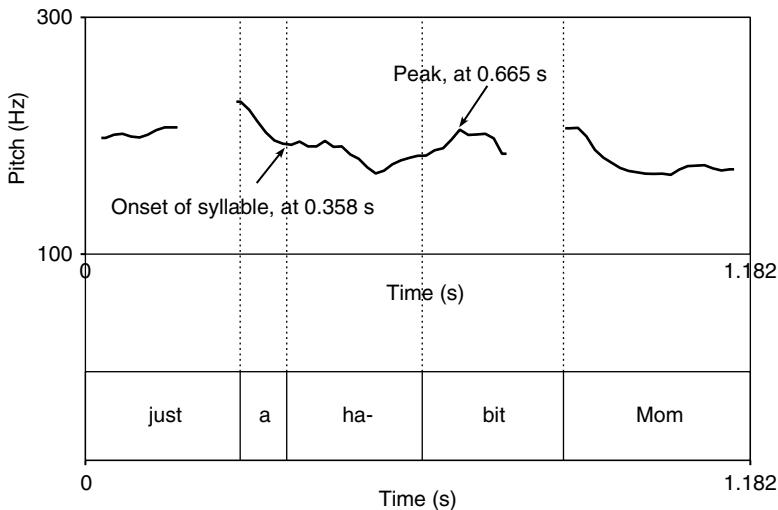


Figure 8.9 A pitch track and text grid showing the key time points for measuring peak delay.

Quagmires and Troubleshooting

Problems can easily crop up when you perform acoustic analyses. For measuring formants, LPC is a source of many errors. You can avoid the errors by paying close attention and changing the LPC settings as needed. The main setting is the number of LPC coefficients, now sometimes indicated as the “number of formants.” Figure 8.10 shows examples of the same signal with proper and improper settings. What you should watch for is whether the formant tracks line up with the dark bands – the formants – on the spectrogram. If they don’t, you’ll need to raise or lower the number of coefficients, as appropriate. Poor recording quality can make it harder to procure good formant estimates.

One important use of formant readings is to determine whether a speaker has a merger or not. For vowels, the basic method is to create an F_1/F_2 plot for the vowel classes that might be merged. If the two classes form separate clouds of tokens, they’re distinct, and if they cover the same formant space, they’re merged – except that it isn’t always that simple. It is possible for two merged classes to overlap only partially if the consonantal contexts for the two are not comparable, as in Figure 8.11, which shows the BOT and BOUGHT classes for a speaker from Texas. The BOUGHT class occurs in certain contexts, such as before /f/, where the BOT class is infrequent, and the coarticulatory effect of labial consonants is to lower F_2 . At the same time, the BOT class includes two common words, *not* and *got*, whose coarticulatory environments tend to raise F_2 . As a result, the BOT and BOUGHT clouds appear to differ even though this speaker merges them. It is also possible for two sounds to appear merged when they’re actually distinct. This situation happens when a factor that distinguishes the two classes, such as diphthongal gliding or length, is not taken into consideration. Figure 8.12 shows such a case, also for the BOT and BOUGHT vowels, for

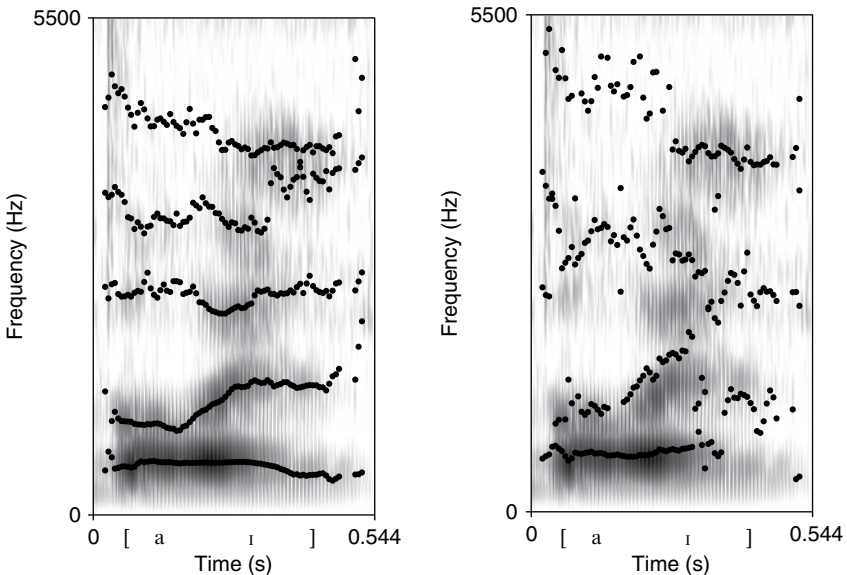


Figure 8.10 A spectrogram with the number of LPC coefficients set properly (left) and improperly (right).

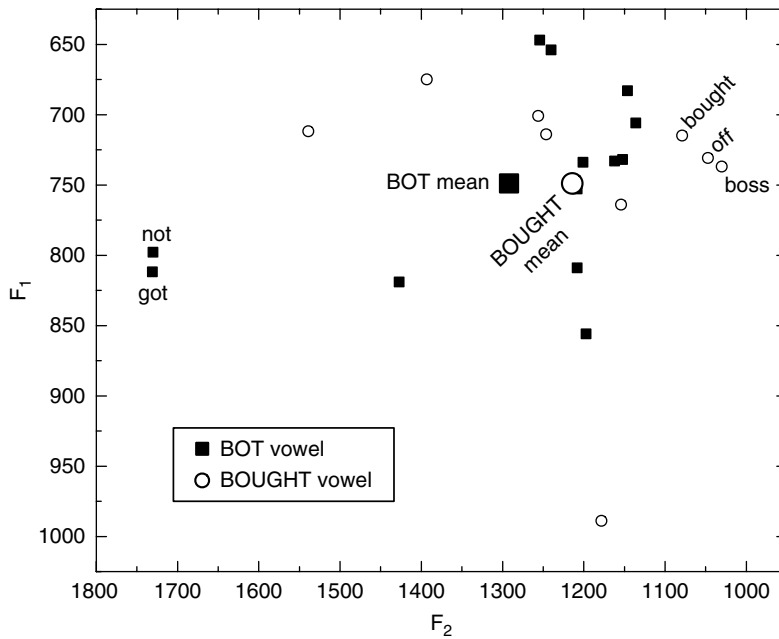


Figure 8.11 A vowel formant plot for the BOT and BOUGHT vowels as spoken by a Mexican American from Texas who merges those vowels, illustrating how consonantal contexts can skew the distributions of the two and make it appear that the two classes could be distinct.

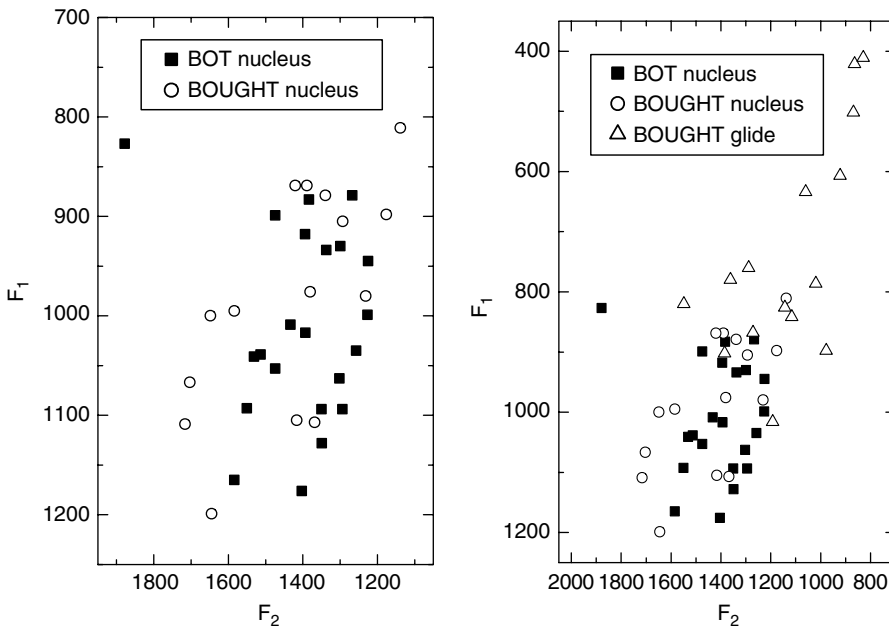


Figure 8.12 Vowel formant plot for the BOT and BOUGHT vowels of a European American woman from Alabama. The nuclei overlap almost entirely, as is apparent in the left plot, but the glides of BOUGHT, shown in the right plot, distinguish BOUGHT clearly from BOT.

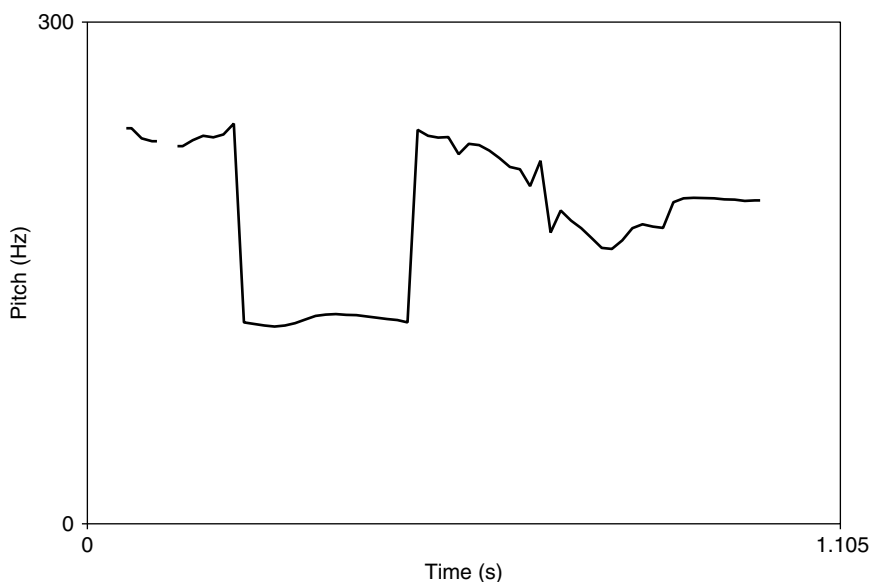


Figure 8.13 A pitch track with sudden changes in its values, indicating an error.

an Alabamian. The left plot shows only the vowel nuclei, which overlap substantially, suggesting that the two vowels might be merged. However, the right plot shows the glides for the BOUGHT class, which clearly differentiate it from the BOT class.

Autocorrelation pitch tracks have some problems similar to those of LPC. With autocorrelation, you have to specify minimum and maximum values for F_0 , and the F_0 s of the person you're analyzing have to fall between those values. If the speaker's F_0 goes beyond those limits, you'll get bad readings. Autocorrelation works by comparing the signal against itself and looking for repeating patterns. A common cause of errors is for autocorrelation to mistake two pitch periods for one or vice versa. These errors will definitely happen if the maximum or minimum F_0 values are set improperly, but they can happen at other times as well. Creaky and breathy voicing are especially hard for autocorrelation to handle. One sign that a pitch track is erroneous is if it makes a sudden jump or fall, as in Figure 8.13.

Tips

- If you're making your own recordings, try to maximize the recording quality. Eliminate background noise, keep the microphone reasonably close to the subject's mouth, and make sure the recording device is working properly. Better recordings are easier to analyze – they require fewer adjustments – and they yield fewer measurement errors. Poor recordings can be analyzed, but you shouldn't try to tackle them until you're experienced.
- Understand that you'll make some mistakes early on. Because of that, you should start with a carefully limited project involving a single analysis technique. You may have to go back and re-measure some of your early measurements. Once you've mastered that technique, you can move on to other techniques and bigger projects.

- Don't try to learn everything out of a book. You have to explore the equipment in order to familiarize yourself with it. With acoustic analysis, experience is definitely the best teacher.
- Pay careful attention all the time when you're analyzing speech. Formant tracking and pitch tracking are both prone to errors, and you have to know how to adjust them to eliminate the errors. Expect to make constant adjustments. You should know what kinds of errors to expect.
- There are other ways to check for errors, too. While you're taking acoustic measurements, compare the readings against what you hear to make sure they match up. You can also look for outliers in the data, since they're often due to errors. Sometimes, it may help to check the readings for reliability by re-measuring a sample of the tokens and then running an intraclass correlation test to see how similar the two measurements of the same tokens are.
- Practice with your own voice before you jump into a project. A good exercise is to map out your own vowels in F_1/F_2 space. While you could simply estimate where the center of each vowel is, it would be more informative to try to locate the onset and offset of each vowel. That will familiarize you with consonantal properties. While measuring the formants, you should also practice measuring your F_0 values.
- When you're measuring formants, make sure that the formant tracks line up with the formants on the spectrogram. If they don't, change the number of LPC coefficients.
- If you're examining F_0 , watch for sudden jumps or falls in the F_0 track. If they occur, you'll need to adjust the upper and lower F_0 limits for the autocorrelation. In addition, listen for how low- or high-pitched the voice sounds, and if the F_0 readings don't match what you hear, something is probably wrong.

Project Ideas

- 1 A common use of the acoustic analysis of vowels is to examine how shifted particular vowels are in a community or region. Older speakers can be compared against younger ones or speakers from different regions can be compared. Nevertheless, although much acoustic analysis of vowels has focused on determining patterns of vowel shifting, it is also possible to conduct a more socially oriented study using acoustic measurements. In a quantitative sociolinguistic study, acoustic measurements can be used as dependent variables. Normalized vowel formant values are necessary, but once procured, their social meanings can be ascertained. Acoustic analyses can be implemented readily for identity studies in small networks such as communities of practice (e.g., Dodsworth, 2008).
- 2 For consonants, as Docherty and Foulkes (1999) and Purnell *et al.* (2005) demonstrate, acoustic analysis can reveal details of consonantal variation that auditory analysis overlooks. Docherty and Foulkes (1999) point out how acoustic analysis can disambiguate variants of stops in British dialects: for example, there are at least three variants of glottalized /t/. Consonantal variation in English is especially great in language contact situations. Some of the more difficult-to-articulate sounds of English, such as the interdental fricatives and the unusual /r/ realization, are prone to shifting in communities with a substrate language. Depending on the substrate

- language, other sounds can also be affected. For instance, voicing distinctions of final obstruents may be realized in unusual ways (Purnell *et al.*, 2005), /l/ may become less velar (Van Hofwegen, 2009), or alveolar stops may become retroflex or dental (Sharma and Sankaran, 2011).
- 3 Prosody remains the most wide-open area of phonetic variation. Prosodic rhythm is most useful in language contact situations, as Low *et al.* (2000) showed. Intonation shows a great deal of dialectal variation, though language contact undoubtedly affects it as well. Dialects can show semantic differences in how they use particular tones and they may have different inventories of tones or phrasal types. Phonetic differences in the realization of particular tones, such as peak delay (e.g., Arvaniti and Garding, 2007), occur as well. For another phonetic difference in intonation, see Grabe *et al.* (2000). Acoustic metrics are necessary to assess these differences.

In all of these kinds of studies, it is important to keep a larger goal in mind. How is language variation encoded cognitively? Acoustic analyses can show what features vary, who uses each variant, and in what stylistic contexts variants are used. Sometimes, acoustic analysis can tease out variants that were hitherto unrecognized by linguists. Follow-up experiments can then determine what people know about these variants.

Further Reading and Resources

- Di Paolo, M. and Yaeger-Dror, M. *Sociophonetics: A Student's Guide*. London and New York: Routledge. A useful source for details about such issues as recording techniques, articulation of voice quality, and reliability testing.
- Foulkes, P. and Docherty, G.J. 2006. The social life of phonetics and phonology. *Journal of Phonetics* 34: 409–438. Ties acoustic analysis of variation to cognition.
- Johnson, K. 2003. *Acoustic and Auditory Phonetics*, 2nd edn. Oxford: Blackwell. Covers the acoustic properties of speech sounds thoroughly and understandably.
- Purnell, T., Salmons, J., Tepeli, D., and Mercer, J. 2005. Structured heterogeneity and change in laryngeal phonetics: upper Midwestern final obstruents. *Journal of English Linguistics* 33: 307–338. A fine illustration of variation in phonetic cues used for a phonological contrast.
- Thomas, E.R. 2011. *Sociophonetics: An Introduction*. Basingstoke: Palgrave Macmillan. A systematic and thorough source on acoustic analysis, experimental techniques, and overriding theoretical issues.

References

- Arvaniti, A, and Garding, G. 2007. Dialectal variation in the rising accents of American English. In *Laboratory Phonology 9*, ed. J. Cole and J.I. Hualde, 547–575. Berlin and New York: De Gruyter.
- Atal, B.S. and Hanauer, S.L. 1971. Speech analysis and synthesis by linear predictive coding of the speech wave. *Journal of the Acoustical Society of America* 50: 637–655.
- Baker, A., Archangeli, D., and Mielke, J. 2011. Variability in American English S-retraction suggests a solution to the actuation problem. *Language Variation and Change* 23: 347–374.
- Beckman, M.E., and Elam, G.A. 1997. Guidelines for ToBI labelling. Version 3.0. Online: www.ling.ohio-state.edu/~tobi/ame_tobi/labelling_guide_v3.pdf (last accessed April 1, 2013).

- Beckman, M.E. and Hirschberg, J. 1994. The ToBI annotation conventions. Online: www.ling.ohio-state.edu/~tobi/ame_tobi/annotation_conventions.html (last accessed April 1, 2013).
- Di Paolo, M. and Yaeger-Dror, M. 2011. *Sociophonetics: A Student's Guide*. London and New York: Routledge.
- Docherty, G.J. and Foulkes, P. 1999. Derby and Newcastle: instrumental phonetics and variationist studies. In *Urban Voices: Accent Studies in the British Isles*, ed. P. Foulkes and G.J. Docherty, 47–71. London: Arnold.
- Dodsworth, R. 2008. Sociological consciousness as a component of linguistic variation. *Journal of Sociolinguistics* 12: 34–57.
- Gilles, P. and Peters, J. (eds) 2004. *Regional Variation in Intonation*. Linguistische Arbeiten 492. Tübingen: Max Niemeyer.
- Grabe, E., Post, B., Nolan, F., and Farrar, K. 2000. Pitch accent realization in four varieties of British English. *Journal of Phonetics* 28: 161–185.
- Kendall, T.S. 2009. Speech rate, pause, and sociolinguistic variation: an examination through the Sociolinguistic Archive and Analysis Project. PhD dissertation. Duke University.
- Labov, W., Yaeger, M., and Steiner, R. 1972. *A Quantitative Study of Sound Change in Progress*. Philadelphia: US Regional Survey.
- Ladd, D.R., Schepman, A., White, L., Quarmby, L.M., and Stackhouse, R. 2009. Structural and dialectal effects on pitch peak alignment in two varieties of British English. *Journal of Phonetics* 37: 145–161.
- Low, E.L., Grabe, E., and Nolan, F. 2000. Quantitative characterizations of speech rhythm: syllable-timing in Singapore English. *Language and Speech* 43: 377–401.
- Purnell, T., Salmons, J., Tepeli, D., and Mercer, J. 2005. Structured heterogeneity and change in laryngeal phonetics: upper Midwestern final obstruents. *Journal of English Linguistics* 33: 307–338.
- Ramus, F., Nespor, M., and Mehler, J. 1999. Correlates of linguistic rhythm in the speech signal. *Cognition* 73: 265–292.
- Scobbie, J.M. 2006. Flexibility in the face of incompatible English VOT systems. In *Laboratory Phonology* 8, ed. L. Goldstein, D.H. Whalen, and C.T. Best, 367–392. Phonology and Phonetics 4-2. Berlin and New York: De Gruyter.
- Sharma, D. and Sankaran, L. 2011. Cognitive and social forces in dialect shift: gradual change in London Asian Speech. *Language Variation and Change* 23: 399–428.
- Stanford, J.N. 2008. A sociotoneic analysis of Sui dialect contact. *Language Variation and Change* 20: 409–450.
- Thomas, E.R. 2011. *Sociophonetics: An Introduction*. Basingstoke: Palgrave Macmillan.
- Van Hofwegen, J. 2009. Cross-generational change in /l/ in Chicano English. *English World-Wide* 30: 302–325.

9 Phonological Considerations in Sociophonetics

Paul Kerswill and Kevin Watson

Introduction	137
What Is the Difference between “Internal” and “External” Factors?	137
The Phonological Variable	138
Implementation: How Do Phonological Concerns Affect Sociolinguistic Variation?	139

Summary

One aim of sociolinguistics is to understand linguistic variation across communities by comparing language from different groups of speakers (e.g., younger and older, male and female, working class and middle class). However, language is constrained not only by these social factors, but also by the linguistic system itself. In this chapter, we show that although the name *sociophonetics* might imply that the focus of the discipline is on *sociolinguistics* and *phonetics*, we also need to understand how variation can be constrained by language-internal *phonological* concerns. First, we elaborate on the distinction between phonological and social factors in sociophonetics. Then, we show that since phonological criteria are crucial even in defining what our variable is, understanding these criteria is important at the very beginning of a sociophonetic project. Using examples from different varieties of English, we answer

Research Methods in Sociolinguistics: A Practical Guide, First Edition.

Edited by Janet Holmes and Kirk Hazen.

© 2014 John Wiley & Sons, Inc. Published 2014 by John Wiley & Sons, Inc.

two general questions: (i) What phonological concerns should we consider when analyzing a linguistic variable, and (ii) how should we go about investigating them? Finally, we offer advice to anyone wishing to undertake a sociophonetic study that takes phonological factors into account.

Introduction

Even if the label *sociophonetics* implies a focus on questions of sociolinguistics and phonetics, rather than phonology, the discipline is not solely concerned with how speech varies because of so-called *external* factors, such as the regional and social identities of the speakers and the (in)formality of the context. While these factors are certainly important, we have known for a long time that variation can also be conditioned by a range of *internal*, linguistic factors, such as preceding or following segmental environment or syllabic context. In this chapter, we show how these sorts of issues, which are chiefly phonological, are often important for sociophonetic work. Our main questions are the following: What concerns should we consider when undertaking a phonological analysis of a sociolinguistic variable, and how should we go about investigating them?

What Is the Difference between “Internal” and “External” Factors?

In 1963, William Labov published the results of his first sociolinguistic study, entitled “The Social Motivation of a Sound Change.” Based on the local varieties of English spoken on the Massachusetts island of Martha’s Vineyard, the study showed how two vowels, PRICE /aɪ/ and MOUTH /aʊ/, varied in their degree of centralization depending on several social factors, including gender and ethnicity, but especially the degree of sociopsychological orientation toward the island on the part of the individual speaker. Labov argued that centralization was a sound change propelled by younger islanders, especially those who had a strong affinity with local culture, in opposition to the thousands of summer visitors. Centralized vowels, he claimed, had come to be emblematic of island identity. Factors such as these, which are not part of the linguistic system itself but which can still affect how parts of the linguistic system behave, are called *external factors*. This was not the first time pronunciation features had been associated with external factors in a published study – that honor goes to Fischer (1958), who was the first to identify gender as a significant factor (alongside others). However, equally important in the Martha’s Vineyard study was the way in which a phonological factor constrained the variation in the vowels – “constrained” in the sense that one phonological characteristic, in this case the voicing of the following consonant, blocked vowel centralization. Thus, Labov’s study demonstrates the combined importance of both external and internal factors in language variation and change.

Internal factors are those parts of linguistic structure that constrain the variation. In the Martha's Vineyard case, Labov found that most speakers only ever had centralized PRICE and MOUTH vowels before a voiceless consonant and never before a voiced consonant. Often the effect is gradient rather than being a categorical, all-or-nothing matter. In such cases, a particular phonological characteristic predisposes the variable to behave in a particular way. As an example, we can take the vowel of GOOSE, /u:/, which is being fronted in South African English, as it is in many other varieties around the world. Mesthrie (2010) shows that, for middle-class non-White speakers, the *degree* of fronting is greater after coronal consonants than after non-coronals (coronal consonants involve movement of the front part of the tongue and include /t/, /d/, /n/, and /s/) (see Mesthrie, this volume). We would say that this feature, like the Martha's Vineyard example above, is constrained by an internal factor – its phonological environment.

The Phonological Variable

We have already seen some examples of how linguistic variation can be affected, or constrained, by phonology. Before we proceed, however, we must arrive at a more precise definition of the linguistic variable. We'll focus here just on the phonological variable, since variables on other linguistic levels present a different set of issues (see Lavandera, 1978; Macaulay, 2002; Pichler, 2010; and Davydova, Adams, and Holmes, this volume). Is the phonological variable just the same as a phoneme? Sometimes it can seem similar, such as with GOOSE fronting, mentioned above, which is often the same as /u:/. Even here, though, it is not so straightforward, since there are some varieties which do not have GOOSE fronting before /l/, as in *fool*, so we need a way of accounting for this positional variation.

A more complex example can be found with the realization of /t/ in British English. In all varieties of English, /t/ has a number of positional allophones. Most often we find [t^h] in stressed syllable-initial position, as in *time* and *betide*, and [t] after /s/, as in *storm*. In Australian, New Zealand, and particularly North American English, /t/ almost always appears as a tap [ɾ] between vowels, as in *water*. In British English, the situation for intervocalic /t/ is a little more complex. The normative (standard) pronunciation is [t^h]. However, British regional accents have a range of pronunciations besides [t^h]. In both London and Glasgow (and many other places) the glottal stop [ʔ] is the most common, whereas in Newcastle upon Tyne the local variant is a glottalized [t], usually transcribed [t̟], while southwestern accents often have [ɾ] in certain positions. What, then, is the phonological status of this variable unit? It clearly does not always simply correspond to a phoneme, because stressed syllable-initial /t/ does not vary – it is always [t^h]. It is also not solely determined by its position in a word, as allophones can be – [t], [ʔ], and [ɾ] can all occur between vowels, for example. We get closer to the answer if we think of the variable as a phoneme occurring in a broad set of phonological contexts *in which variation is present*. This means that, for /t/, for example, we need to consider its occurrence only in positions which are not syllable-initial, since it is here that variation occurs. This, then, is our variable. Having arrived at the variable, we can label it by taking a suitable symbol and placing parentheses around it; in our case, this would most likely give (t). The different realizations, such as [ʔ] and [ɾ], are called *variants*.

A very important first step in a sociophonetic analysis is to begin to understand how a given variable works in the community/communities under investigation. We should identify all – and only – the contexts where an alternation is expected between the different possible variants. In the case of (t), we would need to know to exclude word-initial position because /t/ does not vary in this environment. This step is sometimes called *circumscribing the variable context* or *defining the envelope of variation* (see Meyerhoff, 2011: 23; Davydova, this volume), and it is an important step in ensuring we are comparing like with like across speaker groups.

When analyzing a variable in a stretch of talk, it is not enough to simply record the occurrences of the variant we think is of most interest (e.g., because we think it may be spreading across a community). Each and every occurrence of the variable must be logged and its variants noted down – a procedure which has been called the *principle of accountability* (Labov, 1972: 72). From this information, a quantitative measure, such as a percentage, can be calculated in order to express the proportional use of one variant (see Guy, this volume, for further discussion of quantification techniques). In other cases, the analyst might wish to calculate the average vowel height or degree of fronting, expressing it in a suitable unit, such as Hertz values for F_1 or F_2 , or else using an arbitrary index, say from 1 to 4, to indicate degrees of (in this case) raising or fronting. (See Thomas, this volume, for further discussion of acoustic analysis.) This is another reason why circumscribing the variable context is crucial – we need to know which variants to count as tokens of our variable and which ones to exclude. Doing this is not always an easy task, however. Below, we elaborate a little on the difficulties and provide some advice on how to address them.

Implementation: How Do Phonological Concerns Affect Sociolinguistic Variation?

In the following sections, we present a number of studies that illustrate different aspects of the effect of phonology on language variation, while also providing examples of how to set up a project. Our presentation is divided into *segmental environment effects*, *syllable structure effects*, and *phonological restructuring effects*, with the caveat that this division should not imply that these categories are always entirely separable.

Segmental environment effects

It is well known that vowels are affected by neighboring consonants, due to general coarticulatory processes. Bilabial stops, for example, cause a lowering of a vowel's second and third formants, while velar stops cause F_2 and F_3 to converge (this is sometimes called a *velar pinch*; see Ladefoged and Johnson, 2011: 199). We also know that vowels are shorter in duration before voiceless consonants than before voiced consonants, due to a process sometimes called *pre fortis clipping* (Wells, 1990). Since these effects are due to coarticulation, and not to the behavior of particular speakers or accents, we might wonder whether we need to take them into account in a variationist sociolinguistic study. Won't all speakers behave in the same way? Even if they do, it is important to consider the potential effects of segmental environment. Recall from the discussion above that it is important to circumscribe

the variable context so that when we compare data across different speakers, we know we are comparing like with like. This is also important when considering the potential effects of different phonological environments. It is easy to imagine a situation where observed differences between groups of speakers could be due to segmental environment effects rather than to sociolinguistic factors. For a given vocalic variable, for example, if one group has a greater number of tokens in one environment than the other group (e.g., with neighboring bilabial consonants), then we would need to consider this if we are to compare the groups with each other.

There are numerous ways of dealing with this potential imbalance. One would be to directly control for phonological environment by ensuring all speakers say the same words, using, for example, a reading task. This is not ideal because it means we could only ever use methodologies that employed elicitation tasks, and, as a result, we would miss any patterns from more spontaneous, naturally occurring language. Also, we could not utilize already existing recordings (e.g., from oral history archives) because we obviously cannot control what is being said in recordings that have already been made (see Bounds, Palosaari, and Kretzschmar, 2011, for a discussion of other considerations in using legacy data). To enable the analysis of vowels in different words, and in different phonological environments, one technique that is frequently employed is to measure the formants of the vowel from the center point – the position which is farthest from any consonant – where we expect a consonant to have least effect. (For other possible measuring techniques, see Di Paolo, Yaeger-Dror, and Wassink, 2011: 90–93.) As well as this, researchers often treat vowels in different phonological environments as belonging to different categories. So, you might treat vowels with a following nasal as a different class from vowels with a following alveolar, or vowels with a following /d/ as a different class from a following /t/. If your analysis reveals no differences between vowels in these different contexts, then they can be collapsed and treated as a single group.

This technique has the advantage of allowing the discovery of patterns that may be hidden if all tokens are treated as belonging to a single class from the outset. An example of this can be seen with the tensing of the so-called short-*a* in varieties of North American English. Labov (2007) reports that almost all such varieties have some degree of tensing (i.e., the TRAP lexical set can be realized as a short low front monophthong, which Labov [2007] calls the “lax” variant, or it can be raised, fronted, lengthened, or diphthongized, which he calls the “tense” variant). However, the environments in which TRAP has a tense vowel differ between varieties. In the Northern Cities (see Labov, Ash, and Boberg 2006), TRAP is raised in all environments, as part of the Northern Cities Shift. In New York City, however, the environments of TRAP tensing are much more complex. Labov (2007) reports that coda consonants such as /b, d, m, n, f, s/ promote tensing, but consonants such as /p, t, v, z/ block it. As well as this, there are a range of other constraints: for example, there is an open-syllable constraint, in which TRAP is tense in closed syllables, such as ‘plan,’ but is lax in open syllables, like ‘planet.’ (See below for further discussion of the terms *open syllable* and *closed syllable*.) Any sociolinguistic study of this variable would need to take constraints like this into account. Without doing so, we could not be sure that we are analyzing comparable tokens across speaker groups. Another reason to consider these environments carefully is that constraints on variables can change as they spread from community to community. Labov (2007) shows that as the New York City pattern of TRAP tensing diffuses to other localities, the effect of the following segment remains important, but the details differ: across localities a following voiced

velar might behave differently from other voiced stops, and sometimes the constraint which sees TRAP tensing occur before voiceless fricatives is extended to voiced fricatives. If we are to understand how linguistic features spread geographically, we need to understand how they behave in their new communities, which means understanding how the factors constraining the variation differ in their new location.

Segmental environment is not just important for the analysis of vowels. In the variety of English spoken in Liverpool, in the northwest of England, a common phonological characteristic is *plosive lenition*, which sees plosives realized as affricates or fricatives, as in ‘week’ [wi:ç], ‘bad’ [baz], ‘bat’ [bas].¹ This process is sociolinguistically variable (Knowles, 1973), but it is also constrained by phonological environment. Honeybone (2001) uses a corpus of naturally occurring speech collected from local radio and suggests that lenition is blocked following a homorganic nasal (e.g., ‘want,’ ‘thank,’ ‘pond’), is blocked for /t/ following /l/ (e.g., ‘melt’), but is not blocked in this environment for /k/ (e.g., ‘milk’ [mɪɫx]). The reasons for this, he argues, are due to the phonological structure of the segments. The suggestion is that Liverpool stops do not lenite if they share a phonological characteristic with a flanking consonant. In other words, for /lt/ clusters the segments share their place of articulation, so /t/ does not lenite; for /lk/ clusters, place of articulation is not shared, so /k/ is lenited to [x]. In order for this pattern to become visible, we would need to pay careful attention to the phonological environment of the plosive.

Eliciting tokens in different phonological environments

One difficulty with using naturally occurring data for this kind of work is that the phonological environments which appear in the corpus are entirely due to the words that happen to be uttered. This can be risky, and since certain consonant clusters are much more frequent than others, we could be left in a situation where we do not generate enough tokens of a given environment to be able to answer our research questions. Watson (2007) examines Liverpool plosive lenition using elicitation tasks in order to increase the likelihood of certain clusters of sounds being recorded and gets slightly different results from Honeybone (2001). In Watson’s (2007) analysis, like Honeybone’s, lenition is blocked in an environment where the plosive is adjacent to a homorganic nasal, but lenition of both /k/ and /t/ is possible following /l/, contra Honeybone’s findings. Since the differing methodologies mean the data sets are not directly comparable, more work is required to understand the intricacies of these patterns.

Both examples so far have been concerned with the immediately adjacent segment. Our final example shows that phonological variation can also be constrained by segments that occur elsewhere in the same word as our variable of interest. Clark and Trousdale (2009) examine TH-fronting in east-central Scotland. TH-fronting is when the dental fricative /θ/ is realized as a labiodental fricative, as in ‘three’ [fɹi:]. It is a feature that has been widely studied in many different localities across Britain, and there are remarkable consistencies across localities in how TH-fronting is constrained by social factors (e.g., it is more common in working-class speakers than middle-class speakers and is usually more common in males than females; see Kerswill, 2003; Williams and Kerswill, 1999). Clark and Trousdale (2009) show that as well

as being constrained by the speaker's social group, TH-fronting is also more likely when the word in which (th) occurs has /f/ elsewhere (e.g., 'fourth'). They explain this effect as a form of phonological priming, where the presence of /f/ earlier in the word primes the realization of /θ/ as [f]. This effect is only rarely documented elsewhere (for related discussion see Labov, 1994: 559) but, this result suggests that an instance of a given variable should not be considered in isolation of others.

Syllable structure effects

We have focused so far on the effect of an immediately adjacent or nearby segment on a variable, but we have seen a few examples in which phonological variation is constrained by more abstract structures. We saw, for example, that TRAP raising in some varieties of North American English is likely in a closed syllable (e.g., 'plan') but is blocked in an open syllable (e.g., 'planet').

What is syllable structure?

To understand effects like this, we need to understand the structure of the syllable. Syllables are usually said to be made up of different subparts, namely the *onset* (any consonants before the vowel) and the *rhyme* (the vowel and any consonants following it). The rhyme is further divided into the *nucleus* (the vowel) and the *coda* (the consonants following the vowel). So, in a word like 'stop,' the onset is /st/, and the rhyme (in British English) is /ɒp/, with /ɒ/ being the nucleus and /p/ being the coda. Only the nucleus is obligatory in a syllable – some do not have an onset (e.g., 'eel,' 'ate'), some do not have a coda (e.g., 'bee,' 'no'), and some just have the nucleus (e.g., 'eye'). The terms *open syllable* and *closed syllable* refer to the structure of the rhyme. A syllable is said to be closed if there is at least one coda consonant, and open if there is no coda consonant.

Thus, to return to the examples above, 'plan' is a closed syllable because it has a coda consonant. In contrast, 'planet' is treated as an open syllable because of a phonological principle which says that as many consonants as possible should be grouped with the following vowel, as long as the resulting sequencing obeys the rules of the language in question. Since 'net' is a well-formed syllable in English, we would syllabify the word 'planet' as *pla.net* and not *plan.et* (a period is used to mark a syllable boundary). Now we can see that the first vowel in the word does not have a following coda consonant, so it is said to be in an open syllable. An understanding of this phonological issue allows us to describe the patterning of the TRAP alternation in words like 'plan/planet' in a principled way.

To give a further example of how understanding the syllable can assist our interpretation of variable sociophonetic patterns, we examine variation in the realization of the phoneme /l/. In a number of varieties of English, there are two distinct allophones, one a so-called *clear* /l/, which is usually described as a coronal lateral approximant, articulated with contact between the tip of the tongue and the alveolar ridge, with the air escaping down the sides of the tongue (transcribed as [l]). The other

is the so-called *dark* /l/, also called a *velarized* /l/, which has a secondary articulation whereby the back of the tongue is raised toward the velum (transcribed as [ɫ]). In dialects which have these two allophones, clear /l/ appears in the syllable onset (e.g., ‘look,’ ‘late’) and dark /l/ appears in the syllable coda (e.g., ‘fool,’ ‘ale’). In the course of the twentieth century, dark /l/ has become variably *vocalized* in many varieties of English, involving the loss of the tongue-tip articulation, resulting in a vowel which might be transcribed [ʊ] or [ɤ]. The role of the syllable becomes important when we ask what happens to /l/ when it is *resyllabified* from the coda of one syllable to form the onset of the following syllable. An example can be found by comparing the word ‘call,’ where /l/ is in the coda, with the word ‘calling,’ where /l/ is considered to be in the onset of the second syllable. If /l/-vocalization is restricted to coda position, we might expect that it can occur in ‘call’ but not in ‘calling.’ This is indeed what we find: both vocalizing and non-vocalizing accents have a clear /l/ in ‘calling’ (Kerswill, 1995). As with the ‘plan/planet’ example above, we can use the construct of the syllable to help us account for this sort of variability in the realization of /l/ in a principled way.

Variation in /l/ vocalization

There is variation, however, in constructions such as ‘call Andy,’ where /l/ appears at a word boundary. Some speakers of vocalizing accents have [l] in this position, while others may have a vowel, with a glide such as [w] linking to the following word-initial vowel. This is true of London (Tollfree, 1999: 174–175) and urban areas of East Anglia (Johnson and Britain, 2007: 310–311).

Phonological restructuring effects

So far we have considered variables which, when they vary, may not have much impact on the overall structure of a speaker’s phonological system. In this final section, we consider a connected set of phonological changes where this is not the case.

The vowels of an accent coexist in a system in such a way that changes in one vowel might impact upon the behavior of other vowels in that system. If a vowel starts to move position, for example from the back of the vowel space to the front, and so encroach upon a vowel which is already in that position, one way of resolving the potential conflict is for the already existing vowel to move.² This is the sort of pattern we see in vowel *chain shifts*, particularly in *push chains*, where the movement of one vowel “pushes” another vowel into a new position. Vowel shifts are very common in many languages (see e.g., Labov, 1994: chapter 5). Given space constraints, we focus on just one example to show how the vowels in a system are interconnected. Our example comes from New Zealand English, where we have the so-called *short front vowel shift* (see e.g., Hay, Maclagan, and Gordon, 2008: 41–42).

The vowel space of contemporary New Zealand English (NZE) is presented in Figure 9.1.³ The positions of NZE vowels are illustrated using lexical sets in upper case, and, as a comparison, the position of vowels in Received Pronunciation (RP) are shown using lexical sets in lower-case italics. We should add the caveat that there is obviously a lot of variation within New Zealand English and RP, so here we are

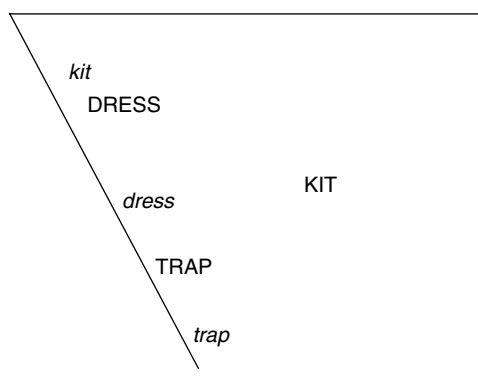


Figure 9.1 The positions of three short vowels in New Zealand English (upper case) and Received Pronunciation (lower-case italics).

glossing over many of the details. Nevertheless, the differences between NZE vowels and those of RP should be clear. At the beginning of the twentieth century, the vowel of TRAP was a half-open front vowel in the region of [æ], but it soon began to rise. As it did so, it encroached on the space of DRESS, which then moved into a position that is higher than in RP, approximating KIT, so that in NZE, words like ‘egg’ and ‘bed’ can sound as if they have an RP KIT vowel. Again, as a result, NZE KIT moves to a central position so that words like NZE ‘bit’ and ‘bid’ have a vowel that sounds like a schwa, even in stressed position. Work on legacy data (from the Origins of New Zealand English – ONZE – archive; see Fromont and Hay, 2008; Gordon *et al.*, 2004) has provided evidence for the ordering of these changes – TRAP moved first, then DRESS, then KIT – which suggests this is a connected set of changes. If these vowels were studied in isolation from others in the system, the connection between them – and, indeed, the motivation for the changes – would be lost.

More shifting

Another interesting development in the NZE short front vowel shift is that DRESS has continued to rise and is now reaching the position typically occupied by FLEECE. FLEECE is different from the other front vowels in this shift as it is a long vowel, so we might hypothesize that NZE FLEECE is protected from merging with NZE raised DRESS because of the difference in length. But, here we have a reminder of the importance of taking phonological environment into account. Recall from above that vowels are shorter before voiceless consonants than before voiced consonants. In relation to FLEECE, this means that the vowel in ‘beat’ is shorter than the vowel in ‘bead,’ and so it is more susceptible to merging with a continually raising DRESS (e.g., ‘bed,’ when the vowel is raised). Maclagan and Hay (2007) show that FLEECE is becoming diphthongal, to avoid encroaching on DRESS, and that FLEECE vowels before voiceless consonants are more diphthongal than those before voiced consonants. This makes sense, given that we know that FLEECE before voiceless consonants is more susceptible to the loss of contrast with DRESS, and it is yet more evidence for considering the effects of phonological environment on our variables.

Quagmires and Troubleshooting

We have covered quite a lot of ground in this chapter, but we have provided only a snapshot of the internal factors that may condition the phonological variation in a given data set, and we have said largely nothing about external factors (see both Dodsworth and Coupland, this volume). Getting started on a project can seem daunting. In this section, to provide advice on how to get started, we'll ask two questions that you'll need to think about at the very beginning of any project: (i) How do I circumscribe the variable context of my variable? (ii) How do I know which internal factors might be constraining the variation in my data?

- *How do I circumscribe the variable context of my variable?* You may have a particular phonological variable in mind because you've noticed it varies in some way in your community. For example, you may have spotted a difference between the way older people and younger people use the variable you're interested in. Before you can begin to explore whether there is indeed a systematic difference between speakers, you need to carefully circumscribe the variable context, so that you know you're comparing like with like. One good way to start is to note down the variants of your variable. So, for a consonant like (t) you might have [t], [ʔ], and [r], and for vowels, you might have degrees of raising or fronting, or some change in some other direction, depending on the variable in question. Remember that the *absence* of a variant can also be a variant, so that when looking at rhotic /t/, for example, we might have two variants: the presence and absence of the rhotic. The other important step is to think about the contexts in which there is variation. Where do your variants occur? Are they (like /ŋ/ in English) blocked from appearing in syllable-initial position, for example? If so, you need to exclude this position from your variable context. Does a given variant only appear if a particular type of segment (e.g., a vowel) follows? If so, you need to make sure to analyze this environment if you want to investigate how that particular variant behaves.

You might be wondering how you find out these things before you have started analyzing your data. How do you find out how the variants work, and where they occur, before you have carried out the analysis? Existing literature can help with this, of course. If your variable has been studied before, whether in your specific community or not, then that will be a useful starting point. However, you may find yourself in a position where there is very little or even no previous work on your variable. What do you do then? One useful approach is to use your own intuitions to make an initial hypothesis, and then to get a small amount of data to test it in a small-scale pilot study. Using these data, you see whether your early hypothesis about how the variants pattern is confirmed or not, and you can modify your plan accordingly. Even after you have done this process, when it comes to analyzing your main body of data, you might discover other variants that you didn't expect, perhaps because they don't occur very frequently. That's fine. Add them to your variant list and count them along with the others. If, when you have finished counting, they are infrequent in the whole data set, you can consider whether to group them together with other variants somehow. But, don't do this right from the start. Keep variants separate at first because you can't know at the beginning whether they'll become important later.

A good piece of advice is that you should prepare yourself for having to go back to the data as you learn more about how the variation patterns. In this sort

of work, you might continually update your understanding of the variable context as you add more data, and this might mean going back to the data you have already coded to include tokens that you had previously excluded because you thought that variation did not occur in that context.

- *How do I know which internal factors might be constraining the variation in my data?* Next, you will need to think about the internal phonological factors that might constrain how the variation behaves. Might the variation be constrained by phonological environment (e.g., voiced preceding sound) or syllable structure, for example? You can only really know the answer when you have analyzed the data, so it can be difficult at first to know which factors to code for. Intuitions about your data, as well as insights from previous research, can help. For example, since we know that many studies have shown that phonological environment is important for many phonological variables, it would make sense to code for it in your data – at least until you have been able to show it has no effect. Most projects start with more possible influences and trim them down along the way. It may be, though, that you only spot that a particular factor might be important when you are halfway through your analysis. To examine this fully, you would have to go back to the first part of your data, and look again at the phrases you had already analyzed. This can be disheartening as it can feel like a step backwards. But it is actually a step forwards, since you may be discovering new ways in which internal factors condition the variation in your data.

Tips

- Read any existing literature that looks at the variable you are interested in, even if it is about a different community. It will give you some ideas about the variable itself and about what internal factors you might want to code for in your data.
- Think carefully about your variable context – what is the envelope of variation? And what variants might you expect to find? If you find other variants that you didn't expect, try not to be too disheartened – add them to your list of variants. You might be discovering something new!
- Make sure you are comparing like with like across speaker groups by carefully considering your variable. Are the phonological environments and syllabic positions comparable, for example?
- When considering phonological environment, treat variants in different phonological positions as different classes until you can show there is no difference between them, at which point they can be collapsed into a single category.
- Be prepared to go back to your data to code for internal factors that you didn't originally plan to code for. This is particularly important if your results suggest a particular line of inquiry might be fruitful. Again, don't be disheartened – testing new hypotheses can be fun, and your results could advance the field.

Project Ideas

- 1 *Do effects of phonological environment pattern in the same way* in your data as suggested in the literature? Or, if you are looking at two or more different localities, do they pattern in the same way in all places?

- 2 *If there are effects of phonological environment* in your data, do they behave in the same way in spontaneous conversation and more formal language, such as reading aloud?
- 3 *Do variants of your variable cluster together in conversation?* For example, is a particular variant more likely to occur if the same variant has recently appeared?
- 4 *Is there a vowel merger in your community?* Has it changed over time? Do listeners perceive differences even if they produce merged vowels?

Further Reading and Resources

The following is a very detailed account of the role of internal factors in linguistic variation and change:

Labov, W. 1994. *Principles of Linguistic Change*. Vol. 1: *Internal Factors*. Oxford: Blackwell.

More recent work that provides very detailed discussion of how to carry out many different aspects of a sociophonetic analysis:

Di Paolo, M. and Yaeger-Dror, M. 2011. *Sociophonetics: A Student's Guide*. London: Routledge.

Thomas, E. 2011. *Sociophonetics: An Introduction*. Basingstoke: Palgrave Macmillan.

Notes

- 1 The phonetic details may vary (e.g., /k/ can be [ç] or [x], realizations which are often conditioned by the preceding vowel).
- 2 Of course, this is not the only possibility. Sometimes, contrast between sounds *is* lost, and in that case we would have a *phonological merger*, when two sounds which were previously distinct merge into a single category. A well-known example of a merger in New Zealand English is that of NEAR and SQUARE, but we lack the space to go into detail here. See Gordon and Maclagan (2001) and Hay, Warren, and Drager (2006) for more information about this particular merger, as well as Labov (1994: 293–418) for information about mergers in general.
- 3 Only a subset of vowels are represented. For a fuller account of NZE vowels, see Hay, Maclagan, and Gordon (2008: 20–27).

References

- Bounds, P., Palosaari, N., and Kretzschmar, Jr., W.A. 2011. Issues in using legacy data. In *Sociophonetics: A Student's Guide*, ed. M. Di Paolo and M. Yaeger-Dror, 46–57. London: Routledge.
- Clark, L. and Trousdale, G. 2009. Exploring the role of token frequency in phonological change: evidence from TH-fronting in east-central Scotland. *English Language and Linguistics* 13(1): 33–55.
- Di Paolo, M., Yaeger-Dror, M., and Beckford Wassink, A. 2011. Analyzing vowels. In *Sociophonetics: A Student's Guide*, ed. M. Di Paolo and M. Yaeger-Dror, 87–106. London: Routledge.
- Fischer, J.L. 1958. Social influences on the choice of a linguistic variant. *Word* 14(1): 47–56.
- Fromont, R. and Hay, J. 2008. ONZE miner: the development of a browser-based research tool. *Corpora* 3(2): 173–193.

- Gordon, E. and Maclagan, M. (2001). "Capturing a sound change": a real time study over 15 years of the NEAR/SQUARE diphthong merger in New Zealand English. *Australian Journal of Linguistics* 21(2): 215–238.
- Gordon, E., Campbell, L., Hay, J., Maclagan, M., Sudbury, A., and Trudgill, P. 2004. *New Zealand English: Its Origins and Evolution*. Cambridge: Cambridge University Press.
- Hay, J., Maclagan, M., and Gordon, E. 2008. *New Zealand English*. Edinburgh: Edinburgh University Press.
- Hay, J., Warren, P., and Drager, K. 2006. Factors influencing speech perception in the context of a merger-in-progress. *Journal of Phonetics* 34(4): 458–484.
- Honeybone, P. 2001. Lenition inhibition in Liverpool English. *English Language and Linguistics* 5: 213–249.
- Johnson, W. and Britain, D. 2007. L-vocalisation as a natural phenomenon: explorations in sociophonology. *Language Sciences* 29: 294–315.
- Kerswill, P. 1995. Phonological convergence and dialect contact: evidence from citation forms. *Language Variation and Change* 7: 195–207.
- Kerswill, P. 2003. Dialect levelling and geographical diffusion in British English. In *Social Dialectology in Honour of Peter Trudgill*, ed. D. Britain and J. Cheshire, 223–243. Amsterdam: John Benjamins.
- Knowles, G. 1973. Scouse: the urban dialect of Liverpool. Unpublished PhD thesis, University of Leeds.
- Labov, W. 1963. The social motivation of a sound change. *Word* 19: 273–309.
- Labov, W. 1972. *Sociolinguistic Patterns*. Philadelphia: University of Pennsylvania Press.
- Labov, W. 1994. *Principles of Linguistic Change*. Vol. 1: *Internal Factors*. Oxford: Blackwell.
- Labov, W. 2007. Transmission and diffusion. *Language* 83(2): 344–387.
- Labov, W., Ash, S., and Boberg, C. 2006. *Atlas of North American English: Phonology and Sound Change*. Berlin: De Gruyter.
- Ladefoged, P. and Johnson, K. 2011. *A Course in Phonetics*, 6th edn. Wadsworth: Cengage Learning.
- Lavandera, B.R. 1978. Where does the sociolinguistic variable stop? *Language in Society* 7(2): 171–182.
- Macaulay, R. 2002. Discourse variation. In *The Handbook of Language Variation and Change*, ed. J.K. Chambers, P. Trudgill, and N. Schilling-Estes, 283–305. Oxford: Blackwell.
- Maclagan, M. and Hay, J. 2007. Getting *fed* up with our *feet*: contrast maintenance and the New Zealand English "short" front vowel shift. *Language Variation and Change* 19: 1–25.
- Mesthrie, R. 2010. Socio-phonetics and social change: deracialisation of the GOOSE vowel in South African English. *Journal of Sociolinguistics* 14: 3–33.
- Meyerhoff, M. 2011. *Introducing Sociolinguistics*, 2nd edn. London: Routledge.
- Pichler, H. 2010. Methods in discourse variation analysis: reflections on the way forward. *Journal of Sociolinguistics* 14(5): 581–608.
- Tollfree, L. 1999. South east London English: discrete versus continuous modelling of consonantal reduction. In *Urban Voices: Accent Studies in the British Isles*, ed. P. Foulkes and G. Docherty, 163–184. London: Arnold.
- Watson, K. 2007. The phonetics and phonology of plosive lenition in Liverpool English. Unpublished PhD thesis. Edge Hill College/Lancaster University.
- Wells, J. 1990. Syllabification and allophony. In *Studies in the Pronunciation of English, A Commemorative Volume in Honour of A.C. Gimson*, ed. S. Ramsaran, 76–86. London and New York: Routledge.
- Williams, A. and Kerswill, P. 1999. Dialect levelling: change and continuity in Milton Keynes, Reading and Hull. In *Urban Voices*, ed. P. Foulkes and G. Docherty, 141–162. London: Arnold.

10 Morphosyntactic Analysis in Sociolinguistics

Julia Davydova

Introduction	150
Implementation	152

Summary

This chapter details some procedures for conducting sociolinguistic analysis on morphosyntactic variation. Researchers of morphosyntactic variation need to be aware of the issues involved with this realm of language variation, including the problems of identifying a variable context, the effects of other linguistic levels, and the concept of closing the set. Researchers should also be aware of the diachronic variation of the language under study and the nature of the language's lexicon in order to account for the variation in the current language's morphosyntactic system. To help the student researcher, examples from different languages illustrate the range of morphosyntactic variation. Best practices and potential quagmires are discussed to guide the student researcher on the path to a successful research project.

Introduction

The major aim of this chapter is to provide a step-by-step, example-based introduction to the major procedures and methods for conducting empirically based analyses in the domain of morphosyntax. In so doing, it points to all major types of morphosyntactic variation that might arise as a result of language use. It also informs the reader of the potential problems involved in doing research on morphosyntactic variation by highlighting some essential caveats, which should really be viewed as road signs that (initiated) sociolinguists may want to consider when embarking upon a variationist enterprise.

Language variation is everywhere, all the time, and the domain of morphosyntax is no exception to this uncontested axiom. Generally speaking, morphosyntax includes those levels of language structure that underlie the processes of word formation and sentence building, while extending its scope to comprise tense and aspect marking. The following examples provide an illustration of what morphosyntactic variation looks like:

- (1) And I **was** there talking to her all the time and she **were** like, “Go away! I’ve had enough!”
- (2) This is like a **really** cool little outfit, **real** cool.
- (3) He’s **gonna** be home in half an hour and we **will** then **go** to the supermarket.
- (4) They are great bakers, so they **bake** and they sometimes **brings** that which they **cook**.
- (5) Listen, I **gotta** run as I **have to** see my daughter before she leaves for London in half an hour.

Study question

Before reading this chapter any further, look at the examples above and try to identify what alternates with what. Can you think of any other examples of variation in the domain of morphosyntax? Try to think of examples other than English.

The morphosyntactic research that has been carried out so far has placed more emphasis on morphological variation than syntactic variation. Perhaps the most important reason for this asymmetry lies in the fact that syntactic changes typically determine differences between languages, rather than varieties of a particular language (see also Tagliamonte, 2012: 207 for a more detailed discussion). Some vivid examples of strictly syntactic variation stem from a cross-linguistic examination of the adjectival position in the noun phrase. In languages such as Russian and French, the adjective can occur both before and after the noun, albeit introducing a change of meaning, if only slight.¹ In contrast, the adjective cannot be placed after the noun in a noun phrase in either English or German. So this forms a clear-cut contrast with both Russian and French.² Take a look at the examples in (6) through (9).

- (6) Russian

krasnaya	shlyapa	vs.	shlyapa	krasnaja
red	hat		hat	red
- (7) French

le	chapeau	rouge	vs.	le	rouge	chapeau
the	hat	red		the	red	hat

- (8) German
 die rote Mütze BUT *die Mütze rote
 the red hat the hat red
- (9) English
 the red hat BUT *the hat red

Clearly, syntactic variation of the type illustrated in the foregoing examples cannot be explored in languages such as modern English, while other tongues, including Russian as well as French, may serve as an excellent site for a variationist inquiry in this domain of syntax. Having introduced the concept of morphosyntactic variation, we will now locate it in the wider field of sociolinguistics. In so doing, we assume a bird's eye perspective in order to focus on the forest rather than the trees. Sociolinguistics can be divided into geographical sociolinguistics, or dialectology, going back to the nineteenth century; anthropological sociolinguistics, which emerged in the 1920s; and finally, sociological sociolinguistics, otherwise known as variationist sociolinguistics, Labovian sociolinguistics, or urban dialectology (cf. Buchstaller, 2009: 1010). Morphosyntactic variation is traditionally studied within variationist sociolinguistics.

Going back to the pioneering works of Uriel Weinreich (Weinreich, Labov, and Herzog, 1968) and William Labov (inter alia 1969, 1972), this approach advocates the *principle of accountability*, which states that the analysis of data must be quantifiable and, therefore, accountable in the sense that all the variants studied form a part of a larger set of variants, which all together constitute a *variable context*. Let us consider, for instance, various negation strategies in non-standard dialects spoken in England, where standard negation variants alternate with non-standard *variants*, as in (10) through (13) (all examples are from Britain, 2007: 83):

- (10) She **isn't** feeling very well.
 (11) They **canna** walk any further.
 (12) She **ain't** gonna come.
 (13) He **in't** gonna come either.

While conducting a variationist study, it is essential to determine the object of study or, to use a technical phrase, *circumscribe the variable context*. These are environments where the variant occurred plus those where it could have occurred but did not. For instance, the study of negation must consider not only predicates negated with, for instance, *ain't* but also those that surface with other negation markers (e.g., *She isn't gonna come* vs. *She ain't gonna come*). Though time consuming, such a rigorous approach to data modeling complies with the variationist postulate that requires "that every variant that is a part of the variable context, whether the variants are realised or unrealised elements in the system, must be taken into account" (Tagliamonte, 2006: 13; Guy, this volume).

Essential to the study of morphosyntactic variation is the notion of *semantic or functional equivalence*. This implies that all variants constituting a set, referred to as a *linguistic variable*, must share the sameness of referential or cognitive meaning. To give one prominent example, one could argue that although words such as *real(ly)*, *so*, *very*, *awful(ly)* have different lexical meaning, they all intensify a quality expressed by the adjective in *He is (so, very, etc. ...) tired*. This general function that they perform at the more abstract level of language provides a necessary prerequisite for classifying these different forms as variants of the linguistic variable (intensifiers).

The foregoing discussion highlights the fact that the process of determining which language forms alternate with which language forms and at which levels of language structure is essentially a qualitative procedure. However, morphosyntactic variation as such is studied with the help of quantitative methods. In fact, this aspect of variationist sociolinguistics makes it, as a discipline, very similar to the sociology of language, both of which share high levels of methodological rigor stemming from sociology (see Kortmann, 2005: 254).

More importantly still, and similar to phonological and discourse-pragmatic studies in language variability, sociolinguistic analysis of morphosyntactic variation operates under the now traditional assumption that variability observed in a language is not random but is actually structured, thereby defending the notion of *orderly heterogeneity* (Weinreich, Labov, and Herzog, 1968: 100–101). The overarching aim is then to correlate the identified variable features of morphosyntax with other aspects of language structure as well as with selected social categories. In what follows, we demonstrate how quantitative analysis of morphosyntactic variation is carried out. In so doing, we make use of the variables meticulously studied and widely discussed in the academic literature.

Implementation

While setting out to do analysis of morphosyntactic variation, the analyst needs to be very clear about the procedure with the help of which the locus of variation is determined in the data set. There are generally two approaches to circumscribe the variable context. The first approach can be labeled as a *semantic approach*, whereby the analyst starts out with determining a (semantic) function of a given language feature and, then, looks at all language forms employed in the data to render this function. To be able to do that, however, “the analyst must be wary of the function of [the] form and the range of the contexts in which it occurs” (Tagliamonte, 2012: 235).³ For instance, in my study of the present perfect I adopted such an approach, singling out four semantic contexts associated with the category of the present perfect and, then, looking for verb forms that are used to convey the present perfect meaning (see (25) through (28) below for illustration). Studies that have also employed such a methodology in the study of the present perfect include Winford (1993) and Tagliamonte (2000).

The analyst can also circumscribe a variable context of a morphosyntactic variable by focusing on a specific position or a syntactic slot within a clause. Linguistic variables that have been investigated with the help of this approach include intensifiers (*freaking unbelievable, so unbelievable*, etc.) and general extenders (*and stuff like that, and things like that*, etc.), to mention just a few. But whatever approach you adopt, always make sure that it complies with the principle of accountability discussed in the introduction. For instance, while working on intensifiers, the researcher needs to extract not only adjectives modified by the adverbs that express some degree of intensification but also adjectives that could have been modified by such an adverb but were not.

Another major challenge that a sociolinguist faces at the very outset of a morphosyntactic project is to find a language feature suitable for exploration according to the procedure outlined in the introductory part of this chapter (see the principle of accountability). The inevitable question arises: What are good variables to study?

Linguistic features that occur frequently in the data will be easier to study, or at least they will warrant a solid empirical basis for the project. The variable of subject–verb concord (svc) and the (ing) variable have been investigated so thoroughly because they are (relatively) frequent features of language. The former accounts for different patterns in subject–verb concord; the latter stands for the variation in the realization of the morpheme *-ing*.

The variable (svc), also known as the Northern Subject Rule in the relevant literature, refers to the pattern whereby the verbal marking *-s* is attached to the verb stem in some cases but not in others, as in *They eat breakfast* vs. *Children eats breakfast*. What are the factors, both linguistic and non-linguistic, underlying the occurrence of the non-standard feature in L1 vernaculars?

The answer to that particular question can be obtained by scrutinizing relevant academic reports, which contain descriptions as to how the features pattern with other aspects of language structure and how they correlate with non-linguistic, or social, factors.

Careful examination of literature dealing with the variable (svc) reveals that there are two important linguistic factors underlying the variable realization of the *-s* marking in a vast body of data. The first factor is the type of subject. It turns out that the probability that the suffix is realized increases dramatically when the subject of the relevant clause is a noun phrase as opposed to a personal pronoun, as in (14):

- (14) When things gets done, they drink a cup of tea.

The second factor underlying variable occurrence of the verbal marking is the adjacency constraint. This constraint predicts that if there is linguistic material intervening between the subject and the finite verb, the latter tends to be marked for *-s*, as in (15) and (16):

- (15) They eat breakfast every day.
 (16) They often eats breakfast.

The analyst can start out with these observations, which provide initial assumptions or *hypotheses* for the study, to see whether or not these constraints or *variable rules* operate in the data. Contrastive comparison of constraints across different data sets can be used, for example, to establish relatedness between different varieties of a language. To illustrate this point, Poplack and Tagliamonte (1989) demonstrated a statistically significant contrast between noun phrases and pronouns regarding the use of the verbal *-s* marking in Samaná English, which is a variety of Black Vernacular spoken in the Dominican Republic. Because this exact contrast exists in traditional dialects spoken in Great Britain, the researchers could show that the observed pattern was a synchronic manifestation of a diachronic development going back to the ninth-century dialects spoken in northern England and Scotland (cf. Tagliamonte, 2012: 211).

Some morphosyntactic variables are fascinating to study because they not only reveal how variable language features are correlated with other aspects of language structure but also demonstrate how these language properties pattern with various facets of social reality. The variable (ing) is a classic feature pointing to important correlations existing between variable realizations of the *-ing* morpheme on the one hand and the social categories of class and gender on the other. In real speech, the *-ing*

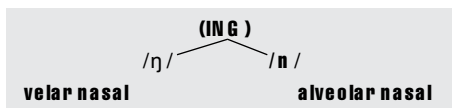


Figure 10.1 Variable realization of the variable (ing).

morpheme can be realized either as a velar nasal sound /ŋ/ or as an alveolar nasal sound /n/, as schematized in Figure 10.1.

The most robust finding is that the variant /ŋ/ is favored by women, whereas the alveolar variant /n/ is associated with male speech (see Fischer, 1958; Trudgill, 1974: 93–94; Labov, 2001: 265). It could be furthermore ascertained that the alveolar variant shows a close affinity with less educated, working-class type of speech. Because this variable is not undergoing a real language change, remaining stable across communities, sociolinguists can employ it with confidence to closely examine linguistic patterns of social stratification. Last but not least, findings reveal, perhaps not surprisingly, that the velar variant consistently patterns with formal style, while the alveolar form is highly preferred in informal contexts, being reserved for relaxed social situation and casual interactions (see Labov, 1966: 397–398; Trudgill, 1974: 92). Results from Hazen (2008) further corroborate and expand on this observation. Drawing on data from English in Appalachia (US), Hazen shows that the alveolar variant is consistently associated with the informal interview, whereas the velar variant is preferred in very careful types of situations, such as the reading of a passage. In fact, the differences in the use of the /n/ between the sociolinguistic interviewer and the reading of a passage turn out to be highly significant, indicating “the most profound divide in the data” (Hazen, 2008: 129).

Further analysis of this linguistic variable reveals that the use of either one variant or the other is guided by linguistic structure itself, which in this particular case is manifested through the grammatical category of the word containing the morpheme *-ing*. Thus, it turns out that the /ŋ/ suffix occurs with nouns, adjectives, and gerunds more often, while the /n/ is more robust with progressive participles (see, for instance, Hazen, 2008: 128, 131). This distinction is illustrated in (17):

- (17) We kept discussi[n] that but what she was sayi[n] wasn't interesti[ŋ] at all.

It is notable that this synchronic pattern has a diachronic dimension to it. Back in time, progressive participles had *-ende* as inflection, which, as time went by, was gradually reduced to /n/. Gerunds, on the other hand, ended in *-inge* and are, for this reason, associated with /ŋ/ in present-day English. Hence, the divide emerged between progressive participles on the one hand and gerunds on the other.

Though an important method, sifting through the available literature is not the only way to get access to morphosyntactic variables suitable for empirical investigation or hypotheses giving insights into the nature of their use. Indeed, a lot can be gained quite unexpectedly, simply by plunging into the data with which the researcher is working. This is the point where any variationist enterprise develops the potential of becoming a real adventure. The more the analyst is familiar with her data, the more likely it is that patterns will emerge one by one, like hidden treasures of a sunken ship, as one is submerging into the material more and more deeply.

Noticing patterns of morphosyntactic variation

Even serendipitous encounters can sometimes provide impetus for future research or instigate a new project. I once overheard a conversation by two Russian speakers on my way to the library one lovely sunny morning in Hamburg, Germany. I was struck by the way one of the speakers was introducing her quotes. However, it didn't take me long to realize that this structure was very similar to, if not identical with, the English quotative *be like* and alternated with verbs introducing quotes such as *say*, *think*, and so on. Examples of Russian quotatives are given in (18) through (20):

- (18) I ja takaja, "A on uzhe tam byl?"
And I am like, "Was he there already?"
- (19) A on sprosil, "Ty kogda pridyosh?"
And he asked, "When will you be back?"
- (20) I ja podumala, "A mozhet vse-taki ne khodit' tuda?"
And I thought, "I might perhaps be better off if I don't go there."

Similar to the English *be like*, the Russian structure *takoj* (*takaja*, *takije*) is widely used in everyday speech, being strictly forbidden in written language. In contrast to the English *be like*, the Russian structure is marked for grammatical gender and number, yielding the variant *takoj* (masculine, singular), *takaja* (feminine, singular), and *takije* (plural). There is a fourth variant *takoje* (neutrum, singular), which is, however, not relevant for our discussion here as it is not very likely, though not entirely improbable, that a quote is introduced by an inanimate subject.

By now, sociolinguists working on dialects of English have fostered quite a remarkable understanding of the variable (*be like*), the way it is internally structured and the way it is implicated in the patterns of language use (see Buchstaller and D'Arcy, 2009, for an exhaustive overview). We know, for instance, that the use of quotatives is incumbent upon the quote type and the grammatical person of the subject. The quote types are typically subdivided into thoughts expressing general feelings and attitudes and actual quotes advancing the story line. Furthermore, it has become customary to draw a distinction between the first and third person in the investigation of the English quotatives. The four possible options are shown in (21) through (24):

- (21) And I am like, "Oh my God! This can't be happening."
(22) And they are like, "Oh my God! This can't be happening."
(23) And I am like, "I come here every morning and get some work done."
(24) And they are like, "I come here every morning and get some work done."

The consistent finding is that (21) is the most favorable environment for the use of *be like*, which features a quote revealing speaker's attitude coupled with the first person of the grammatical subject. Does this pattern characterize the Russian data as well? And if so, what does it tell us about the way the language works? Another important observation

concerning the use of *be like* is that it is strongly associated with female speech. In fact, the data in Tagliamonte and Hudson (1999) and Tagliamonte and D'Arcy (2007) indicate that females rather than males show a preference for *be like* in both Canadian and British English. Coincidentally, yet interestingly enough, the Russian conversation that I overheard was between two female speakers. This is very suggestive given the results stemming from the foregoing research on the variable (*be like*). In fact, it is very important to take note of all observations that you make while listening to other people talk or scrutinizing your data. They proffer hypotheses, which, once empirically tested, may transform into hard and fast evidence. The larger the data sample one is working with, the more solid is the evidence that the researcher offers in order to substantiate her claim.

Most of the morphosyntactic analysis carried out by sociolinguists has focused on native forms of English, the so-called *L1 vernaculars*. Yet, what makes the study of English so intriguing is the abundance of its forms that can be encountered worldwide. English is spoken natively and is the language of the dominant social group in countries such as Great Britain, the United States, Canada, Australia, and New Zealand. Yet, an overwhelming majority of English speakers have adopted (and adapted) English as their second or major foreign language. English plays an important role in education, government, and administration in countries of South and Southeast Asia and in various parts of Africa. It is taught as a first and oftentimes sole foreign language to children all across Western Europe, Russia, China, and South America. English is spoken by various communities of migrants populating Britain and the United States.

Morphosyntax and society

Jawaharlal Nehru University (JNU), one of the leading academic communities in India, hosts students from highly diverse socioeconomic backgrounds, which in turn has inevitable repercussions for the type of English that these people speak. As a second language, English is acquired in three major types of contexts in India.

First and foremost, English is acquired in so-called public schools, which are in fact private institutions of secondary education offering instruction exclusively in English. The level of instruction varies from region to region, with the best schools being located in big cities such as New Delhi. Because of such extensive input, these speakers tend to use English quite a lot in formal and informal settings, for instance in interaction with their peers.

Secondly, English is taught as one of the subjects in government vernacular schools, which offer instruction in the regional language. As a result, English input is reduced to the formal setting. These speakers hardly ever get a chance to use English in casual situations until they go to university.

Finally, there are vast territories in India that remain unaffected by the influence of English. This largely concerns rural areas where students don't have access to English in any form, as a rule. Once at the university, these students are forced to learn English from scratch as tertiary-level education is obligatorily in English. With these distinctions in mind, we can single out *acrolectal*, *mesolectal*, and *basilectal* forms of Indian English.⁵

The heterogeneity and ensuing complexity of the sociolinguistic contexts in which English is being acquired and then put to use gives rise to an unprecedented number of English language varieties, which constitute an excellent site for analysis of morphosyntactic variation. In what follows, I explain how this is the case. In so doing, I draw on data obtained from fieldwork done at Jawaharlal Nehru University, New Delhi, India, in November 2007 and 2011.⁴

Morphosyntax is one of the important areas in which these varieties vary. These different modes of acquisition of English as a second language result in different types of English, which is distinctly pronounced in the domain of tense and aspect. Let us consider the category of the present perfect, which in Standard English is associated with four major semantic-pragmatic contexts, illustrated in (25) through (28):

- (25) She has left him [and he is all alone and broke]. (resultative)
- (26) They have been friends for years [and intend to stay friends in the future]. (extended-now)
- (27) He's been to Russia twice [and may go there again]. (experiential)
- (28) They have recently divorced [and the news is still discussed]. (recent past)

Davydova (2011) shows that different speaker cohorts show striking differences with respect to the use of the present perfect or the HAVE-perfect, as shown in Table 10.1.

Table 10.1 Overall distribution of tense forms in present perfect contexts in Indian English (based on Davydova, 2011, 2012)

	<i>Acrolect</i>	<i>Mesolect</i>	<i>Basilect</i>
HAVE-perfect	182 (74%)	95 (45%)	4 (5%)
Simple past	54 (22%)	88 (42%)	35 (47%)
Other	7 (2%)	26 (12%)	34 (43%)
Total N	243	209	73

The results in Table 10.1 point to imbalances in the use of the present perfect by speakers exhibiting different levels of mastery of English. Yet, to be able to tap into those imbalances, the analyst needs to explore the community qualitatively beforehand. It was through extensive discussions with people from JNU that I came to realize which speakers I needed to get hold of. The entire project would not in fact have been possible had it not been for the kind and generous help rendered by my informants and intermediaries. Students should be aware that even in sociolinguistic analysis of linguistic variation, the subjects and their social contexts are important to the analysis and discovery of language variation patterns.

A further example of morphosyntactic variation in Indian English is obtained from quotatives, shown in (29) through (31), from the Hamburg Corpus of Non-Native Varieties of English (HCNVE: IE35):

- (29) So I don't like A and she is like, "Okay, pass." And another one Ø, "A, A." Those ask girl, "It's A." She is like, "That's the pronunciation that I want."
- (30) Even when our teachers are teaching us (,) they do not make it a point that okay (,) fine, "This is American English. So we are teaching you. This is British English."

We are teaching you.” They are just teaching us English (.) [...] So that used to be okay (,) fine, “We are sitting in an English class.”

- (31) So you say that I am going for it (,) and if it’s a girl (,) I’ll get it aborted (.) I said, “Why?” He said, “But because I want at least one boy.” I said, “What is the, I mean, what is the concept behind it?”

What is interesting about these examples is that they show that the system of quotatives includes previously lexical items such as “okay” and “fine,” which are now apparently used to introduce quotes. These alternate with more conventional quotatives such as the verbs *say* and *ask* as well as with the construction *be like*. What factors – linguistic and otherwise – constrain the occurrence of *be like* and other variants in this data set? Will the use of *be like* parallel that attested for native forms of English? Will it be different and if yes, with respect to which patterns and to which extent? These are empirical questions that can (and should) be addressed in the analysis of morphosyntactic variation.

Another notable feature of Indian English that could easily warrant a morphosyntactic study is a subject pro-drop, as in (32) from HCNVE: IE37.

- (32) Interviewer: (unclear) okay (.) Are you fond of shopping (?)
IE37: Ø is very critical (.) Whenever I need I go to shop (,) I go for shopping (.)

This is perhaps not surprising given that many languages spoken in South Asia exhibit the ability to pro-drop arguments of the sentence (Butt, 2001: 2). More importantly, Platt, Weber, and Ho (1984, cited in Bhatt, 2004: 1026) report subject pro-drop in other New Englishes such as Singapore English and Philippine English, thereby suggesting a certain parallelism in the occurrence of this feature across newly emerged forms of English. Is the ability demonstrated by Indian English to pro-drop subjects a result of transfer from indigenous languages or is it due to some universal cognitive processes activated in situations of language contact? These issues can be investigated by carrying out contrastive analysis of variation in the indigenous languages and in the resulting indigenized varieties of English (see box).

Contrastive analysis of morphosyntactic variation in an indigenous language and an indigenized variety of English:

- (33) Hindi
yah pratap hai. Ø bilkul thik hai.
this Pratap is Ø very good is
‘This is Pratap. He is very well.’

- (34) Indian English (HCNVE: IE37)

I was born in city called Raebareli (,) Ø is a district called UP (,) okay (.) UP is one of the biggest state of India (.) Okay (.)

Quagmires and Troubleshooting

The main purpose of this section is to discuss some of the major challenges inherent in carrying out morphosyntactic analysis and to point out some possible solutions. Let us recall the notion of semantic or functional equivalence elaborated on in the introduction to this chapter. The notion requires that all language items constituting

a morphosyntactic paradigm are functionally equivalent. Yet, how many items are to be included in a morphosyntactic study? Should we be looking for all potential variants constituting a data set or should we simply be focusing on those known from and well described in the literature? The issue formulated in the foregoing questions has been referred to as the problem of *closing the set* (Buchstaller, 2009).

My answer to that is pretty straightforward: If we focus on that which we already know, we will only produce more of that which we already know. The goal of the analyst is therefore to aim for a comprehensive account of the morphosyntactic variable one is working on. It is important to first uncover all the potential variants. You might be examining a well-studied variable and know some of the previously studied variants, yet there could be others in your data. You can discover them only if you go through the data sentence by sentence looking for all possible alternative realizations of the morphosyntactic function you are interested in.

This bit of advice is useful to those students who decide to work with small-sized or medium-sized corpora. Students who settle on working with large-scale corpora should be using concordance programs that allow for the automatic search of all known variants. However, they need to be aware of the fact that automatic extraction of tokens will hamper an exhaustive account of the variants constituting a morphosyntactic variable.

Exercise: Closing the set

There are numerous ways to intensify an adjective. Here are some suggestions: *awfully kind*, *very kind*, *so kind*, *freaking kind*, *fucking kind*. Think of other ways to intensify either this or any other adjective. How many variants (intensifiers) constitute your personal data set?

Another major caveat to doing morphosyntactic analysis concerns the language's lexicon. Because a language is in constant flux, lexical items are constantly evolving through being recycled and put to use in ever new contexts and environments, thereby developing new meanings which may (or may not) ensure their entrance into a particular morphosyntactic paradigm. This is how *effects of other linguistic levels* (in this case lexicon) can be manifested in the study of morphosyntax.

The analyst should always be on the watch for these changes. This is best achieved through unflagging interest in (and commitment to) the data one is working with. Examples in (29) through (31) showcase some interesting occurrences of quotatives which were only identified through a close inspection of language material. However, we need a large-scale study to be able to ascertain whether these occurrences are indicative of the changes affecting the entire quotatives system of Indian English, or whether they are idiosyncratic variants in individual grammars.

Last but perhaps not least, the analyst should be aware that the morphosyntactic variation that can be observed in synchrony often comes about as a result of diachronic development. For instance, many contemporary varieties of English attest variable use of adverbs, as in (35) and (36):

(35) We got there very *quick*.

(36) We got there very *quickly*.

The variation between adverbs ending in *-ly* and those which don't has a historic dimension. To put it very succinctly, zero adverbs are older forms, whereas adverbs marked for *-ly* are newer ones. The latter entered the system of adverbial marking in the Middle English period and gained ground in the Early Modern English period (Tagliamonte, 2012: 217–220). In the nineteenth century zero adverbs became overtly stigmatized and were ousted from the educated varieties of English spoken in England. However, variation between the two forms is well preserved in various informal vernaculars and subject to thorough investigation with the advent of morphosyntactic analysis in the twentieth century.

While embarking upon a study of a morphosyntactic feature, the researcher should thus go through both synchronic and diachronic records in order to paint a full account of the variable under study.

Advice

- 1 Make sure that your morphosyntactic variable complies with the principle of accountability. Include not only contexts that feature the linguistic variant you are interested in studying but also those where the variant could have occurred but did not.
- 2 Make sure that the linguistic variable is frequent enough to warrant a quantitative investigation. If you are not sure about which variable to study, read the literature or look at the data available that is of interest to you. Listen out for interesting features to study out in the real world.
- 3 Make sure that the variants constituting a variable context are functionally equivalent, meaning that they are compatible in terms of their referential or cognitive meaning.
- 4 Correlate the identified variable feature of morphosyntax with other aspects of language structure as well as social factors. In other words, formulate your hypotheses.
- 5 Study both synchronic and diachronic accounts of the variable that you intend to investigate to be able to see how your variable is implicated in language variation and, ultimately, language change.

Tips

This section summarizes the procedures for explaining how a morphosyntactic variable can be identified and extracted from the data set. Be sure you can address the following points and answer these questions in your research:

- Describe the major morphosyntactic function(s) performed by the variable that you are interested in studying.
- How can the locus of variation be best determined in this case? Draft a procedure for circumscribing the variable context, relying on the relevant accounts in the literature.
- What potential variants should be included in the linguistic variable that you study?
- Go through your data set and extract all the tokens according to your draft. Which known variants have you been able to spot, and what is their overall rate? Have you identified any new variants and/or contexts that you think should be

included in your study? And if so, what is the overall frequency with which they occur in the data?

- Always start with a larger set and then narrow it down to the most robust variants in the data. These are the backbone of your quantitative analysis!

Project Ideas

- 1 *Project A*: This project targets intensifiers (e.g., *I am really lucky* vs. *She is awful tired*) as attested in speech of younger and older characters from the TV series *Gilmore Girls*.⁵ Richard and Emily Gilmore are an older couple representing upper-class American society. Rory Gilmore is their granddaughter who lives in the small town of Stars Hollow with her mother. She has a close friend, Lane, who comes from a middle-class family. Lane plays rock music with Zack and Brian. Her other peers are, however, from a prestigious private school called Chilton and, later, from Yale University. Account for the differences in the use of intensifiers across generations and different social groups as portrayed in the series. Compare your results with those reported in Tagliamonte and Roberts (2005).
- 2 *Project B*: Subject pro-drop is a feature that can be encountered in online postings (see, for instance, Tagliamonte, 2012: 112). Study updates in online social networks such as Facebook, Twitter, and so on that are available to you. What observations can you make concerning subject omission? Is this feature frequently attested in your data? If yes, study it in more detail paying attention to various linguistic and non-linguistic correlates. If no, try to find other morphosyntactic features that could warrant further investigation.

Further Reading and Resources

- Siemund, P., Davydova, J., and Maier, G. 2012. *The Amazing World of Englishes: A Practical Introduction*. Berlin: De Gruyter.
- Tagliamonte, S.A. 2006. *Analysing Sociolinguistic Variation*. Cambridge: Cambridge University Press.
- Tagliamonte, S.A. 2012. *Variationist Sociolinguistics: Change, Observation, Interpretation*. Oxford: Wiley-Blackwell.

Notes

- 1 Variationist sociolinguists argue that these semantic nuances get neutralized in the larger discourse (Poplack 2009).
- 2 For the sake of an exhaustive account, we should mention that in English it is still possible to come across sayings such as *There were ducks galore*. These are, however, rare examples or exceptional cases rather than robust patterns of use.
- 3 Words in square brackets are mine.
- 4 I gratefully acknowledge the funding provided by the German Research Foundation or *Deutsche Forschungsgemeinschaft* (DFG) and by the *Landesexzellenzcluster* “Linguistic Diversity Management in Urban Areas” (LiMA) at Hamburg University.
- 5 This distinction corresponds to the classification of non-native Englishes into acrolang, mesolang and basilang (Mesthrie and Bhatt, 2008: 40).
- 6 www.thewb.com/shows/gilmore-girls.

References

- Bhatt, R.M. 2004. Indian English: syntax. In *A Handbook of Varieties of English*. Vol. 2: *Morphology and Syntax*, ed. B. Kormann, K. Burridge, R. Masthrie, E.W. Schneider, and C. Upton, 1016–1030. Berlin: De Gruyter.
- Britain, D. 2007. Grammatical variation in England. In *Language in the British Isles*, ed. D. Britain, 75–105. Cambridge: Cambridge University Press.
- Buchstaller, I. 2009. The quantitative analysis of morphosyntactic variation: constructing and quantifying the denominator. *Language and Linguistics Compass* 3(4): 1010–1033.
- Buchstaller, I. and D’Arcy, A. 2009. Localized globalization: a multi-local, multivariate investigation of quotatives *be like*. *Journal of Sociolinguistics* 13(3): 291–331.
- Butt, M. 2001. Case, agreement, pronoun incorporation and pro-drop in South Asian languages. Paper delivered at the workshop “The Role of Agreement in Argument Structure” at Utrecht University, August 31, 2001. <http://ling.uni-konstanz.de/pages/home/butt/main/papers/utrecht01-hnd.pdf> (last accessed April 3, 2013).
- Davydova, J. 2011. *The Present Perfect in Non-Native Englishes: A Corpus-Based Study of Variation*. Berlin: De Gruyter.
- Davydova, J. 2012. English in the outer and expanding circles: a comparative study. *World Englishes* 31(3): 366–385.
- Fischer, J.L. 1958. Social influences on the choice of a linguistic variant. *Word* XIV: 47–48.
- Hazen, K. 2008. (ING): A vernacular baseline for English in Appalachia. *American Speech* 83(2): 116–140.
- Kortmann, B. 2005. *English Linguistics: Essentials*. Berlin: Cornelsen.
- Labov, W. 1966. *The Social Stratification of English in New York City*. Washington, DC: Center for Applied Linguistics.
- Labov, W. 1969. Contraction, deletion and inherent variability of the English copula. *Language* 45(4): 715–762.
- Labov, W. 1972. *Sociolinguistic Patterns*. Philadelphia: University of Pennsylvania Press.
- Labov, W. 2001. *The Principles of Linguistic Change: Social Factors*. Oxford: Blackwell.
- Mesthrie, R. and Bhatt, R.M. 2008. *World Englishes: The Study of New Linguistic Varieties*. Cambridge: Cambridge University Press.
- Poplack, S. 2009. Finding contact-induced change on the ground: Is the present the key to the past? Lecture delivered at the Colloquium held at the Freiburg Institute for Advanced Studies (FRIAS), March 16, 2009.
- Poplack, S. and Tagliamonte, S. 1989. There’s no tense like the present: verbal-s inflection in early Black English. *Language Variation and Change* 1(1): 47–84.
- Tagliamonte, S.A. 2000. The grammaticalisation of the present perfect in English. In *Pathways of Change: Grammaticalisation in English*, ed. O. Fischer, A. Rosenbach, and D. Stein, 329–354. Amsterdam: John Benjamins.
- Tagliamonte, S.A. 2006. *Analysing Sociolinguistic Variation*. Cambridge: Cambridge University Press.
- Tagliamonte, S.A. 2012. *Variationist Sociolinguistics: Change, Observation, Interpretation*. Oxford: Wiley-Blackwell.
- Tagliamonte, S.A. and D’Arcy, A. 2007. Frequency and variation in the community grammar: tracking a new change through the generations. *Language Variation and Change* 19(2): 1–19.
- Tagliamonte, S.A. and Hudson, R. 1999. *Be like et al. beyond America: the quotative system in British and Canadian youth*. *Journal of Linguistics* 3(2): 147–172.
- Tagliamonte S.A. and Roberts, C. 2005. So cool, so weird, so innovative! The use of intensifiers in the television series “Friends”. *American Speech* 80(3): 280–300.
- Trudgill, P. 1974. *The Social Differentiation of English in Norwich*. Cambridge: University of Cambridge Press.
- Weinreich, U., Labov, W., and Herzog, M. 1968. Empirical foundations for a theory of language change. In *Directions for Historical Linguistics*, ed. W.P. Lehmann and Y. Malkiel, 95–188. Austin: University of Texas Press.
- Winford, D. 1993. Variability in the use of perfect *have* in Trinidadian English: a problem of categorical and semantic mismatch. *Language Variation and Change* 5(2): 141–188.

11 Vocabulary Analysis in Sociolinguistic Research

Michael Adams

Introduction	164
Lexicography	165

Summary

This chapter explains how to analyze vocabulary by means of sociolinguistic lexicography. Taking the word as an object of study presents a range of challenges for researchers. Words can be both systematic and idiosyncratic, and this chapter details how to capture, describe, and explain the idiosyncratic, qualitative side of vocabulary analysis. Attention is paid to planning the purpose and scope of a glossary, collecting data for it, and the construction of glossary entries. The chapter demonstrates how a glossary can capture the intersection of words and culture, and whether that culture is local, regional, vocational, or social, expressed in dialect, jargon, and other niche vocabularies.

Introduction

Vocabulary has rarely been the favorite subject of sociolinguists, though it has always had a place along the wall, perhaps in the corner. Words do not behave systematically – not usually, anyway. They don’t aggregate well; as a result, they resist generalizations. They don’t present us with much to measure, so results from one investigation of a word or words are probably not comparable with those of another. Nevertheless, the infinite, multidimensional stream of speech humans can’t help but generate is made up of words. Of course, it’s made up of other meaningful things, as well; like many of them, words are sociolinguistically significant on two levels – they are not only socially meaningful in speech contexts, but also socially meaningful in our awareness of their social and linguistic values.

Here, I am thinking of sociolinguistics along lines Dennis Preston lays out in a table – titled “Approaches That Make Up (or Include) Some Form of ‘Sociolinguistics’” – with leading exponents of the approaches indicated parenthetically (see Box 11.1). Words can matter in all of these modes of sociolinguistic inquiry, even if they are not the prime focus of study for all who practice those modes. As an often-overlooked component of language, lexis provides many opportunities to the enterprising young sociolinguist.

Humanistic inquiry into languages is often philological – philologists are historical linguists who reconstruct cultures from texts; for instance, Anglo-Saxon culture from texts like *Beowulf*. As the philologist Cecily Clark once argued,

If one sees life as a continuum, synchronically as well as diachronically, as a seamless fabric in which language is woven together with politics, religion, economic developments and socio-cultural relationships, then all linguistic manifestations are – if rightly understood – capable of illuminating these other spheres, in the same measure as language is enriched, impoverished, reshaped by the contexts in which it is used. (Clark, 1990: 65)

That is to say, sociolinguistics comprises a repertoire of objectives and techniques through which we understand human sociocultural behavior and values, and there is potentially much more at stake in it than solving purely linguistic problems.

Box 11.1 Areas of analysis where words matter (adapted from Preston, 2004: 141)

- Quantitative Sociolinguistics (Labov)
- Ethnography of Speaking (Hymes)
- Interactionist Discourse Analysis (Gumperz)
- Social Psychology of Language (Lambert)
- Sociology of Language (Fishman)
- Dialectology
- Anthropological Linguistics
- Ethnomethodological Conversation Analysis (Garfinkel, Sacks, Schegloff)
- Text Analysis
- Critical Linguistics (Fowler, Fairclough)
- Historical Linguistics
- Systemic-Functional Linguistics (Halliday)

Lexicography

Dictionaries are the obvious products of lexical research. People speak of “the” dictionary, but there is really no such thing: Each dictionary maps a particular vocabulary, maps it for a reason, and devises its own method of analyzing the vocabulary in dictionary structure. Very often, the motive – or, at least, one of the motives – behind a dictionary is sociolinguistic. On the one hand, dictionaries of broad scope – like the *Oxford English Dictionary (OED)* – may not originate in a sociolinguistic motive, though most such dictionaries contain a great deal of sociolinguistic material. On the other hand, dialect dictionaries – like the *Dictionary of American Regional English (DARE)* – or slang dictionaries – like *Green’s Dictionary of Slang* – obviously do originate in such motives.

DARE: A bold synthesis of linguistic geography and historical lexicography

DARE was inspired by both the *Linguistic Atlas of the United States and Canada* and the *OED* – it’s a bold synthesis of linguistic geography and historical lexicography. Most *DARE* entries include results of a questionnaire administered in the field in the mid-1960s. As Frederic G. Cassidy, *DARE*’s original Chief Editor, later reflected, “What questions would it contain and on what principle should they be chosen? To answer this methodological question an analysis was made of the approximately 40,000 items already collected and printed in *Dialect Notes (DN)* from 1890 to 1939, and the *Publication of the American Dialect Society (PADS)* from 1944 onward” (Cassidy, 1987: 121). From that examination, Cassidy and his colleague, Audrey Duckert, abstracted 41 categories covering words for concrete items and activities of everyday life, as well as words reflecting attitudes, feelings, and opinions. Open-ended questions were devised to elicit words and phrases relevant to the categories: “What are names for a sloping outside cellar door?” “What do you call the kind of owl that makes a shrill, trembling cry?” “What games do children play around here, in which they form a ring, and either sing or recite a rhyme?” Eventually, they devised a survey of 1847 questions to guide the fieldwork undertaken for *DARE*, and they administered it to 2777 informants from 1002 communities across the United States, yielding approximately 2.5 million bits of lexical evidence.

If you are interested in words and their sociolinguistic value, you could write a glossary or dictionary that emphasizes aspects of lexis that are unavailable, or at least less conspicuous, in quantitative research and that could be otherwise missing from general dictionaries. One way to examine the process of making a glossary or dictionary is to look at one in progress, which allows you to see what might work, but also what won’t, because the material – lexical ore mined from a socially restricted vocabulary – isn’t yet fully refined. For many years, I’ve been working on a historical glossary of restaurant jargon, which is just at that usefully unfinished stage. Consider the following entry from that glossary:

eighty-six; 86 [New York soda counter code] **1:** *vt* [NDAS in sense 2] Cancel, consider unavailable **2000** Rauch *In the Weeds* “[Kurt:] ‘Eighty-six the salmon croquettes.’” **c2005** *Kitchen Confidential* “Teddy Takes Off” (unaired) “[Jack:] ‘OK, Chet is fired; Chet is extremely fired. I’m gonna 86 the shrimp salad.’” **2006** Brite 111 Orders came in thick and fast, and all at once they were in the weeds, the state of flailing chaos that was the worst thing that could happen to a kitchen crew. Waiters came in yelling for orders that should have been ready twenty minutes ago. Dishes already promised to diners had to be 86’d. (MD, NJ, NY) **2:** *vt* Lack, be out of **2002** Foster 55 SAUTÉ: Heard that all day. I am 86 soup! EXPO: Heard that soup. SERVERS! We are 86 soup! Pass it around. **2002** Foster 57 Glossary of terms: ... 11. 86: We are out of something. **3:** *vt* Hold or order held an ingredient assumed in menu item **2001** Gatta 38 “She ordered a chicken Caesar without the chicken or croutons. I put the order in right but there was some mix up; I did not know because I did not bring the food out, but there was chicken and croutons on the salad and I know I’d 86’d both chicken and bread.” **2002** Foster 57 86 can also mean to hold as in a “burger 86 the bacon.” **4:** *adj* [HDAS in sense 1; NDAS in sense 1; ODMS in senses 1 and 2] Unavailable **1936** Bentley 43 Eighty-six. Item on menu not on hand. **1980** Safire 16/1 The hashlinger in the kitchen would yell back, “Eighty-six on the B.L.T!” That meant, we knew, he was out of bacon – an “86,” for “Out of it,” was as famous as “87 ½,” for “There’s a good-looking girl out front.” **1991** Truehart 23/1 The items listed daily on the kitchen notice board under the heading “86” were to be described as “sold out.” **1991** Paules 114 Some knowledge of cooking is acquired in the course of waitressing, including how to *read codes* (interpret standard waitress abbreviations for orders and preparation instructions), what size plate goes with which order, which potatoes, gravy, and vegetables go with which entrées, and the meaning of cook-cook and cook-waitress terminology (*all day*=altogether, *down* and *working*=cooking, *eight-six*=not available, or as a command, stop selling). **1995** Henderson 252 Eighty-six (86) To be out of an item. **2001** Gatta 36 Part inspirational, part informative, at the line-up the manager on duty shares information with the servers about what is to be expected for the shift, what foods are 86’d, any contests that are being run and can quiz servers on menu knowledge. Gatta 53 86’d refers to food or other items that are currently out of stock. (IN, MD, MI, NJ, OH, PA)

By examining this entry-in-progress, you can learn a lot about making a sociolinguistically focused glossary, as I will illustrate.

Motive and scope

I have never worked in a restaurant, but my brother has, and when he was talking about his work one day, I realized he was using lingo I’d never heard before, so I took some notes. Many glossaries are motivated by curiosity – once you notice that people are speaking in ways that fit groups to which they belong, you want to know more about what it means to speak in and belong to that group. The glossary as it stands now was originally developed from an article I wrote a long time ago, titled “The Server’s Lexicon” (Adams, 1998), which just scratched the surface of the subject. The glossary is not concerned with the language of chefs and cooks, but with language in the *front*, where servers *upsell* for better *tips* yet face many frustrations in the process: when the restaurant is *on a wait* and a server gets *triple-sat* with *amateur diners*, she’s suddenly *in the weeds*. When I first heard them, these terms meant nothing to me, but they are very meaningful in the social work of waiting tables in restaurants of every kind, everywhere in North America.

Of course, you don’t have to find a motive by accident. You can set out to capture localisms in a town or the dialect of a small region, for instance, or you can compile

emerging slang, or even mingle social and geographical interests by tracking slang created on your floor of your residence hall, effectively taking a sociolinguistic snapshot of particular people, in a particular place, at a particular time. This last example raises interesting possibilities for your own lexical research. The curiosity that motivates lexicography can be about your own speech situation. What results is “identity lexicography,” which is participatory research – you are part of the phenomenon you study, a speaker of the dialect, slang, or jargon in question – that puts lexicography on a manageable scale, the scale of your own speech. Imagine how you might examine some activity in which you engage or group to which you belong through the vocabulary of that activity or group.

Once you have determined the subject of a glossary or dictionary, you have to consider its scope – will it be comprehensive (all slang, all campus slang, all war slang, etc.) or will it be selective, according to some principle (not all campus slang, but the slang of fraternities and sororities, or even a single one; not all war slang, but that of infantry in the twenty-first-century wars in Afghanistan and Iraq, etc.)? Different scopes imply different sources and methods of collecting data and sometimes different types of analysis, more on both of which below.

Settling on the scope of “The Server’s Lexicon” is problematic. Who counts as a server? Should the glossary include only those terms produced by waiters and waitresses, or should it include all language spoken in the front, including that of hosts and hostesses, managers, maître d’s, and bussers? “The Server’s Lexicon” is a historical glossary – it illustrates the history of entry words at intervals and identifies their first recorded use – but should it include obsolete terms or only those words still in use? My own approach in building a glossary (and my recommendation to anyone compiling one) is to take scope as a moving target, as a matter to settle finally when all the evidence is in.

Still, you should see the target’s outline. In some cases, this requires building a word list from scratch: you won’t find your family’s private vocabulary in the news or at the movies, so you’ll have to reflect on what you know and ask relatives and perhaps close friends of the family, who may occasionally overhear that vocabulary, for help in constructing the list. Once you have the list in front of you, turn to dictionaries (general, regional, slang, names) to make sure what you and yours think is unique to your family really is. You may want to exclude what’s not unique from your family glossary. Or, you may not. Although *eighty-six* began as restaurant jargon, it’s used much more widely now, but use outside of jargon doesn’t alter the fact that it’s an essential item of the jargon. Other items important to servers, like *back of house*, *close*, *front of house*, *open*, *ticket*, and *tip*, may not be original with restaurant work and are certainly used in other retail and service settings, but these terms are necessary to any lexical description of the work and sociality of waiting tables in a restaurant.

Another way of building a word list is to appropriate relevant items from a dictionary. If you want to examine the lexis of some region within Wisconsin, start with what *DARE* records as especially associated with Wisconsin. If there is a “literature” of your vocabulary, then you can cull a list of words by reading through it. In the case of “The Server’s Lexicon,” the literature includes restaurant management handbooks and newsletters; sociological and anthropological scholarship on restaurant work, authors of which were either observers or participants; novels, movies, and television shows set at least partly in restaurants; servers’ memoirs; journalism, and more. If you want to write a glossary of regional vocabulary, con-

sider local newspapers and news broadcasts, historical manuscripts and regional literature. I didn't generate my original word list from such sources, however: I started with face-to-face elicitation, and this is a good point at which to consider how one collects lexical data with a glossary in mind.

Collecting data

Behind any good glossary or dictionary, there is a wall of data collected from sources appropriate to the dictionary's purpose and scope, such as those just mentioned. Lexicographers don't write dictionaries from their intuitions about what words are out there, what words mean, how speakers use them contextually, how people view them socially, etc. In order to write a good entry, you need a good number of good citations. How does a lexicographer come by these citations? It's a very open question that allows all sorts of answers.

Simple lists of words with brief glosses can have a sociolinguistic value when they represent the marked vocabulary of a definable population. When I started looking into restaurant jargon, before I even conceived of "The Server's Lexicon," I took words and definitions from my brother and made a simple list. Then, I had to find out two things on the basis of that list: Were there more words, and would other servers define the words gleaned from my brother as he defined them? I looked around for students who were also servers, found some, and significantly expanded the word list, added senses, and collected sample sentences using the terms these informants had provided. I had not designed a questionnaire; I was not doing systematic research, but something more like journalism, just asking people to talk about what they knew. This may be the best, perhaps even the only, way to inquire into a vocabulary of which you have no experience and about which little has been written, but as *DARE* proves, you can also work from a questionnaire, if you have a basis for writing one, and administer it systematically.

All told, I spoke with seven servers. Because of the types of information I sought – words, meanings, and sample sentences – and because I knew I wouldn't analyze the data collected statistically, I wasn't concerned with the purity of our interviews. The process was recursive: after I had talked with, say, the fourth informant, I would contact the first three to find out if they had thought of more jargon items and whether they recognized terms or meanings of terms new to the growing word list. To avoid ungrounded "yes" answers, I always asked informants to define words they hadn't mentioned to me but now recognized from the results of another informant's interview, and to provide sample sentences using the terms. In order to gauge which terms were core terms of the jargon and which were specialized to a type of restaurant, I spread the seven informants over seven states and among various restaurants (national chain, local family, fine dining, etc.).

For the article I published in 1998, this was enough, but after publishing the article, I changed my plan and, with it, the glossary's scope. I decided to cover the history of the terms, chart the variety of contexts in which they are used, and assess attitudes towards the jargon, and more recently, perhaps even its enregisterment (see Adams, 2009a). I decided I wanted the glossary to reflect the interrelationship of language, setting, work, and sociality – sociality on the job, so to speak – a big burden for a glossary or dictionary. Each of these interests requires a different sort of data: what servers say now can

be drawn from face-to-face interviews, but historical data comes only from historical texts, evidence of enregisterment only from commodified presentation of dialect, jargon, or slang that promotes restricted group identity in mainstream discourse.

Enregisterment (definition from Coupland, this volume)

Enregisterment is the process by which speech styles and their social meanings come to be recognized in a particular cultural setting. Once speech styles are “enregistered” in this way, they are available to be discussed, evaluated and used in new ways.

Whenever possible, a good glossary or dictionary of restricted or specialized vocabulary ought to display quotations in its entries. Anyone who has used the *OED* is familiar with quotation paragraphs. Quotations included in such a paragraph are not selected at random (though in some cases there may be very little evidence of a word, so what’s quoted is exactly what’s known), but are selected from the glossary or dictionary’s database according to principles determined by the purpose of the glossary or dictionary and the nature of the lexis under investigation. Usually, these principles aren’t obvious or articulated within the dictionary user’s view, though there are some accounts of the rationales for quotation paragraph structures (e.g., Adams, 2009b; Sheidlower, 2011).

Quotations are important for lexicography oriented in a sociolinguistic direction. If they are well selected, they convey a great deal of cultural, as well as semantic, information. This raises an issue for the collection of materials for a glossary or dictionary because the best selection will come from the most comprehensive collection of material, collectors of which have been conscious of how the material can be used. So, while a dictionary citation file need not be balanced in the way an adequate corpus would be, it nonetheless must be representative, because text types have social implications. The source of a quotation is part of the context of a word’s use, and that context is the nexus of vocabulary and culture.

Consider the wide array of citations for *eighty-six*. First, the term’s history is embedded in the entry, under the adjective sense 4, with a quotation from Bentley’s 1936 article. Second, variation among text types is significant, and it reflects a collection strategy. The first two quotations are from a film and a television series, the third from a novel; the sources signified by Foster and Henderson are memoirs by servers, whereas Gatta and Paules are sociological accounts of restaurant work; Safire and Truehart are journalists, and quotations from them come from major US newspapers. These sources reflect issues of scope I’ve already identified. Arguably, the migration of jargon from restaurants into television, film, and fiction serves two related purposes: First, the terms used lend an air of authenticity to the fictional work; second, though, because the set of terms used to establish that authenticity is quite selective and stable (*eighty-six* is one of them), they are terms that have come to stand for restaurant work in the public imagination. In either case, they signify attitudes towards the jargon.

Some of the quotations under *eighty-six* are especially useful for what lexicographers call their “defining value.” Under sense 2, Gatta quotes a server in an interview: “She ordered a chicken Caesar without the chicken or croutons. I put the order in

right but there was some mix up; I did not know because I did not bring the food out, but there was chicken and croutons on the salad and I know I'd 86'd both chicken and bread.'" This is an example of someone using the term in question naturally, in a real-world setting, in a way that makes its meaning clear. If you are compiling a sociolinguistically interested glossary, you'll need to collect material like this from face-to-face interviews, Web-based surveys collected through a site like Survey Monkey, chat room or posting board posts, or published research like Gatta's, or some combination of these. Obviously, the evidence you collect has to provide you with a basis to define.

Some of the quotations are from glossaries in books, as seen in both first-hand accounts like those by Foster and Henderson and scholarly accounts like Gatta and Paules, all of which are explaining jargon they use or quote in their books to uninitiated readers. Some lexicographers don't collect quotations like this, because glossary definitions aren't natural speech and lack context, so – in the minds of such lexicographers – they have minimal defining value (this is the *OED*'s position; see Sheidlower, 2011: 204). I always include such evidence, however, because when describing a local or regional variety, slang, or jargon, glossarial quotations are evidence of linguistic perceptions and attitudes. It's sociolinguistically important that those using restaurant jargon believe terms like *eighty-six* need to be glossed and that, in many cases, they are right. The quotation from Paules under sense 4 is neither natural use nor a gloss, but encyclopedic commentary about the relationship between two jargons – one from the front of the house, the other from the back – operating in the same restaurant. The glossarial and encyclopedic quotations may not be necessary to establish the lexical semantics of a term, but in "The Server's Lexicon," I'm going for the whole semantics shebang, the widest and deepest view of how language is meaningful in the restaurant setting that one can offer through a glossary.

The means of collection are strenuous. With snippet views and YouTube videos, you can find relevant quotations much more easily than you could a decade ago, but still, you cannot pinpoint citations in advance of reading or viewing the works in which they occur. In a questionnaire, you've identified targets in advance, but in a broader data collection program – a reading and viewing and listening program – targets accumulate as you adjust to the scope of the vocabulary in question. Because archives relevant to the study of regional lexis probably won't be digitized, because books under copyright aren't available from first to last page on the Web, there is no substitute in the end for patient reading. With experience, you develop the facility to read carefully enough to pick out relevant words in a text, to pause and judge the defining value of the surrounding passage, and then move on, less reading than skillful perusal of the text in hand (for more on which, see Adams, 2010). The same sort of attention applies to excerpting video and audio.

When you excerpt text you may do so onto paper (as I usually do if something comes up in a video or audio source) and then key it in – to what? Settle on a rudimentary entry structure from the outset. For instance, just borrow the form of entry I've used for *eighty-six*, which itself is adapted from the word list format of the journal *American Speech*, in which the first, article version of "The Server's Lexicon" was published. In other words, since submitting the article, I have simply added material into the original document. You can refine your word list and entry structure continually, but I strongly advise that you enter quotations directly into them, so that you can watch data accumulate, make substantive judgments on the basis of that accumulation, run through the whole text to make stylistic changes consistently, and (perhaps most important) keep all your quotations in one place. Obviously, back the file up.

Finally, what you collect is aligned with decisions you make about a glossary's purpose and scope. Always collect more than you think you need to supply that purpose and scope so that you can select the best evidence from what you collect, understanding that your sense of what's best may shift a bit in the course of collecting data and writing the glossary, which, as I explain below, are simultaneous projects. Many assume that "the dictionary" is a static form of lexical reference, but actually it's a fluid medium of sociolinguistic research: you should feel free to experiment with combinations of data and lexicographical form to suit the vocabulary you investigate and what you have to say about it.

Structuring entries

Though it doesn't resemble other sociolinguistic accounts you've read, a dictionary entry is a form of analysis: depending on the dictionary type, it can report analysis that's "behind" the entry, but may also promote analysis on the reader's part. Consider the familiar elements of dictionary entries: the headword itself, establishing the word as a constituent of the vocabulary in question; variant forms, which may reflect dialects, but certainly represent something of sociocultural interest; etymologies; lexical category labels; restrictive labels, which embed language attitudes into the entry structure; definitions; and, in cases of polysemy, sense analysis on some principled basis (historical, analytical, frequency of use, etc.) – all sociolinguistically relevant information. As I suggest below, entry structure can be reconceived to do more sociolinguistics than you'll find in a general-purpose dictionary.

All of the information categories listed above are problematic, even the ones that seem easiest to supply, because one category often depends on or has ramifications for another. Here, as a guide to writing an entry, I'll consider each category illustrated in the *eighty-six* entry, beginning with the headword.

The headword, usually represented in bold face, is, in the first instance, the means of placing (for a user, locating) the entry in an alphabetical list. Thus, spelling counts. But the headword category also often lists alternative forms of the item. In speech, it doesn't really matter, but in print, as the quotations prove, some people use the form *eighty-six*, others the numeral 86. The headword category should include all semantically indistinguishable forms of the item in question. As it's impossible to spell a numeral, *eighty-six* is taken as the preferred form, but that's not meant as a usage judgment. Surely, this is unproblematic.

Yet, look at the 1994 quotation from Paules, the encyclopedic one discussed above. She includes what may be another alternative form, *eight-six*. This isn't a typographical error in the glossary, by the way, though it might be a typographical error in Paules's book correctly transcribed in the glossary. It also might be a legitimate form, a numeralism parallel to an initialism like *FBI*. If the form is legitimate, doesn't that entail inclusion of the quotation? If the quotation is included, doesn't that entail entry of the alternative form it presents? On what basis does the lexicographer exclude evidence of an alternative form? What would you do?

After the headword, an entry usually includes an italic lexical category (or part of speech) label, if the entry includes only one sense of the item in question. But, as you can see from the draft entry for *eighty-six*, many entries will include several senses, at least some of them representing different lexical categories (verb and adjective, in the case of *eighty-six*), so each sense will require a label.

Most items of jargon are formed on words already in the vocabulary of English or another language, so it's rarely necessary to construct a "deep" etymology, which will be available in standard dictionaries. (Anyway, unless you are a comparative linguist/philologist, you probably shouldn't attempt such etymologizing.) Generally, square-bracketed sections in "The Server's Lexicon" supply the most recent etymon or a cross-reference to a dictionary of record, so that readers of the glossary can trace an item's history if they wish. But you'll notice that in the *eighty-six* entry, the first bracketed section has the etymology endorsed under sense 4 in the quotations from Bentley and Safire, and then the senses also have bracketed sections that include abbreviations of those slang dictionaries that enter the precise sense – in other words, I'm hardly the first lexicographer to record *eighty-six*, and I suspect that any number of general dictionaries include one or another sense of the term. Can bracketed sections comfortably serve both purposes?

In other cases in "The Server's Lexicon," I use square brackets to summarize the formation of the term in question, for example, "**blender tender** *n* [WNID3 *blender n* in sense *c* + *tender n* in sense 1]" – a blender tender is a bartender who prepares frozen drinks in blenders – in which WNID3 refers to *Webster's New International Dictionary of the English Language, Third Edition*. The abbreviations in bracketed sections of the *eighty-six* entry refer to still other dictionaries, and it's worth noting that you would need to set up a table of such references, should you decide to use them. In any event, the question remains, can the square bracketed sections serve an array of purposes without confusing readers of the glossary? So, again, what would you do?

Naturally, the *eighty-six* entry includes glosses or definitions. Because the term is used to mean more than one thing, the entry distinguishes among senses. So, you have collected data from interviews and probably from print and other scripted or written sources. Now, you have to examine and group citations conveying a similar meaning for the term in question, while assigning citations exhibiting dissimilar meanings to another pile or file. Whenever possible, gloss with a synonym or a phrase in everyday language: thus, "**eighty-six** ... 4: *adj* ... Unavailable." You should be able to replace the term in question with the gloss (disregarding tense, number, and similar grammatical features) in the quotations you include under that sense or in a contrived sample sentence: "The catsup is eighty-sixed"/"The catsup is unavailable." The lexical category label, the gloss, and all of the quotations listed underneath the gloss must agree about lexical category. If quotations give evidence of a term used in more than one lexical category, you'll have to split the entry into more than one sense.

The conundrum of ordering senses in a glossary or dictionary is whether to do so grammatically, semantically, or historically – this should be an organizing principle of a glossary and should operate uniformly across entries, so readers know where to find and how to interpret the data, once they're familiar with your entry structure. A grammatical structure assumes a hierarchy among lexical categories usually with nouns coming first; if you want an entry to convey the most sociolinguistic information possible, avoid this type of analysis, because it doesn't convey any social facts. Note that I've taken this approach in the draft entry for *eighty-six*. Semantic analysis that identifies core and peripheral meanings logically is similarly unsociolinguistic. Identifying a core meaning by frequency of use is of some sociolinguistic value but depends on a corpus from which frequency can be determined. A historical arrangement, which could begin with the oldest sense or the newest sense, is perhaps the best approach in a sociolinguistically interested glossary.

Quotations must guide the other elements of an entry. We tend to think of quotations as illustrating a definition, but actually the quotations – the data in context – are primary and the apparatus of an entry, a way of abstracting and analyzing what we find in the quotations. Ideally, you will collect more quotations than you can or should include in an entry. How will you decide what to keep and what to discard? Here are some questions we should ask of the draft *eighty-six* entry: (i) Should a final version of the entry include both quotations from Foster under sense 2? (ii) Should it include quotations by Gatta and Foster under sense 3 that are only a year apart? (iii) Do all three quotations under sense 1 have sufficient defining value to be included? (iv) Are any quotations longer than their defining value warrants?

Box 11.2 The *eighty-six* entry revised

It's still by no means finished, but along the lines considered above, here is a better version of the entry with quotations from the Web (from 1936 to 1980 under sense 1) and earlier quotations for all other senses to be included later, as well as square-bracketed cross-references to dictionaries to be revised later:

eighty-six; 86; eight-six? [New York soda counter code] 1: *adj* [HDAS in sense 1; NDAS in sense 1; ODMS in senses 1 and 2] Unavailable 1936 Bentley 43 Eighty-six. Item on menu not on hand. 1980 Safire 16/1 The hashslinger in the kitchen would yell back, "Eighty-six on the B.L.T!" That meant, we knew, he was out of bacon – an "86," for "Out of it," was as famous as "87 ½," for "There's a good-looking girl out front." 1991 Truehart 23/1 The items listed daily on the kitchen notice board under the heading "86" were to be described as "sold out." 1991 Paules 114 Some knowledge of cooking is acquired in the course of waitressing, including [...] the meaning of cook-cook and cook-waitress terminology (*all day*=altogether, *down* and *working*=cooking, *eight-six*=not available, or as a command, stop selling). 1995 Henderson 252 Eighty-six (86) To be out of an item. 2001 Gatta 36 Part inspirational, part informative, at the line-up the manager on duty shares information with the servers about what is to be expected for the shift, what foods are 86'd, any contests that are being run and can quiz servers on menu knowledge. (IN, MD, MI, NJ, OH, PA) 2: *vt* [NDAS in sense 2] Cancel, consider unavailable 2000 Rauch *In the Weeds* "[Kurt:] 'Eighty-six the salmon croquettes.'" c2005 *Kitchen Confidential* "Teddy Takes Off" (unaired) "[Jack:] 'OK, Chet is fired; Chet is extremely fired. I'm gonna 86 the shrimp salad.'" 2006 Brite 111 Orders came in thick and fast, and all at once they were in the weeds, the state of flailing chaos that was the worst thing that could happen to a kitchen crew. Waiters came in yelling for orders that should have been ready twenty minutes ago. Dishes already promised to diners had to be 86'd. (MD, NJ, NY) 3: *vt* Hold or order held an ingredient assumed in menu item 2001 Gatta 38 "She ordered a chicken Caesar without the chicken or croutons. I put the order in right but there was some mix up; I did not know because I did not bring the food out, but there was chicken and croutons on the salad and I know I's 86'd both chicken and bread." 4: *vt* Lack, be out of 2002 Foster 55 SAUTÉ: Heard that all day. I am 86 soup! EXPO: Heard that soup. SERVERS! We are 86 soup! Pass it around. 2002 Foster 57 Glossary of terms: ... 11. 86: We are out of something.

What would you do differently, and why?

Here are some reasonable but not necessarily definitive answers to those questions: (i) In general you would avoid taking two quotations for the same sense from the same source, but there are exceptions, for instance, when they are from radically different modes of discourse, as in this case, where one is an experienced server's autobiographical rendition of a typical use of *eighty-six* in context and the other is from a glossary that proposes which terms require explanation to a lay audience; (ii) probably not, because the Foster quotation has weaker defining value; (iii) while the defining value of both the film and television quotations is relatively weak, they reflect different grammatical meanings because the first is an imperative use of the verb, and they come from different text types, as well, so arguably all three quotations should stay; and (iv) yes, the Paules quotation should be trimmed.

One more note on the data from "The Server's Lexicon." For each sense I indicate by USA postal code which, if any, of my original informants mentioned, defined, and illustrated usage of it in a sample sentence. Thus, I layer each entry with different types of data, some reflecting face-to-face methods of collection, most not. *DARE* mingles questionnaire responses and quotations from print and manuscript sources, as well as encyclopedic quotations from scholarship (a bit like the Paules quotation in the *eighty-six* entry). *DARE* questionnaire responses are balanced and representative, and one can calculate frequency, for instance, on the basis of them. I can't make a similar claim about my informants' responses in Box 11.2, but they nonetheless do more than certify the quoted evidence with first-hand knowledge of the jargon in use. Notice that sense 1 was used by three informants in close proximity, while sense 4 was used by six of the seven informants over a greater geographical area – besides being first historically, the adjective sense is used more generally, and sense 1 may be geographically restricted. You can't prove the last supposition from the glossary, but its value is in raising it for proof by some other means.

Quagmires and Troubleshooting

- *Ignorance of what we already know is a quagmire*, but you often don't know when you're sunk in it. Check lexical items against the dictionary record – don't overlook what we already know. If you are constructing a glossary of any but the most rudimentary kind (word list plus gloss), figure out a way to summarize what we know within the entry structure, for instance, within square brackets.
- *A lexicographical study can get bogged down in careless language*. Lexicography is a particularizing sort of research, not (for the most part) a generalizing one. So represent facts first and foremost, judging as evidence allows in the laconic way dictionaries tend to express judgments. The trick is to find evidence – interview or questionnaire responses, quotations, and so on – that speaks well for itself, and then let it speak. Above all, be careful not to make quantitative claims that can't be supported by qualitative research.
- *Arrogance, too, can spoil an otherwise well-intentioned project*. In identity lexicography, for instance, don't assume that, as a group member, you know all that is said or meant in the group; as an insider, you have insight and access, but you still need to collect data methodically from all users of and perhaps even witnesses to the speech in question.

- *Don't be distracted by shiny words.* There's a natural tendency to notice unfamiliar, exotic, and (in the case of slang and jargon) self-consciously clever vocabulary. But following the lure of such words leads away from the center of the subculture you're investigating to its edges, and if you conceive the subculture from that perspective alone, without considering the commonplace core of its lexicon, you'll be knee-deep in misdescription – you'll do a disservice both to those using your glossary and to the speakers represented in it.

Advice

Be flexible in determining what counts in your glossary until you make a final editorial decision about what counts. So, by implication, collect as much of the most diverse material you can, and then select from that database the evidence that best serves your purpose and the glossary's scope. Devise an entry structure and style that allows you to display the most possible information about your chosen vocabulary relevant to the glossary's scope and then apply it consistently.

Tips

Here is a quick list of pointers about constructing a glossary:

- Think of constructing a glossary as a recursive process: First, you plan and then look for evidence that suits your plan; then, on the basis of the evidence you find, you re-estimate the glossary's scope, reconsider the entry structure, and revise your plan. Repeat until everything fits.
- You can't collect the exact amount of data you need; always collect much more than you'll need, so that, in the end, you can select the best material for your glossary, rather than be caught short.
- In a glossary with quotations, whether transcribed from face-to-face interviews or culled from print and other media, accuracy is paramount. Transcribe carefully. Save all material so that it can be verified. Proofread it again and again. Then, proofread it again.
- Keep very careful track of all bibliographical information. Texts (especially web texts) can be hard to track down after the fact. A quotation without a page number (from a print source) or a date (for web text) is useless unless you are willing to read the whole book or the whole blog to locate the quotation in question again.

Project Ideas

There are so many possible glossary projects, it's difficult to know which few to mention here as good examples, but here is a sampling:

- 1 Choose an activity in which you are active, do research into its specialized vocabulary, and represent it in a glossary. This prompt covers every vocabulary from that of snowboarding to stamp collecting, bookbinding to cheese-making, competitive swimming to dressmaking, online videogaming to martial arts, ad infinitum.

- 2 Look into the lexical element of your local dialect, or do the ultimately local and record your family's peculiar, private lingo.
- 3 Or, look into the lexical element of a dialect into which you have migrated, in order to learn about what isn't familiar to you.
- 4 Recently, two students in my course on slang, Alie Hansen and Eli Calkins, compiled a glossary of slang unique to their hallway within their university residence hall. Theirs was more than just a glossary, however, as they described the social networks and hierarchies that constitute the in-groups for introducing and using the slang, complete with a map of the hall to suggest the geography of networks. The glossary particularizes their general argument, but its entry structure summarizes information from the essay and integrates the two components of their project. This sort of study is easily replicated in a workplace, as well as in a close-knit living arrangement.

Further Reading and Resources

There is an extensive bibliography in the history, theory, and practice of lexicography, but the most accessible introductions are these:

- Béjoint, H. 2010. *The Lexicography of English: From Origins to Present*. Oxford and New York: Oxford University Press.
- Landau, S. 2001. *Dictionaries: The Art and Craft of Lexicography*, 2nd edn. New York and Cambridge: Cambridge University Press.

References

- Adams, M. 1998. The server's lexicon: preliminary inquiries into current restaurant jargon. *American Speech* 73: 57–83.
- Adams, M. 2009a. Enregisterment: a special issue. *American Speech* 84(2): 115–117.
- Adams, M. 2009b. The period dictionaries. In *The Oxford History of English Lexicography*. Vol. 1: *General-Purpose Dictionaries*, ed. A.P. Cowie, 326–352. Oxford: Clarendon Press.
- Adams, M. 2010. Historical dictionaries and the history of reading. In *Reading in History: New Methodologies from the Anglo-American Tradition*, ed. B. Gunzenhauser, 47–62 and 143–145. London: Pickering & Chatto.
- Adams, M. In preparation. The Server's Lexicon. Unpublished manuscript.
- Cassidy, F.G. 1987. The *Dictionary of American Regional English* as a resource for language study. In *Studies in Lexicography*, ed. R. Burchfield, 117–135. Oxford: Clarendon Press.
- Clark, C. 1990. Historical linguistics – linguistic archaeology. In *Papers from the 5th International Conference on English Historical Linguistics*, ed. S. Adamson, V. Law, and S. Wright, 55–68. Amsterdam: John Benjamins.
- Dictionary of American Regional English*. 1985–2013. Six volumes. Ed. F.G. Cassidy, J. Houston Hall, and others. Cambridge, MA: Belknap Press.
- Green's Dictionary of Slang*. 2010. Three volumes. Ed. J. Green and others. London: Chambers.
- Preston, D. 2004. Three kinds of sociolinguistics: a psycholinguistic perspective. In *Sociolinguistic Variation: Critical Reflections*, ed. C. Fought, 140–160. New York: Oxford University Press.
- Sheidlower, J. 2011. How quotation paragraphs in historical dictionaries work: *The Oxford English Dictionary*. In *Contours of English and English Language Studies*, ed. M. Adams and A. Curzan, 191–212. Ann Arbor: University of Michigan Press.

12 Doing Discourse Analysis in Sociolinguistics

Janet Holmes

Introduction	178
Doing Discourse Analysis	178
Developing Research Questions	180
Collecting the Data	180
Transcribing the Data	182
Analyzing the Data	183
Qualitative Analysis	185

Summary

Discourse analysis is used in many different disciplines and is particularly useful to sociolinguists since it provides one way of exploring the relationship between language and society at the micro level of social interaction. This chapter describes the steps used by sociolinguists who adopt discourse analysis in order to answer a range of research questions. I first mention just four major theoretical approaches to discourse analysis (Critical Discourse Analysis, Variationist Sociolinguistics, Conversation Analysis, and Interactional Sociolinguistics). Then I discuss these steps: (i) formulating a clear research question, (ii) identifying or recording appropriate data, (iii) transcribing the data, and (iv) analyzing

the data. Both quantitative and qualitative uses of discourse analysis are illustrated. Workplace humor is used to demonstrate some of the issues that the discourse analyst must address, and selected excerpts are analyzed for exemplification. The chapter finishes with some warnings about aspects of discourse analysis that require special care.

Introduction

Discourse analysis is used in a wide range of disciplines. Anthropologists, sociologists, philosophers, and social psychologists are just some of those who use discourse analysis to address their research questions. Linguists use discourse analysis to provide information about the way texts are constructed. Sociolinguists use it to examine the role of language in social interaction. Discourse analysis can throw light on such questions as how friendship is enacted linguistically, how power is exercised and leadership constructed, how people manage to get a turn in a conversation, whether women or men use more hedges in a conversation and why, and how interviews and meetings are conducted in different cultural contexts. Sociolinguists have also studied topics such as how people give compliments or make complaints, how and when humor occurs in different social contexts, how people open and close meetings, and why and when miscommunication occurs in interaction. Clearly, discourse analysis is potentially very useful in a sociolinguist's tool kit. So how do sociolinguists actually *do* discourse analysis? This chapter outlines how sociolinguists analyze discourse and provides some examples to illustrate what discourse analysis can tell us about the social meaning of language in interaction.

Doing Discourse Analysis

Theoretical frameworks

Discourse analysis can be used within a range of different theoretical frameworks. I briefly outline just four here. Sociolinguists who adopt a *Critical Discourse Analysis* (CDA) approach are concerned to identify the (often covert) ways in which power is enacted through the written and spoken discourse structures of everyday interactions (e.g., van Dijk, 2001; Wodak, 2001). Critical discourse analysis focuses on evidence that taken-for-granted ways of doing things favor those with power and discriminate against the powerless. So, for example, who has speaking rights in a meeting, who decides what will be on the agenda, and who allocates speaking turns. How can the use of the passive voice serve the purposes

The passive allows the agent to disappear and this may mask power relations: for example, *You are required to comply with these regulations.*

of the powerful? Researchers who use this approach are eclectic in their methodology: they take what they need from a range of different approaches to analyze discourse.

Variationist Sociolinguists (or social dialectologists) use discourse analysis to identify discourse features which they can count (e.g., phrases like *you know*, *I mean*, tag questions), and then correlate these with social categories such as gender, social group, ethnic group, or social network (e.g., Tagliamonte, 2006, 2012; Cheshire, 2007). They track changes over time for discourse particles, such as the New Zealand invariant tag *eh* or the quotative *I'm like*, that spread from

one age group and social group to another. Variationist sociolinguists often face challenges in identifying the range of relevant functions or meanings of the discourse units they focus on, as well as problems in establishing their potential positions of occurrence for quantification purposes (see Pichler, 2010; Tagliamonte, 2006).

Conversation Analysis (often called just CA) has its roots in sociology and, more specifically, ethnomethodology (see Drew, this volume), but it has provided such a useful set of analytical tools that discourse analysts from many different disciplines have adopted them. Those who use this approach attend to the meanings conveyed through the sequential organization of discourse: what does each response tell us about the speaker's interpretation of the previous utterance? Examining many instances of talk with a similar function (e.g., telephone openings), CA researchers look for patterns. They use extremely detailed transcripts to represent the audio and video recordings of talk-in-interaction. The analysis aims to interpret the interactional significance of micro-level linguistic features – such as hesitations, pauses, lengthened consonants and vowels, and the relative volume of different words or even syllables. Core CA researchers avoid appealing to aspects of the wider social context in interpreting material unless the participants themselves indicate these are relevant and salient through their talk. Drew (this volume) describes how to do CA.

By contrast, sociolinguists who adopt an *Interactional Sociolinguistics* framework pay a great deal of attention to social context. They are interested in identifying features of discourse that index a range of different kinds of contextual information, such as age or ethnicity, or stances associated with particular social groups, such as aggressive, collaborative, deferential, or collegial (e.g., Gumperz, 1982; Schiffrin, 2003). The goal is to explore how social meaning is conveyed and inferred in particular interactions, and researchers typically bring detailed knowledge of the specific social context to the analysis, often based on extensive ethnographic observations and interviews (see Hoffman, this volume; Jaffe, this volume). This approach has proved particularly valuable in studies of cross-cultural workplace communication (e.g., Campbell and Roberts, 2007), and has also been used to explore the ways in which particular dimensions of social identity are constructed (e.g., gender, ethnicity, leadership).

Below, I illustrate how a researcher could use discourse analysis within any of these different theoretical frameworks. Though each tends to generate different research questions, they all make use of a similar basic tool kit to find answers to their questions in the discourse which is their focus.

Tag questions are located at the end of an utterance and may be inflected for tense and person: *She won't be late, will she?* or invariant: *He's a very smart guy, right? Great day, eh?*

Quotatives in italics:

She said you're crazy
She was all you're crazy
She was like you're crazy

Developing Research Questions

To illustrate how people develop a research question where the answer requires discourse analysis, I use my own experience of researching workplace talk. I first became interested in the language people use at work when I realized that people talk very differently in different workplaces and workplace groups. Even people in different departments in the same university have distinct ways of interacting with each other. So the first research question I formulated was very broad and non-specific: *How do people talk at work?*

When I started reading I discovered that previous research had mainly concentrated on institutional talk (e.g., courtroom cross-examination), media interviews, or professional discourse (e.g., doctor–patient interaction) (see for example Drew and Heritage, 1992). I was more interested in the way people talk in offices and factories, and in different workplace contexts, such as formal and informal meetings, and at morning tea. Michael Clyne’s (1994) research on intercultural communication in Melbourne workplaces provided an interesting model, though my initial interest was not on talk involving people from different linguistic or ethnic backgrounds, but simply the talk of ordinary New Zealanders at work.

I decided to focus first on talk in professional white-collar workplaces, since that was a context I knew. Clyne had studied speech acts such as apologies, complaints, and directives, and this seemed a good way to narrow down the research question. So one of my initial research questions was “How do people give directives at work?” and then, making it even more specific, “How do managers give directives in professional white-collar workplaces?”

As the research grew and a research team developed, we added other questions:

- How do people make complaints?
- How do people refuse to do something at work?
- How do people establish rapport with their workmates?
- How is power enacted in the workplace?
- What is the function of humor in the workplace?
- How do people “do leadership” at work?
- Are there gender differences in talk at work?
- How do people from different ethnic groups talk at work?

Collecting the Data

You can use a wide range of data to do discourse analysis: written or spoken material, data from the public domain (e.g., newspapers, radio and TV programs, movies, the Internet), corpus data (see Baker, this volume), or data you collect yourself. The big advantage of written material or spoken material that has been already transcribed in a corpus collected by someone else is that it enables you to skip the time-consuming step of transcription. The advantage of collecting your own data is

that it is unique, and you are likely to have greater insights when analyzing and interpreting it.

To answer our research questions, we needed authentic workplace talk, and we therefore faced the ubiquitous observer's paradox: how to record the kind of talk people produce "naturally" when they are not being observed or recorded. Our solution has been written up in some detail (e.g., Holmes and Stubbe, 2003; Marra, 2008), but briefly, it involves persuading appropriate volunteers to record their everyday workplace talk and then allow us to take their data away, transcribe it, and analyze it.

This process is much more complicated than it sounds as there are numerous steps on the way (see Box 12.1).

Box 12.1 Some core steps in the data collection process

Make contact with the organization/workplace

The best way is usually through a personal contact.

Identify mutual benefits

Discuss with the most senior person (CEO, Managing Director, boss) what you want to do and identify benefits for the workplace: for example, identifying effective communication strategies.

Explain the research process to all involved

Tell everyone in the workplace what you want to do (a staff meeting is an ideal setting). Be brief: no more than 20 minutes for your spiel. Ask for appropriate volunteers to carry the recording devices. ("Appropriate" depends on your research question; you may be focusing on people in certain roles.) Discuss whether meetings could be video-recorded.

Observe

Spend a period (ideally at least a week, perhaps comprising different half-days over a two-week period) taking detailed ethnographic notes of the workplace norms and ways of doing things.

Collect the data

Train your volunteers in the use of the equipment. If video is involved, set up two small cameras to get maximum coverage before the relevant meeting and collect the cameras after the meeting is over. This reduces your intrusion.

Debrief

Talk to each volunteer after the recording to collect their thoughts and impressions. Record these interviews.

Many of these steps are described in detail in other chapters in this volume (e.g., Hoffman, O'Shannessy), so here I draw attention to just four important points. Firstly, for ethical as well as practical reasons everyone needs to know about the data collection, even if they are not recording their own talk. Secondly, in order to interpret the social meaning of the recorded discourse, a period of preliminary ethnographic observation is invaluable. In our research, we make detailed notes about the norms of the workplace and their distinctive ways of doing things: for example, are doors typically open or closed? do people go to morning tea? do they chat before and after meetings? Thirdly, in order to obtain good quality data you need to test the equipment in the workplace, and ensure the volunteers understood your goals so that, for example, they can avoid recording in very noisy contexts where possible. Fourthly, debriefing interviews (formal or informal) after the recording is completed are very valuable in contributing to understanding the material. In our research, these are generally supplemented with workshops after we have undertaken some preliminary analysis, so we can check our interpretations and provide the volunteers with some feedback.

Transcribing the Data

There is a good deal of information in this book on transcription, so again I highlight just a couple of points. Firstly, it is generally unrealistic to aim to transcribe everything that your volunteers have recorded (it would take far too long), but it is very useful to know the range of material they have collected. One solution to this is to listen to everything, making notes describing what is on the tape, a bit like the minutes of a meeting. Listening to all the data is an important step. Typically, you will find that you are able to recall material that is relevant to later research questions many months after it was recorded, and the intonation and tone of voice will also be in your head. Keywords relating to your research questions are also useful: so, if you are studying workplace humor or directives or apologies, you can indicate where these occur in the recordings as you listen. This technique makes it easier to find relevant sections that you need to transcribe carefully later.

How much should you transcribe? And in how much detail? The answers are ideally determined by your research questions, but realistically, financial resources are also a relevant consideration. The main goal at this stage is to be comprehensive, but again this is not always straightforward. As we select material, we are inevitably involved in analysis, since deciding what counts as a directive or an instance of humor or as evidence of leadership behavior is part of what we are researching. As a result, we tend to err on the side of including anything potentially relevant wherever possible. When studying the discourse of leaders or managers, for example, we began by transcribing samples of every type of interaction in which they are involved before selecting particular aspects of leadership behavior (e.g., managing meetings, mentoring, strategic planning) for our focus. Then we transcribed all the data which seemed relevant to represent that behavior accurately. Our goal is to have enough material to be confident that our analysis provides a comprehensive and accurate picture of what is going on, however complex that might be. Finally, computer

programs such as EXMARaLDA (www.exmaralda.org) or ELAN (www.lat-mpi.eu/tools/elan/), which link the audio files to the transcript and allow detailed annotation, make it much easier to find and check material during the main analysis phase.

Analyzing the Data

To illustrate how to do discourse analysis, I focus on the analysis of humor in workplace discourse. The steps outlined below are equally relevant for a study of directives, apologies, hedges, and many more speech acts and discourse strategies. While most discourse analysts are interested in qualitative analysis, interpreting the social meaning of discourse in interaction, it is also possible to use discourse analysis for quantitative analysis. Our analyses of humor in the workplace have used both methods, as I illustrate.

In studying workplace discourse, we were interested in both the frequency and the functions of humor in different workplaces. How much humor occurred in different workplaces? Where did it occur? Who used humor? And why did people use humor at work? To answer these questions, the analyst first needs a definition of what counts as an instance of humor. There is a huge amount of literature on this topic (see Schnurr, 2009, for a review), which we consulted before formulating our own definition.

Definition of humor

Humorous utterances are defined as those which are identified by the analyst, on the basis of paralinguistic, prosodic, and discursal clues, as intended by the speaker(s) to be amusing and perceived to be amusing by at least some participants. A wide range of contextual and linguistic clues are relevant to identifying instances of humor, including the speaker's tone of voice and the audience's auditory and discursal responses. Laughter, and, where video recording is available, facial expression, including smiles, are also very important clues (Holmes, 2000: 80).

Note that the definition given in the box focuses on successful instances of humor. Some analysts also examine "failed" humor, which clearly requires a more complex definition based on inferences about the speaker's intention. By focusing initially on successful humor, we could make use of a wider range of contextual, paralinguistic, and linguistic clues to support the analysis.

A second issue that arose in identifying "instances" of humor was the difference between a single utterance, often in the form of a funny quip as in Example 1, and more sustained examples, including amusing anecdotes and collaborative humor, where a number of people contribute, as in Example 2. (Transcription conventions are provided in Box 12.2.)

Box 12.2 Transcription conventions

I have provided here our minimal set of transcription conventions. More detailed conventions are discussed by Drew in this book, and provided in the references on discourse analysis below.

Note that we replace all real names with pseudonyms and remove any identifying material.

[]	Paralinguistic and editorial information in square brackets
FINAL	Capitals indicate emphatic stress
...	Section of transcript missing
:	Stretched preceding sound
?	Question intonation where not clear on paper
+	Pause of approximately 1 second
(2)	2-second pause
/here\	Overlapping talk
/okay\	
()	Untranscribable talk
(think)	Transcriber's best guess at an unclear utterance
XF:	Unidentified female speaker
-	Cut-off utterance
=	Turn continues

Example 1

Context: Sally, Tina's manager, tells Tina to take away a proposal that they have been discussing and do some more work on it.

SALLY: well we've just about done it to death I think [laugh] it's about ready for you to give it mouth-to-mouth resuscitation do you think
TINA: okay will do

This is easily identifiable as one instance of humor (used to soften a critical comment), but Example 2 is not so straightforward.

Example 2

Context: Regular meeting of an IT project team in a large commercial organization.

1 JACOB: oh is this THE FINAL?
2 BARRY: this is THE FINAL /+ final steering\ committee
3 JACOB: /[laughs\
4 BARRY: oh Pete most probably enjoyed doing that /[laughs\
5 MARCO: /()\
6 DUDLEY: /he even sent\ me an e-mail to reinforce it with you
7 [general laughter]
8 BARRY: this
9 [General laughter]

- 10 BARRY: this is THE final
 11 DUDLEY: THE final
 12 BARRY: [laughs]
 13 DUDLEY: I'm switching out the lights and I'm leaving now
 14 BARRY: [laughs] I'm switching out the lights and leaving

For the purpose of our analysis we decided to count such extended examples as just one instance of humor spread over several turns, unified by topic. This is a pragmatic decision which we put on record so that other researchers could use it for comparative purposes or modify it as appropriate. Obviously, the dividing line is not always clear, and we had many discussions before coming to agreement about some instances. This illustrates another advantage of teamwork: it is very helpful to have a group working together to provide feedback, test out hypotheses, and help sort out problems.

In undertaking quantitative analysis we counted single vs. collaborative instances of humor separately, since we considered this distinction to be a potentially interesting qualitative difference in the humor in different communities of practice or workplace teams. One possible place to start such an analysis is to focus on workplace meetings. To control for variations in the length of meetings, an index can be used: for example, the number of instances of humor per 100 minutes.

Using this approach, it is possible to compare meetings in terms of how much and what kind of humor occurs. For example, in our data there was considerably more humor in planning meetings than reporting meetings; there was more collaborative humor in factory meetings than in commercial organizations; and both included more collaborative humor than we found in government department meetings.

Having identified a unit of analysis and examined its distribution, we can consider what the analysis contributes to an understanding of social relationships in workplace interaction. Why is there more humor in some workplaces and some contexts than others, for instance? What kinds of humor occur in different workplace contexts? To answer such questions, more detailed qualitative discourse analysis is needed.

Devising a suitable measure for counting different discourse features often requires some thought. For example, since each instance is a specifiable length, pragmatic particles such as *you know*, or *eh*, are more sensibly quantified using an index involving number of words rather than time: for example, the number of instances of *eh* per 1000 words.

Qualitative Analysis

The precise direction you take with a qualitative approach will depend on your research question(s). Here are just two examples.

- 1 You could identify different *types of humor* in the workplace interactions recorded and relate these to the kinds of social relationships observed in the workplace and to features of the workplace culture.

- 2 You could examine how *humor contributes to the construction of workplace identity*.

Let's take each of these questions in turn and consider how a discourse analyst might address them.

Types of humor

What can the analysis of humor in workplace discourse tell us about workplace relationships and about the workplace culture?

Drawing on all the instances of humor in your data set, the first step involves establishing criteria for assigning instances to different categories. One useful source of ideas will be your background reading. Then, listening to all the instances of humor, and examining your transcripts, you will become aware of whether – and if so, how – instances of humor differ in terms of the way they are discursively constructed. Two categories which emerged from our data were a collaborative or supportive style of humor, and a more contestive or challenging style. (These are not comprehensive, of course. Your data might suggest additional or different categories.) This distinction is often apparent both in terms of analysis of the *content* and analysis of the *style* of interaction, though again other patterns are also possible (see Holmes, 2009, for further discussion).

So, Example 2 above can be categorized as collaborative in terms of its content since the various contributions support and add to each other in terms of their semantic message; each contribution reinforces and expands the previous propositions. And the humor is expressed through the construction of a highly collaborative floor, using the semantic and syntactic cohesive devices of paraphrase and repetition. The participants' contributions overlap, and there is laughter throughout, as they jointly construct the humorous sequence.

Focusing in more detail on features of the discourse, we note that the words *the final*, uttered with stress by Jacob (line 1) in the form of a request for confirmation, are repeated by Barry twice, first in response to Jacob's query (line 2), and then again with stress just on *the* to emphasize the point (line 10). Dudley echoes Barry's repetition (line 11), and paraphrases it with a humorous metaphor, *I'm switching off the lights and I'm leaving* (line 13), which Barry repeats (line 14). Between these repetitions, Dudley's comment, *he even sent me an e-mail to reinforce it with you* (line 6), further expands and underlines the point. The whole sequence elicits much laughter (lines 3, 4, 7, 9, 12, 14), and provides a typical example of a humorous sequence which is collaboratively constructed using strategies of repetition and paraphrase for cohesion and emphasis. This brief analysis suggests that collaborative humor serves to enhance collegiality between the men in this team, but we would need to analyze many more examples to decide if such exchanges were typical of this team, and thus characteristic of a generally collegial and supportive workplace culture.

The second type of humor we identified can be described as more contestive or challenging humor. Example 3 is a clear case of contestive humor.

Example 3¹

Context: Regular meeting of six men in a project team in a large private commercial organization. Callum has failed to update a header, leading Barry to think he's got the wrong document. Callum defends himself:

- 1 CALLUM: I definitely sent you the right one
- 2 BARRY: [laughs scornfully]
- 3 ERIC: yep Callum did fail his office management [laugh]
- 4 word processing lesson [sarcastic tone]
- 5 CALLUM: I find it really hard being perfect at everything [superior tone]

In line 1, Callum asserts that the document Barry has received is the correct document, despite the fact that, as it emerges, he has failed to update the header. Barry, apparently realizing the reason for his confusion, laughs in a way that sounds mocking and rather negative (rather than, say, friendly or appreciative). Then, in lines 3–4, Eric makes Callum the target of a subversive, jocular insult delivered in a derisive tone. He emphasizes his negative point by using the marked phrase *did fail* with the emphatic auxiliary *do*, rather than the simple past tense *failed*; and he uses Callum's name, rather than *you*, although Callum is present, thus creating a distancing effect. Callum responds in line 5 by challenging Eric's claim with his own ironic, mock-modest claim. By asserting his overall superiority, Callum contests Eric's contribution by challenging the put-down intent of his jocular abuse.

This cut-and-thrust style of humor contrasts with the more collaborative style described above. Participants typically compete for the floor, vying with each other to produce amusing and witty comments. The humorous contributions in lines 3–5 are delivered by different individuals rather than collaboratively constructed. Callum's utterance is designed to challenge Eric's insult; its content refutes it and it is delivered speedily, contributing to an impression of fast, witty repartee.

Again it is important to analyze all available instances of humor involving the members of this team to help decide whether this type of humor is typical or unusual. Ethnographic information can also contribute to the analysis. Do these team members generally get on well? Do they mix with each other out of work time? Do they work together effectively to achieve their transactional goals? If the answer to such questions is positive, then this will influence how this contestive style of humor is interpreted.

In fact, this style of humor did turn out to be typical for this team, and it became clear that it served the same purpose as more collaborative, supportive humor in other workplace teams. This team thrived on mutual insults and their humor typically took the form of almost ritualistic challenges to each other's professional expertise and competence. These examples illustrate, then, how analyzing discourse features of the interactions between members of particular workplace teams can provide insights into their workplace relationships. In this case, analyzing preferred styles of humor indicates how members of different workplace teams relate to each other and suggests how their humor contributes to the construction of a particular kind of workplace culture.

It is important to bear in mind, however, that instances of humor rarely fit exclusively into neat categories. Like all discourse, humor is multifunctional and particular instances may serve more than one function and convey a range of social

meanings; so a particular exchange may reinforce solidarity between colleagues whilst also contributing to the construction of particular kinds of professional identity in the workplace. This brings us to the second question suggested above: “How can humor contribute to the construction of workplace identity?”

The contribution of humor to constructing workplace identity

One way to address this question is to build up case studies of individuals. In our research, we focused on people in leadership positions and compared the different styles of leadership evident in the recorded data that we had gathered from them over a period of several months. Shorter periods can provide just as rich a source of data if the recordings are carefully selected. Even a couple of meetings can provide interesting discourse data for analyzing different styles of leadership. The next step is to examine all instances of humor in interactions involving the focus person(s). They need to be transcribed and then analyzed carefully in the wider discourse context within which they occurred.

Using this approach, it is possible to build a profile of the ways in which a particular person tends to use humor in workplace interaction, and then to consider how this contributes to their professional identity construction at work:

- How often do they make a humorous remark compared to others?
- How is the humor distributed through the discourse?
- What range of types of humor do they use? Do they use witty one-liners? Do they join in with jointly constructed instances of collaborative humor?
- What is the main function of the humor to which they contribute?
- How do they “do humor”? What is their distinctive style?

By analyzing all the examples of humor to which they contributed, we found that effective team leaders (as identified by their colleagues and their performance) tended to use humor very skillfully and flexibly in different discourse contexts. This skill clearly contributed to the positive perception of these leaders held by their team members, who often commented, when interviewed, on their appreciation of the leader’s sense of humor and meeting management skills. Skillful (though not necessarily frequent) use of humor was one component, then, in the construction of a positive professional identity.

I will illustrate how we analyzed the discourse of such leaders with an example from a data set for Clara, the manager of a department in a multinational white-collar commercial organization. I have selected this example because it is typical of the way just a little humor can contribute to managing a tricky situation. It also illustrates another common pattern in our data, namely the use of humor to relieve tension. Often this tension relates to a difficult decision or, as in this case, to some interpersonal challenge which has caused social discomfort.

Example 4²

Context: Project team meeting chaired by department manager, Clara, since the project team leader is absent. Seth has gone to collect the minutes from the previous meeting, which he didn’t realize he was supposed to circulate.

- 1 Cla: oka:y well we might just start without Seth
 2 he can come in and can review the minutes from last week
 3 Ren: are you taking the minutes this week
 4 Cla: no I'm just trying to chair the meeting
 5 who would like to take minutes this week (2)
 6 Ren: who hasn't taken the minutes yet (1.5)
 7 Ben: I haven't yet so I will
 8 Cla: thank you /Benny\
 9 Ren: /oh Benny\
takes BEAUTIFUL minutes too (*archly*)
 10 Ben: don't tell them they'll want me doing it every week
 [general laughter]
 11 Cla: it's a bit of a secret
 12 okay shall we kick off and just go round the room um doing an update
 13 the: + and then when Seth comes in with the the minutes
 14 we need to check on any action items are outstanding
 15 over to you Marlene

Through her discourse, Clara is here “doing leadership.” She begins with a relatively low-key opening move, *okay well we might just start* (line 1). *Okay* is a very common discourse marker used to open meetings in our data, and *well* also occurs frequently alone as a meeting opening marker. Clara softens the directive which requires people to stop talking and attend to her with the inclusive pronoun *we*, the modal *might*, and the minimizer *just* (line 1).

Clara then adopts a more authoritative style to deal with Renee's subversive move *are you taking the minutes this week* (line 3). Renee's enquiry is clearly not guileless since Clara has provided a number of signals that she intends to chair this meeting, and the chair typically does not take the minutes in this group. Clara answers with a direct, unmodified *no* followed by a clear statement that she is taking the role of chair. Her use of the phrase *just trying to chair* could be interpreted as a reproof in response to Renee's question. She next asks for a volunteer to take the minutes (line 5). She approves Benny as minute taker, *thank you Benny* (line 8), and sets the agenda for the meeting (lines 12–14). Finally, she allocates the first turn, *over to you Marlene* (line 15). All these moves contribute to the construction of her professional identity as an effective manager who is in charge of this team.

Clara also pays attention to the relational dimension of interaction. Her expression of thanks to Benny both ratifies his role as minute taker and expresses approval. Most relevantly in relation to an analysis of how she uses humor, she supports Renee's side sequence *Benny takes beautiful minutes* (line 9), and Benny's humorous response *don't tell them they'll want me doing it every week* (line 10), by adding her own collusive contribution *it's a bit of a secret* (line 11). In other words, she contributes to the humor, albeit with a very brief comment, and thus implicitly endorses it.

It is also worth noting that Renee's compliment to Benny could be interpreted as an instance of sarcastic subversive humor, since minute taking is not self-evidently a valued skill in such a high-powered team, and this interpretation is further supported by her use of the adjective *beautiful* which she stresses and which is sufficiently “feminine” to cast doubt on her sincerity. So, although overtly Renee effectively conveys the impression she is paying a compliment, the arch tone she uses, together with its ambiguous content, suggest her motive is not simply to pay a compliment. Benny's good-humored response (line 10), however, treats it as genuine by protesting he may

end up doing this task every week. He uses the pronouns *them* and *they* to jokingly align himself with Renee and position the others as overhearers. Clara ratifies his more positive tone with her supportive comment *it's a bit of a secret* (line 11), a comment which aligns her with Renee and Benny, contests her positioning as someone unaware of Benny's skills, and effectively re-establishes her control of the meeting. Clara's very brief humorous comment thus does a great deal of interactional work.

This discussion illustrates how discourse analysis can help unravel some of the components of identity construction. This brief excerpt, selected from many possible examples, illustrates the way in which Clara typically manages to exert authority whilst also paying attention to the relational or interpersonal dimensions of interaction, and how she makes effective use of humor in this enterprise. I could have selected excerpts in which Clara instigates the humor, illustrating how she fosters creativity in her team, or how she demonstrates her quick wit in responding to mocking jibes.³ Instead I chose this very low-key example to illustrate how the humorous contribution needs to be carefully analyzed in its wider discourse context, as well as the importance of paying attention to tone of voice and to relevant power and role relationships in interpreting the data.

Finally, it is worth noting that a critical discourse analysis of this excerpt would focus on the ways in which Renee attempts to subvert Clara's authority, while Clara firmly asserts her power by insisting on her right to assign roles and speaking turns. The example thus illustrates another common pattern in our data, namely the use of humor to relieve tension. Often the tension will relate to a difficult decision that has had to be made, but in this case it is generated by an interpersonal challenge which has the potential to cause social discomfort. This nicely demonstrates how a high-level generalization about humor as tension relief plays out at a local level in a specific workplace context.

Quagmires and Troubleshooting

You have probably realized by this stage that there are many points where things may prove challenging. Some are general issues common to all research:

- deciding which theoretical approach to adopt;
- formulating a research question clearly so that you can work out what to do to address it;
- deciding whether to use quantitative and/or qualitative analysis.

Others are more specific to research using discourse analysis:

- getting access to appropriate sites for collecting the data required to answer the research questions;
- recording good quality data which can be heard clearly enough to transcribe;
- deciding on the level of detail required in your analysis.

But perhaps the biggest problem faced by all qualitative analysis is the issue of "warranting" your analysis. If someone challenges your interpretation, how can you justify it? There are a number of ways of addressing such a challenge. Firstly, it is important to ensure that any clues you gained from listening (and, if possible,

watching) the recorded data are evident in your transcription or provided in the description of the data. So, in Example 4, we had available a video of the meeting which provided additional non-verbal clues that Clara intended to chair the meeting. Her non-verbal behavior (posture, gathering of papers, gaze) conveyed this message clearly. Hence Renee's question *are you taking the minutes this week* (line 3) was even more challenging than suggested by the transcribed words alone.

Secondly, *triangulation* is very useful and may take a range of forms. Ethnographic notes gathered while on the recording site are often useful in aiding interpretation. So, for example, we knew the normal practices of this project team, the way meetings were usually run and minute taking assigned; we also knew the roles of participants and their relative statuses in this hierarchically organized company.

Interviews before and after recording can add further information, and can be used to validate interpretations. However, it is important to be aware this technique is just another source of data. In addition, it is always possible that reflections later may not accurately indicate what was intended or interpreted by participants at the time.

Consistency of your interpretations with material in other data sets – your own or those reported in previous research – is another valuable source of reassurance. Sometimes data collected later will provide further insights into material you are analyzing. In our data, for example, we generally recorded a set of at least six meetings from each team. Inevitably, some issues recurred in later meetings, thus providing more information to assist our interpretations.

Another form of triangulation is provided by discussion with other researchers. Sometimes, you will have listened to a problematic piece of discourse so often that you feel completely confused about its social meaning. A discourse analysis group is one answer to this: a group of fellow students/researchers who meet to discuss each other's data and provide support for each other's interpretations by referring to evidence they can infer from the material presented.

Tips

- Read the existing literature in the area you are interested in.
- Formulate your research question as clearly as possible.
- Collect good quality data, using more than one method if appropriate.
- Listen to and describe your data in note form before selecting what to transcribe.
- Transcribe recorded material in just as much detail as required to answer your research question.
- Analyze your data using appropriate discourse analysis tools.
- Check your interpretations by triangulation: for example, using the research literature, using ethnographic notes, using participants' feedback, using other students' as a discussion group.

Project Ideas

Here are some research questions which could be answered by reading previous research in this area and then analyzing discourse you have collected.

- 1 It has been claimed that people generally talk differently to children compared to adults. *Record a conversation* on the same topic (e.g., what did you do today? what did you do during the holidays? tell me about your favorite TV program) between an adult and a child, and between the same adult with another adult. Transcribe about five minutes from the middle of each conversation and then analyze features of the discourse to see if there are any differences.
- 2 *How much and what type of humor occurs in different social situations* in which you are involved? Can you account for differences by analyzing the humor and taking account of the different social relationships and contexts in which it occurs?
- 3 *There are many different ways of getting people to do something*: for example, giving a directive, making a request, making a suggestion, hinting. How does the same person get people to do things in different social contexts? What social factors account for differences in the way the directive is formulated? Is there evidence of negotiation of the directive? Be aware that you may need to take account of a considerable amount of previous discourse to interpret the social meaning of any directive.
- 4 *How do people open and close meetings in your department/workplace/social club?* How many turns are involved? How long is the opening move? What linguistic forms occur? How can discourse analysis of these points in a meeting illuminate the social relationships of participants?

Further Reading and Resources

- Cameron, D. 2011. *Working with Spoken Discourse*. London: SAGE.
- Gee, J.P. 2011. *How to Do Discourse Analysis: A Toolkit*. New York: Routledge.
- Jones, R.H. 2012. *Discourse Analysis: A Resource Book for Students*. Abingdon, UK: Routledge.
- Sidnell, J. 2010. *Conversation Analysis: An Introduction*. Oxford: Wiley-Blackwell.
- Swann, J. and Leap, W.L. 2000. Language in interaction. In *Introducing Sociolinguistics*, ed. R. Mesthrie, J. Swann, A. Deumert, and W.L. Leap, 184–212. Edinburgh: Edinburgh University Press.

Acknowledgments

I would like to thank Jay Woodhams for checking the transcription, Meredith Marra and Brian King for reading earlier drafts, and Andy Gibson for help with the references.

Notes

- 1 This example is from Holmes and Schnurr (2005).
- 2 This example is taken from Holmes and Stubbe (2003: chapter 4), where it is discussed more fully.
- 3 See Holmes (2006) for further analysis of Clara's discourse.

References

- Campbell, S. and Roberts, C. 2007. Migration, ethnicity and competing discourses in the job interview: synthesising the institutional and the personal. *Discourse and Society* 18(3): 243–271.
- Cheshire, J. 2007. Discourse variation, grammaticalisation “and stuff like that.” *Journal of Sociolinguistics* 11(2): 155–193.
- Clyne, M. 1994. *Inter-cultural Communication at Work*. Cambridge: Cambridge University Press.
- Drew, P. and Heritage, J. (eds) 1992. *Talk at Work: Interaction in Institutional Settings*. Cambridge: Cambridge University Press.
- ELAN. Max Planck Institute for Psycholinguistics, The Language Archive, Nijmegen, The Netherlands. <http://tla.mpi.nl/tools/tla-tools/elan/> (last accessed April 5, 2013).
- Gumperz, J. 1982. *Discourse Strategies*. Cambridge: Cambridge University Press.
- Holmes, J. 2000. Politeness, power and provocation: how humour functions in the workplace. *Discourse Studies* 2(2): 159–185.
- Holmes, J. 2006. *Gendered Talk at Work*. London: Pearson.
- Holmes, J. 2009. Humour, power and gender in the workplace. In *The New Sociolinguistics Reader*, ed. N. Coupland, and A. Jaworski, 631–645. London: Macmillan.
- Holmes, J. and Schnurr, S. 2005. Politeness, humour and gender in the workplace: negotiating norms and identifying contestation. *Journal of Politeness Research* 1(1): 121–149.
- Holmes, J. and Stubbe, M. 2003. *Power and Politeness in the Workplace*. London: Pearson.
- Lausberg, H. and Sloetjes, H. 2009. Coding gestural behavior with the NEUROGES-ELAN System. *Behavior Research Methods, Instruments, & Computers* 41(3): 841–849.
- Marra, M. 2008. Recording and analyzing talk across cultures. In *Culturally Speaking: Managing Rapport through Talk Across Cultures*, 2nd edn, ed. H. Spencer-Oatey, 304–321. London: Continuum.
- Pichler, H. 2010. Methods in discourse variation analysis: reflections on the way forward. *Journal of Sociolinguistics* 14(5): 581–608.
- Schiffrin, D. 2003. *Approaches to Discourse: Language as Social Interaction*. Hoboken: John Wiley & Sons, Inc.
- Schmidt, T. and Wörner, K. 2009. EXMARaLDA – Creating, analysing and sharing spoken language corpora for pragmatic research. *Pragmatics* 19(4): 565–582.
- Schnurr, S. 2009. *Leadership Discourse at Work: Interactions of Humour, Gender and Workplace Culture*. Basingstoke: Palgrave Macmillan.
- Tagliamonte, S. 2006. *Analysing Sociolinguistic Variation*. Cambridge: Cambridge University Press.
- Tagliamonte, S. 2012. *Variationist Sociolinguistics: Change, Observation, Interpretation*. Oxford: Wiley-Blackwell.
- van Dijk, T.A. 2001. Principles of critical discourse analysis. *Discourse and Society* 4: 249–283.
- Wodak, R. 2011. What is CDA about – a summary of its history, important concepts, and development. In *Methods of Critical Discourse Analysis*, ed. R. Wodak, and M. Meyer, 1–13. London: SAGE.

13 Words and Numbers: Statistical Analysis in Sociolinguistics

Gregory R. Guy

Introduction	195
Quantitative Approaches to Generalization	195
Statistical Inference: The Significance of Significance	201
Statistical Modeling	208
Conclusion	209

Summary

This chapter focuses on the need for statistical analysis in some types of sociolinguistic research and introduces the basic concepts needed in such analysis. From its foundation in the humanities, linguistics developed many different categories for language features. As the scholarly study of these features developed, researchers began to find regular patterns in their distribution and statistical description came to be an important part of sociolinguistic analysis, especially in variationist approaches. With an understanding of simple statistical methods such as ratios, central tendencies, and tests of significance, students can better understand and describe the sociolinguistic patterns in their data.

Research Methods in Sociolinguistics: A Practical Guide, First Edition.

Edited by Janet Holmes and Kirk Hazen.

© 2014 John Wiley & Sons, Inc. Published 2014 by John Wiley & Sons, Inc.

Introduction

The origins of linguistics lie mainly in the humanities, but humanistic disciplines are traditionally little concerned with quantitative analysis. Consequently, naïve observers, and even many linguists, may wonder about the place of numbers in a discipline focused on words. The importance of statistics for linguistic research emerges most clearly when one investigates questions that lack categorical answers.

Much of linguistic theory, at least since the Neogrammarians and their exceptionless sound laws, focuses on the categorical: generalizations that admit no exception. When properties of language are categorical, no quantitative analysis is necessary. Thus, speakers of English do not require statistical studies to be convinced that articles never follow nouns. A phrase like *the dog* is grammatical, while the alternative **dog the* is not and never occurs; this generalization is so comprehensive that English speakers would likely find it silly to count up instances to confirm it.

However, many interesting facts about language involve relative, not absolute, properties; that is, relations of *more* and *less* rather than relations of *either/or*. Theories that model such properties are necessarily quantitative. One of these is variation theory in sociolinguistics, which seeks to model quantitative patterning in language use. In everyday life, speakers systematically adapt pronunciation, grammar, lexicon, and discourse strategies to address different hearers or to serve different communicative ends. Also, individuals, as well as groups defined by social characteristics and practices, differ systematically in usage. The adequate characterization of the rich patterning of speakers' sociolinguistic knowledge implied by such alternations requires statements of more and less: upper-class speakers use more prestige variants than working-class speakers; older speakers use innovative forms less than younger speakers; everyone in a community uses more prestige variants in more careful speech styles.

Consequently, for sociolinguistics to faithfully and adequately describe and model the social and psychological processes that give rise to these systematic, but non-categorical alternations in language, it needs a quantitative apparatus, drawn from mathematics and statistics. Such quantitative methods are a central feature of contemporary sociolinguistic work that must be mastered by any prospective researcher in the field. They are more than just necessary tools of the trade; they provide the sociolinguist with the Janus-like vision that is one of the great attractions of the discipline – combining a humanistic attention to social meaning and practice with the rigor and objectivity of science. This chapter seeks to introduce some basic elements of this quantitative apparatus, an introductory lesson in “numbers for wordsmiths.”

Quantitative Approaches to Generalization

Perhaps the most essential strategy of linguistic analysis is generalizing, or attempting to move beyond individual cases to formulate a general rule, principle, or pattern. This is a basic strategy of human intelligence. There is even an English aphorism describing failures of generalization: “He can't see the forest for the trees.”

Quantitative analysis provides several methods of generalization – techniques for discerning the shape of the forest through all the trees. Some of these include ratios and percentages, classifying variables, and measuring central tendencies.

Ratios

In a study of relative clauses in Australian English, a working-class speaker was found to use 2 tokens of a *wh*- relative, while a middle-class speaker used 49 tokens, in constructions with [+human] antecedents in subject position (e.g., *That's the man {who, that, ø} lives next door*). If we assume these speakers are representative of their social classes, is it reasonable to hypothesize that middle-class speakers use *wh*- relative pronouns like *who*, *which*, and *where* more often than working-class speakers?

The difference between the two figures (2 vs. 49) is substantial, so the unreflecting answer might be yes, but the thoughtful answer should be a resounding NO! This is only a fragment of the information necessary for inferring a pattern. To conclude that the middle-class (MC) speaker uses more *wh*- forms is like going out to look at trees, finding five oaks, and concluding you had found an oak forest. Such inferences are only valid if we have broader information: In the forest, how many trees did you see, and what other kinds did you find? Did you find only oaks, or did you pass hundreds of maples to find your quintet of oaks? Making reasonable generalizations requires knowing all relevant observations, not just a selectively reported subset. So in the relative clause study, we need to know how many opportunities each person had to produce *wh*- forms and what other types of relativizers were used.

A crude measure of opportunities would be observation time: how long was each subject talking? If the working-class (WC) speaker spoke for 10 minutes, while the MC speaker was recorded for several days, the same data might lead us to the opposite conclusion. We need information on *data quantity* and the *ratio* of the various kinds of observations. A generalization is more credible when it is based on more data, and it will be based on the ratio, rather than the raw counts in different-sized samples.

In the study in question, the MC speaker was actually recorded for 50 percent more time than the WC speaker: 3 h 45 m as opposed to 2 h 30 m. But, this is a crude measure of opportunities to produce relativizers; for, if one speaker is talkative and the other taciturn, the number of relative clauses each produced might differ dramatically even in equal-length recordings. Hence the most straightforward approach to formulating an estimate of the speakers' relative usage of *wh*- forms is to count up all their relative clauses and look at the ratio of *wh*- to *that* forms, or the percentage of *wh*- as a fraction of all relative clauses. Including such data gives the following picture:

	MC speaker	WC speaker
Relativizer		
<i>who</i>	49	2
<i>that</i>	33	9
% <i>wh</i> -	60%	18%

With this added information, we now know the total number of relative clauses produced by each speaker in the specified context and can compare their relativizer usage. The crucial statistic here is the percentage of *wh*- forms, and these speakers

indeed seem to differ in *wh*- usage, at least in subject position with human antecedents. We can now say the MC speaker uses *wh*- forms more often in this context. This can be stated not because he used 49 of them, but rather because 60 percent of his relative clauses were introduced by *wh*- forms, as opposed to 18 percent for the WC speaker. We compare the fractions, not the numerators of the fractions. Had we found 450 cases of *that* for the MC speaker, his *wh*- usage would have been only 10 percent, and we would come to the opposite conclusion.

Now, what about generalizing further, beyond the context in which these data were observed? Based on these data, limited to human antecedents and subject relatives, can we justifiably infer that the MC speaker generally uses more *wh*-? The validity of such reasoning depends on how representative the context of observation is of the total range of possible contexts. In this case, given what is known about English relatives, the selected context is arguably quite unrepresentative, so a broad generalization based only on these data is unjustified. Thus, subject position often disallows zero relativizers, so this context eliminates one of the three alternatives of this variable.¹ Also, many English speakers have considerable linguistic insecurity regarding the case marking of the relative pronoun *who/whom*. Although prescriptively favored in standard English, this case marking is absent from the productive grammar of most speakers and is absent in all other English relativizers (cf. no case marking of *that*, *which*, *when*, *where*, \emptyset). Consequently, some speakers avoid *who/whom* to escape prescriptive opprobrium; instead, they use *that* or \emptyset forms with human antecedents. Therefore, before generalizing about these speakers, it is wiser to examine their usage in contexts that allow a full range of variants and are not muddled by linguistic insecurity. Consider, for example, their usage in object relatives with non-human antecedents (e.g., *This is the shirt {which, that, \emptyset } I bought*) as seen in the following table:

	MC speaker	WC speaker
Relativizer		
<i>which</i>	9	5
<i>that</i>	20	6
\emptyset	27	12
% <i>wh</i> -	16%	22%

In this context, it is the working-class speaker who uses the higher percentage of *wh*- forms. Across all contexts other than the subject relatives with human antecedents, the total figures were nearly identical: 36 percent *wh*- for the MC speaker, and 33 percent for the WC speaker. Hence, overall there is no evidence for a systematic difference in rate of *wh*- use between these two speakers, demonstrating the importance of evaluating the sources of data before making generalizations.

Variables

The above example also illustrates some additional points regarding our assumptions about variables and their place on a quantitative–qualitative axis. The first of these is often theoretically illuminating. The above example related a linguistic dimension (choice of relativizers) and a social dimension (speaker's social class). Each of these may be treated as a variable in the mathematical sense. This in itself is a

preliminary generalization. The various relativizers are treated as constituting alternative ways of fulfilling the same syntactic function, and the speakers in the study are treated as instantiating alternative values of an attribute (social class) that all speakers are presumed to possess. Hence, MC and WC are possible values of the variable “class,” and *wh-*, *that*, and \emptyset are possible values of the variable “relativizer.”

These two variables also have a clearly different status in our understanding of the world. Most commonly, sociolinguists think usage of linguistic variables is determined or influenced by social characteristics. Applying statistical terminology, choice of relativizer is a “dependent variable,” while speaker’s social class is an “independent variable.” This implies a dependency or causal relationship between the two dimensions. Here, this is justified because we do not expect a speaker’s momentary decision to use or not use a *wh-* relativizer to influence their social standing on a class scale that is ordinarily seen as a function of more durable social traits like education and occupation. A PhD who utters *ain’t* on some occasion does not thereby lose their postgraduate educational history. The same is true of other social dimensions: sex and race are normally permanent characteristics of a person’s identity, independent of momentary linguistic choices. Rather, it is the linguistic choices that are determined (or restricted) by a speaker’s social identity and linguistic experience.

However, the terminology of dependent and independent variables should not make us lose sight of the fact that this distinction is highly conceptual, deriving, in effect, from some “theory” of the world. Adopting a different point of view may shift the relationship between a given pair of variables. Thus, if we view social identity as a construct based on an individual’s performance of certain practices, including linguistic practices, then we might talk about the use of prestige linguistic variants as an independent variable that facilitates constructing an identity as an educated person. Gender identities – masculinity and femininity – as well as ethnic identities and social relationships like boss, teacher, friend, and so on are all at least partially constructed through linguistic practice, such that making certain linguistic choices contributes to the establishment and maintenance of the identity. From this perspective, one might reasonably construe the linguistic variables as independent and the social identities as dependent.

The same trade-off between dependent and independent can be encountered among linguistic variables, if they are interconnected. In vernacular Brazilian Portuguese, for example, verbs rarely agree with post-posed subjects, yielding utterances like (1):

- (1) *Sumiu os taxis*
 disappeared(sg.) the taxis
 ‘The taxis disappeared.’

Here the verb *sumiu* is singular even though its subject, *taxis*, is plural – but what is the direction of dependency? Research on this topic commonly assumes that word order is prior and agreement is dependent – the speaker first puts the words in order and, then, does (or fails to do) agreement operations. But, the opposite conceptualization is possible: perhaps agreement blocks putting the subject last. Or perhaps both agreement and word order are triggered by something else. In contemporary generative syntax, it is commonly assumed that grammatical agreement is a consequence of moving a syntactic element to certain structural positions, so in sentences like (1) both

the word order (with subject following verb) and the lack of agreement would be consequences of how the sentence was derived. The general point is that what is dependent or independent is not given by statistics, but by one's prior assumptions or theories. It is sometimes illuminating to test those assumptions by exploring alternative dependency relations between the variables under investigation.

The second point to note about variables is their place in a typology of quantitative vs. qualitative, continuous vs. discrete. This characterization affects what statistical methods one can use. For English relativizers, the linguistic variable has three possible realizations (*wh-* words, *that*, \emptyset), but each is discretely different from the others; they do not form a continuum, and there are no intermediate values – nothing that is, say, one-third of the way between *which* and *that*. This is a *nominal* variable. Such variables label categories that are treated as qualitatively distinct from one another. Other linguistic variables that are usually treated as nominal include word order (a clitic might precede or follow a verb but can't be any place else), deletion or non-deletion of a segment, and grammatical categories like number, tense, case (e.g., English nouns are singular or plural; there are no intermediate values like “somewhat plural”). Social variables may also be nominal: thus, speaker's sex, nationality, L1 vs. L2 status, and so on are nominal variables in which each possible value is a qualitatively distinct category, without intermediate values.

However, other variables that linguists work with do not have this nominal, discontinuous nature. In the social domain, a speaker's age is an intrinsically continuous scale with an infinite variety of intermediate values. The same is true of income, years of schooling, length of residence in a particular country or dialect region, and so forth. Social gender is often seen as more continuous than biological sex: masculinity and femininity are qualities people may be seen as having in greater or lesser amounts. In the relativizer example above, the social class variable was instantiated by only two individuals, who could be thought of as constituting a nominal variable, but many sociolinguistic studies treat class as a continuum, with fuzzy, non-discrete boundaries between the points on the class scale. Often in such work, social (or “socioeconomic”) class is operationally defined in terms of a quantified scale, like the nine-point scale Labov used in his path-breaking New York City study (1966).

Among linguistic variables, the same is true. Vowel articulations are notoriously continuous. Although we phonemicize them, labeling particular articulations as tokens of the category /i/ and others as tokens of the category /ɪ/, the articulatory and acoustic regions over which these vowel sounds are defined have no hard boundaries, and in the course of linguistic change, they are continuously deformed into each other – intermediate articulations are not only possible, but occur frequently. Other phonetic/phonological properties with this continuous character include pitch, stress, voice-onset time, and so on. Acquisition (both L1 and L2) is ordinarily thought of as a continuous variable, along which speakers could be infinitely differentiated.

These non-nominal variables are typically quantifiable in some dimension, as each token has more or less of some property. For age, a speaker has a given quantity of years and days of life; for vowels, each token has measurable formant frequencies, which vary continuously in a range of approximately 200–5000 Hz. But, it is worth noting additional distinctions among the quantifiable variables. One important type consists of *ordinal* variables. These are values that form a scale with a rank order – a weak quantification in which there is directionality, so that transitivity obtains (if $A > B$ and $B > C$, then $A > C$), but in which there is no defined sense of the distance

between any points on the scale. Such variables are distinguished from *interval* or continuous variables in which the separation between given points has a measurable definition. These two types can be contrasted by considering the results of an Olympic marathon. The order in which the contestants finish is an ordinal scale: the first-place finisher gets the gold, second-place silver, and so on. But this doesn't tell us how much time or distance separated each finisher; the gold-medal winner might have been just a half-step or 500 meters in front of the silver medalist. Getting this additional information requires an interval scale, such as a list of the times each contestant took to run the race. In linguistics, a contemporary example of an ordinal scale is the constraint hierarchy of Optimality Theory. In its orthodox version, this is purely ordinal: we can state that constraints X, Y, and Z are ranked in that order, but the theory makes no provision for concepts like X being just a little bit higher than Y, but Z falling way behind.

It should be noted that the researcher can often choose whether to treat a given variable as discrete or continuous. Thus, speaker's age could be treated as a continuous variable, or the age continuum could be segmented into groups, such as adolescent, younger adult, older adult, which effectively makes it a nominal variable. The same is true of linguistic variables. For example, some studies of lax vowel lowering in Canadian English (cf. Hoffman, 1998; De Decker and Mackenzie, 2000) classify tokens of /ɪ/ and /ɛ/ auditorily as either lowered or not – a nominal variable. But, vowel height is a continuous function of the vowel's first formant. Accordingly, De Decker (2002) treats the same phenomenon using acoustic measurements of F1 and F2.

Central tendencies

These distinctions between types of variables often determine what statistical methods should be used. For example, how can we identify a “central tendency” in a data set? The best known such measure is the *mean*, or arithmetic *average*, but this is only relevant for quantitative scales – normally interval or continuous scales. Thus, one can calculate the average age of a group of speakers, or the average F1 of a set of vowels, by summing all the values and dividing by the number of cases. In the English relativizer example, the average percentage of *wh*- usage can be calculated at 41 percent (weighting each speaker equally). But, what cannot be calculated in that example is the “average relativizer” used by each speaker. There is no “average” of *which*, *that*, and \emptyset . Neither could we calculate the average sex or nationality of a sample of speakers, nor the average grammatical case of a collection of pronouns. These are nominal variables, for which the mean is undefined. Occasionally one encounters metaphorical uses of means for nominal variables, like “the average nursing home resident in the United States is a white female,” but what this actually refers to is another measure, the *mode*, which is simply the value that most commonly occurs; in other words, there are more white women in nursing homes than any other subgroup defined by ethnicity and gender.

Note that, although the mode is the only meaningful central tendency measure for nominal variables, it is also useful for interval data. If a set of F1 measurements of the vowel /æ/ found more tokens clustered around, say, 550 Hz than at any other frequency, this would be one valid measure of central tendency, even if the mean value was 500 Hz, due to outliers with raised articulations. Furthermore, it is

possible to find more than one mode if there are several clusters of data points at different values. This is itself important information about a data set that is obscured by a single mean value when the data are distributed like the weights on a barbell.

A third measure of central tendency is the *median*, which is simply the middle number in a rank-ordered set of scalar values. Consider a hypothetical study that includes 11 individuals whose ages are as follows:

Speakers' ages in a hypothetical sample (median age in bold)

18, 19, 19, 20, 21, **23**, 25, 27, 28, 54, 69

In this corpus, the median speaker's age is 23, because this is the age of the sixth oldest of the eleven individuals, so there are five people younger than this and five older. This is a measure of "central tendency," which has one great virtue: it is not skewed by extreme "outlier" values, like the two people over age 50 in the above example, who are more than twice the age of most other subjects. The mean age of this group is 29.5, but the great majority of the subjects (9 of 11) are younger than this, so the median age of 23 better captures a sense of how these subjects cluster.

Statistical Inference: The Significance of Significance

The discussion so far has dealt with "descriptive" statistics, which are ways of describing the forest based on information about the trees within it. But, there are other things that the analyst can do with statistics, like making informed decisions based on knowledge of the odds. For example, when we have only partial information about a situation, we may want to make reasonable extrapolations from the part to the whole. Methods serving these purposes are called "inferential" statistics. A central concept in this field is that of *statistical significance*, a much-misunderstood term.

Statistical significance is essentially a way of estimating how likely it is to get a particular distribution of data given certain assumptions about the source from which the data are drawn. In scientific studies, the available data are almost always a subset of the total possible data set – a sample drawn from a "universe." Thus, a study of English relativizers cannot possibly investigate all relative clauses uttered by English speakers. Therefore, we examine a sample and seek to draw inferences about the statistical patterning of the universe. A sample can deviate from the universe in various ways. For example, a flipped coin should have a 50 percent chance of coming up heads, and in a large sample of coin flips, the percentage of heads should converge on 50 percent. But if we flip twice, do we necessarily expect one head and one tail? Clearly not. Indeed, we might not be surprised to get 4 or 5 heads in a row, because in a universe where heads are randomly but evenly balanced with tails, 5 consecutive heads should occur once every 32 (2^5) trials. But if 200 coin flips gave heads every time, we would wonder whether the universe from which those flips were drawn really did have equal likelihood for heads and tails, because the chance of 200 consecutive heads is

1 in 2^{200} , a number so small as to render our starting assumption highly unlikely. Hence, we should entertain alternative assumptions, such as that the coin in question has heads on both sides!

Statistical tests of significance provide standard reference values that can be tested against known distributions to evaluate the likelihood that the observed data come from such a distribution. They are most commonly phrased with reference to the “null hypothesis,” which always states that nothing is going on, the source distribution is normal, and the independent variables do not influence the dependent variables. In the coin-flip case, it would state that neither heads nor tails is more likely to occur. The ultimate significance statistic, conventionally represented as p , is usually stated in terms of the probability that the null hypothesis is true. If p is small, meaning that the null hypothesis is very unlikely, then the results are said to be statistically significant, meaning that it is reasonable to entertain some other hypothesis about the nature of the universe. “Small” in this context is generally taken to mean less than .05 or .01; that is, if there is less than a 5 percent or 1 percent chance that the data are drawn from a universe in which the null hypothesis is true, then there is a 95 percent or 99 percent chance that the source universe really has a different distribution of the data, such as a real and significant effect of some independent variable on the dependent variable.

Consider a sociolinguistic example. Cedergren and Sankoff (1974) report that in Montreal French, the complementizer *que* is variably deleted: sometimes it is present and sometimes absent (*Je pense qu’ il va* ~ *Je pense il va*). In a set of sociolinguistic interviews with 16 speakers, the rate of absence appeared to be correlated to the social status of the speaker. Some figures are given in Table 13.1.

The overall percentage of *que* absence is appreciably higher for working-class speakers. But, can we infer this is true of the universe? Since we cannot examine all relevant utterances by speakers of Montreal French to obtain a definitive answer, what can we reasonably infer from the data in hand?

In this case the null hypothesis would state that, no, class *doesn’t* have anything to do with *que* use by Quebecois(e). Opposed to this is the “experimental hypothesis,” stating that yes, it does. In principle, either hypothesis is possible about Table 13.1. The higher rate of *que* presence among professional-class speakers might be due to sampling error: we happened by chance to encounter more utterances with retained *que* among the professional-class speakers interviewed, and if we had recorded them longer, or added other speakers, the apparent class difference would disappear. So, we need to move from considering what is possible to what is likely, and this is what statistical significance permits. The distribution in the sample can be compared with known facts about distributions drawn from populations in which the null hypothesis is true, yielding an estimate of how likely the null hypothesis is to be true about the universe (i.e., Montreal French) from which these data were drawn.

Chi-square

One useful procedure for doing this is the *chi-square* test. We begin this test by arranging the data in a contingency table. In our example, we have two variables (*que* realization and social class of speaker), each with two possible values, giving the four-cell contingency table at the core of Table 13.2. Each possible combination of

Table 13.1 Complementizer *que* in Montreal French² (from Cedergren and Sankoff, 1974)

	<i>Que absent</i>	<i>Que present</i>	% <i>absent</i>
Working class	28	90	23.7
Professional class	3	130	2.3

Table 13.2 Contingency table for Montreal French example

	<i>Que absent</i>	<i>Que present</i>	Totals
Working class	28	90	118
Professional class	3	130	133
Totals	31	220	251

“contingencies” gets a separate cell: one for utterances with *que* present and one for those with *que* absent produced by working-class speakers, plus cells for utterances with *que* present and with *que* absent produced by professional-class speakers. Note that although we might assume class is the independent variable, this has no bearing on the chi-square calculation.

Also given in Table 13.2 are the “marginal totals” for each row and column, as well as the grand total. The marginal totals represent the total number of items found for each value of each variable: for example, all tokens collected from professional-class speakers (in this example, 133), all cases of absent *que*, regardless of who said them (31), and so on.

The marginal totals are required for the chi-square test because the logic of the test involves considering other ways that the same data might have been distributed across the cells, and not whether different numbers of tokens could have been collected. To see how this works, consider a hypothetical case of a sociolinguistic variable with two possible realizations, A or B, which is examined in speakers belonging to two age groups, older and younger. Suppose we collect 100 tokens from each age group, and find the data evenly divided between variants A and B. We would set up a contingency table as in Table 13.3(a), with marginal totals of 100 in each row and column, and a grand total of 200. Now, what distributions of items in the cells are possible, and what conclusions would they suggest about a relationship between speaker’s age and use of this variable? If each cell had 50 tokens, as in Table 13.3(b), we should conclude that there is no association between age and this variable. This is the distribution that the null hypothesis predicts. But in Table 13.3(c) we see another extreme: there are 100 tokens in the two cells on one diagonal, and zero in the other two. This preserves the same marginal totals, but shows a categorical association: older speakers use only variant A, while younger speakers use only variant B. Encountering such a distribution, most linguists would conclude that there is a rapid change in this community, with B supplanting A in apparent time. This would involve rejecting the null hypothesis. Note that Tables 13.3(b) and 13.3(c) lead us to opposite conclusions, even though they show the same marginal totals. Consequently, the statistical test takes those values as given; in this case, they are

Table 13.3 Contingency tables (a) to (e) showing different degrees of association between a linguistic variable and speaker age

<i>(a) Marginal totals</i>			
	A	B	Total
Younger			100
Older			100
Total	100	100	200

<i>(b) No association</i>				<i>(c) Categorical association</i>			
	A	B	Total		A	B	Total
Younger	50	50	100	Younger	0	100	100
Older	50	50	100	Older	100	0	100
Total	100	100	200	Total	100	100	200
$X^2=0, p=1$				$X^2=800, p=0$			

<i>(d) Slight association</i>				<i>(e) Strong association</i>			
	A	B	Total		A	B	Total
Younger	45	55	100	Younger	35	65	100
Older	55	45	100	Older	65	35	100
Total	100	100	200	Total	100	100	200
$X^2=2, p>.20$				$X^2=18, p<.0001$			

determined by the size of the sample (exactly 100 tokens were collected from each age group) and by the overall rate of use of the variants in the community (which is 50% usage of each variant).

Now in real data, one rarely encounters such extreme cases. More commonly we encounter intermediate cases, like Table 13.3(d), which differs only slightly from the null hypothesis case, and Table 13.3(e), which goes robustly toward a strong but non-categorical association between age and usage. The task for our statistical test is to quantify where an observed distribution falls on the continuum of possible distributions between the two extremes illustrated by Tables 13.3(b) and (c). The quantification is expressed in terms of the likelihood of getting our observed distribution from a universe in which the data are distributed analogously to Table 13.3(b). If that is highly unlikely, we tend to conclude that the universe is not so constructed; in this example, we would conclude that there is a significant association between age and usage, perhaps because of ongoing linguistic change in the community.

The chi-square values shown for Tables 13.3(b)–(e) illustrate how this statistic fulfills this task. They range from a low of zero for the case showing no association (b), to a high of 800 for the case showing categorical association (c). At these extremes, the p value – the probability that the null hypothesis is true – approaches 1 when chi-square is 0, and approaches 0 when chi-square is very large (in this case, 800). But, the statistic really does its job in the middle ranges. Table 13.3(d) gives a chi-square of 2, corresponding to a p somewhat higher than .2. This means that such a distribution could be drawn more than 20 times in 100 trials from a universe in which data were evenly distributed across these variables, as in Table 13.3(b). Such

Table 13.4 Expected values for the Montreal French example, under null hypothesis

	Que absent	Que present	Totals
Working class	14.57	103.43	118
Professional class	16.43	116.57	133
Totals	31	220	251

a result would not constitute valid evidence for an age difference in this hypothetical community. But, the pattern in Table 13.3(e) is much less likely to come from a null-hypothesis universe. The chi-square of 18 corresponds to $p < .0001$, meaning there is less than one chance in ten thousand that the null hypothesis is true in this case. Given such results, we would be nearly certain that there was a real association between age and the use of this variable. Thus, chi-square provides a quantification of distributions along the continuum from the balanced, null-hypothesis distribution to the categorically imbalanced case; with this quantification, we can draw informed inferences about the universe based on the sample.

The procedure for calculating the chi-square is fairly straightforward; we present the main concepts here, but interested readers are directed to statistical texts (e.g., Woods, Fletcher, and Hughes, 1986) for more detail. Basically, the test compares the observed distribution with what would be expected if the null hypothesis were true and the marginal totals were all preserved. In the Montreal example, the expected values appear in Table 13.4, giving both professional-class and working-class speakers the same percentage of *que*-absence that the total data show: 12.35 percent deletion (31/251). The formula for the comparison is (observed value – expected value)² / (expected value). The total chi-square value for the table can be compared with known distributions of the statistic for samples drawn from null-hypothesis universes to give a significance figure (p) for any contingency table. In the Montreal example, the chi-square is 26.65; the corresponding value of p is less than .001, meaning there is less than one chance in a thousand that the data in Table 13.2 could come from a Montreal in which speakers of all social classes deleted *que* at equal rates. Accordingly, we would report such a result as highly significant, meaning that the experimental hypothesis, that class does affect *que*-deletion, is vastly more likely than the null hypothesis.

Note that the chi-square test does not show the *direction* of a significant association. In this case, professional-class speakers retain *que* more while working-class speakers tend to delete. But if the opposite direction of association had occurred, and the figures in Table 13.2 were reversed (so professional-class speakers produced 28 absent and 90 present tokens, vs. 3 absent and 130 present for the working class), the chi-square statistic would be unchanged. So, chi-square only tells us about significance, while the nature of an association must be determined by inspecting the original values.

Now, given that the p value falls on a continuum, at what point do we conclude a finding is significant? The normal practice is to set some “critical value” for significance, such as .05 or .01, which means rejecting the null hypothesis when it has less than one chance in twenty ($p < .05$) or one in a hundred ($p < .01$) of being true. In social science research, $p < .05$ is the most commonly used critical value (and this is

the default criterion in the Goldvarb program). Why .05? A five percent chance of the null hypothesis being true is pretty small; why not consider results significant when $p < .10$ or $.25$? The answer is that, although widely accepted, .05 is merely a convention. The choice of a criterion really depends on what one wishes to do with the information. In gambling, anything better than a 50-50 chance should pay off in the long run, but if wrong, all you lose is money. But, suppose the stakes were higher: imagine a medical study where clinical trials showed that people taking a new wonder drug had a higher death rate than the control population, but with $p = .60$. In other words, the difference between the two populations has a 60 percent chance of being random, leaving “only” a 40 percent chance that this medication increases your risk of dying. Would you take it?

The consequences of drawing erroneous conclusions in sociolinguistics are unlikely to be either fatal or unprofitable, but the conclusions of a study are likely to enter the body of knowledge and inform future hypotheses and research. Consequently, we seek to be fairly confident of their accuracy and conservative about the conditions under which we reject the null hypothesis. The .05 figure is therefore a reasonable value to adopt as our cut-off for significance, but it is not a magic number. When studying something that we believe for good reasons to be significant, getting a p close to .05, like .08 or .10, might motivate us to collect more data rather than abandon our hypothesis. On the other hand, if something is significant at the .04 level in one study, but in several other studies is highly insignificant, with p values of .40 to .60, it is good to remember that the .04 result is expected once in 25 trials even when the null hypothesis is true! This is particularly relevant in a study that does multiple significance tests. If while writing your dissertation you perform 30 or 40 chi-square tests using the .05 criterion, it is nearly certain that you have one or two “false positives” among the results.

Other significance tests

The chi-square test looks at co-occurrence relations among nominal variables. Continuous variables require other tests of significance. For data that combine nominal and continuous variables, tests like the t-test are appropriate. For example, testing whether an English speaker had the *cot-caught* merger would involve comparing the vowels in the LOT and THOUGHT lexical sets (a nominal variable) to see if they differ in formant values (a continuous variable). A significant difference between formant values of the two sets would suggest no merger, while no significant difference would be evidence of merger. In such cases, significance depends mainly on two things. First, how different are the means of the two sets of measurements? If tokens of one vowel had a mean F1 of 400Hz, while another showed a mean of 800Hz, this is likely to be significant, but if the means differed by only 20Hz, it might not be. Second, how widely spread or tightly bunched are the values for each vowel? If the two vowels differed in mean F1 by 50Hz, but the values of each were bunched and non-overlapping, this would suggest they were significantly different. But, the same 50Hz difference in means might not be significant if the distributions of F1 values were widely dispersed and extensively overlapped. The t-test takes these two dimensions into account; it assigns greater significance to larger differences in means, but it takes into account the dispersion or variance of the measurements.

Correlations

Another case to consider is testing relationships between two quantitative variables, a situation which arises frequently in sociolinguistic research. For example, studies of change in progress examine the relationship between age and usage of an innovative form, and research on social stratification may investigate the relation between a quantitative measure of some linguistic variable and a quantified, scalar model of social class. One informative statistic in such cases is the test of *correlation*, which measures the extent to which the value of one variable co-varies with, or predicts the value of, the other. For example, among children, age and various measures of language acquisition (such as vocabulary size, and mean length of utterance) tend to increase together: older children know more words and produce longer sentences. Hence, there is a positive correlation, and we might be able to derive a mathematical relationship so that knowing a child's age would allow us to predict with some degree of accuracy certain quantitative measures of acquisition.

Other types of correlation also occur. One is a negative correlation, where one number goes down as the other goes up. This is found in language change for measures of age and usage of an innovation: since younger speakers typically use more new forms, higher usage rates are associated with lower speaker ages. Finally, one encounters cases with no correlation: one number does not predict or imply anything about the value of the other. This absence of correlation should obtain between measures like the F2 frequency of a vowel and the lexical frequency of the word containing it: all vowel phonemes, both front and back (with both high and low F2s) occur in both high and low frequency lexical items (cf. *he, who* vs. *heap, hoop*).

How can we express such relationships statistically? If the two quantitative measures exhibit a positive or negative correlation, then it is in principle possible to derive a mathematical function that relates them: one is a multiple or a fraction of the other, or differs from it by some constant amount, or is a negative multiple of the other, and so on. Many such functions are possible, but lacking prior expectations about what function relates the variables under investigation, the best strategy is to start with a simple relation – a linear function, where the value of one variable is approximated by some multiple of the other variable, possibly with the addition of some constant (schematically, $y = ax + c$). Of course, we do not ordinarily encounter perfect correlations in real data, so what we need is some measure of how accurate the hypothesized linear function is for a given data set. The statistic that does this is known as the coefficient of correlation, conventionally represented as r .

Essentially, r measures how well a linear function captures the relationship between the two variables. It ranges in value between -1 and $+1$. An r of $+1$ describes a perfect linear correlation, where the value of y for all data points is precisely equal to $(ax + c)$, and the coefficient a is positive, so both x and y increase together. An r of -1 means the same thing, except that the relationship is inverse and a is a negative number, so y goes down when x goes up. An r of 0 indicates no discernible linear relation between the two measures; that is, knowing the value of one does not help to predict the value of the other (at least, as a linear function; an r of 0 does not rule out the possibility of certain non-linear mathematical relationships between the variables).

Most of the time one encounters r values that are neither -1 , 0 , nor $+1$. How do we interpret these? They are measures of how precise or weak the correlation is. Values close to ± 1 mean a strong correlation; r values of $\pm .5$ to $\pm .6$ usually indicate

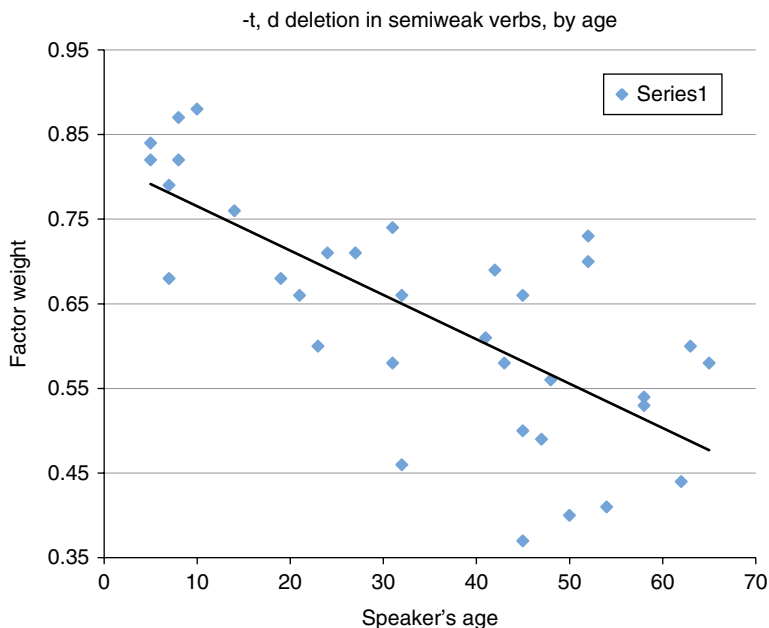


Figure 13.1 -t,d deletion factor weights by speaker's age (from Guy and Boyd, 1989).

good correlations, while values close to 0 typically indicate no relationship between the variables. As with chi-square, an r value can be compared to standard tables to derive a significance figure (p). This depends on data quantity, so with lots of data, smaller values of r are significant. By way of illustration, an r of $\pm .6$ is significant at the .05 level for a sample size of 11 or greater, but with 25 data points, an r of $\pm .4$ is significant.

As an example, consider Figure 13.1, from Guy and Boyd (1989). This study examined rates of deletion of -t,d from final consonant clusters in English (where speakers often say a phrase like *wes' side* with the /t/ deleted from *west*). In one morphological category, namely irregular past-tense forms like *kept*, *left*, *told*, the speakers in this study showed an inverse correlation between age and rate of deletion. The figure is a scattergram which plots all the speakers' factor weights for deletion in irregular past verbs against their respective ages; the points cluster roughly along a line declining from left to right (i.e., deletion declines with age). The coefficient of correlation for this data set was $r = -.72$. Since there were 34 data points in the sample, this is significant beyond the .001 level.

Statistical Modeling

In their use of quantitative methods, sociolinguists often seek to go beyond basic points like describing usage and testing for significance, in pursuit of more systematic and integrative accounts. Most commonly this involves a concept of language

use in which a linguistic variable is seen as the output of a system that is influenced by a number of distinct influences, both social and linguistic. Thus, speakers' linguistic choices may be simultaneously influenced by features of their experience and social identity (e.g., factors like age, gender, class), by the social context (e.g., audience, stylistic and genre considerations, etc.), and by features of linguistic structure (e.g., discourse demands, phonological contexts, etc.). Labov's 1966 study of coda /r/ in New York City English offers a classic illustration. Higher-status speakers use more consonantal /r/ productions, all speakers use more /r/ in more careful styles, the age distribution peaks in younger to middle-aged adults (depending in part on class), and all speakers produce more /r/ in word final position compared to non-final position (*floor* more than *fourth*). So, /r/ pronunciation in this community is governed by a complex function of social and linguistic constraints. To express this quantitatively requires the construction of multivariate models, in which each factor that influences the dependent variable is associated with a value, and each occurrence of the dependent variable is predicted by the conjunction of all applicable independent factors.

The details of such models are beyond the scope of this chapter, but their importance in contemporary sociolinguistic research cannot be overemphasized. Indeed, sociolinguistics has long been a leader in the social sciences in developing such models, dating from the "variable rule" model of Labov (1969) and Cedergren and Sankoff (1974), and implemented in applications like Goldvarb (Sankoff, Tagliamonte, and Smith, 2012) and Rbrul (Johnson, 2009). They are centrally important for investigating questions such as the following: Which constraints favor or disfavor the dependent variable? Which are stronger or weaker? Which constraints are significant or insignificant? Interested readers are referred to works such as Paolillo (2001) and Guy (1988, 1993) for further information.

Conclusion

This chapter has provided a necessarily brief introduction to some basic points of quantitative analysis. The selection of topics is guided by the author's experience in what from this domain proves most useful, necessary, and illuminating for linguistic research. Clearly this cannot pretend to be a complete treatment of statistics, which is an entire discipline in its own right; for this, the reader may begin by consulting the works cited. What I hope to have provided here is some useful background material for linguists who wish to conduct quantitative research, as well as a point of departure for readers of this book who will confront more advanced subjects in later chapters. In short, the chapter may be seen as an attempt to write some words about the numbers that are written about words, in the pursuit of a deeper understanding of both of these symbolic systems.

Further Reading and Resources

There are numerous books on quantitative analysis in linguistics. Here are a few of them.

Baayen, R.H. 2008. *Analyzing Linguistic Data: A Practical Introduction to Statistics Using R*. New York: Cambridge University Press.

- Gries, S.T. 2009. *Statistics for Linguistics with R: A Practical Introduction*. Berlin: De Gruyter.
- Johnson, K. 2008. *Quantitative Methods in Linguistics*. Oxford: Wiley-Blackwell.
- Rasinger, S.M. 2008. *Quantitative Research in Linguistics: An Introduction*. New York: Continuum.

Notes

- 1 In fact, zero subject relatives do occur, especially in presentative or existential constructions like *There's a guy (Ø) lives down the street from me*. However, these are much rarer than zero relatives in non-subject position.
- 2 These are tokens occurring in postvocalic position. Cedergren and Sankoff report a higher rate of deletion in post-consonantal position; those tokens are omitted here to simplify the example and eliminate another intervening variable.

References

- Cedergren, H. and Sankoff, D. 1974. Variable rules: performance as a statistical reflection of competence. *Language* 50: 335–355.
- De Decker, P. 2002. Beyond the city limits: the Canadian vowel shift in an Ontario small town. MA thesis. York University, Toronto.
- De Decker, P. and Mackenzie, S. 2000. “Slept through the ice”: a further look at lax vowel lowering in Canadian English. In *Toronto Working Papers in Linguistics*. Vol. 18: *Special Issue in Social Dialectology*, ed. G. Easson. Toronto: University of Toronto, Department of Linguistics.
- Guy, G.R. 1988. Advanced VARBRUL Analysis. In *Linguistic Change and Contact: NWAV-XVI*, ed. K. Ferrara, B. Brown, K. Walters, and J. Baugh, 124–136. Texas Linguistic Forum 30. Austin: University of Texas.
- Guy, G.R. 1993. The quantitative analysis of linguistic variation. In *American Dialect Research*, ed. D. Preston, 223–249. Amsterdam: John Benjamins.
- Guy, G.R. and Boyd, S. 1989. The development of a morphological class. *Language Variation and Change* 2: 1–18.
- Hoffman, M. 1998. Looking for a theng: the progress of lax-vowel lowering. Paper presented at NWAV 27, University of Georgia.
- Johnson, D.E. 2009. Getting off the Goldvarb standard: introducing Rbrul for mixed-effects variable rule analysis. *Language and Linguistics Compass* 3(1): 359–383.
- Labov, W. 1966. *Social Stratification of English in New York City*. Washington: Center for Applied Linguistics.
- Labov, W. 1969. Contraction, deletion, and inherent variability of the English copula. *Language* 45(4): 715–762.
- Paolillo, J. 2001. *Analyzing Linguistic Variation: Statistical Models and Methods*. Stanford, CA: Center for the Study of Language and Information.
- Sankoff, D., Tagliamonte, S., and Smith, E. 2012. *Goldvarb LION: A Variable Rule Application for Macintosh*. Toronto: University of Toronto, Department of Linguistics.
- Woods, A., Fletcher, P., and Hughes, A. 1986. *Statistics in Language Studies*. Cambridge: Cambridge University Press.

Focusing on Aspects of Sociocultural Context in Analyzing Language

14 Anthropological Analysis in Sociolinguistics

Alexandra Jaffe

Introduction	214
Ethnographic Data Collection and Its Implications for Analysis	214
Regularities and Variation	215
The Complexity of Context	215
Language Ideologies and Indexicality	216
Analytical Challenges	217
A Data Example	217
Analysis	220

Summary

This chapter describes strategies for doing an anthropological analysis of ethnographic data. It takes the reader through a sample analytical process of a concrete data sample. I focus in particular on *context* and *indexicality*, both of which are crucial elements of an analysis that successfully links the details of interactional practice with wider cultural, ideological, social, and political processes and frameworks. The analysis illustrates the types and levels of contextual information needed to answer the question, “What is going on here?” and shows how different categories of data can be used to explore hypotheses and

Research Methods in Sociolinguistics: A Practical Guide, First Edition.

Edited by Janet Holmes and Kirk Hazen.

© 2014 John Wiley & Sons, Inc. Published 2014 by John Wiley & Sons, Inc.

provide evidence for analytical claims. The chapter discusses several analytical traditions: language ideology, language socialization, performance theory, and the study of instructional discourses.

Introduction

The goal of this chapter is to introduce the reader to the anthropological analysis of linguistic ethnographic data. Using examples from current fieldwork, I explore analytical strategies for the interpretation and integration of different types of data. Below, I explore how these strategies are connected to a methodological and theoretical focus on context.

Ethnographic Data Collection and Its Implications for Analysis

The practice of the ethnographic method has implications for the kinds of analysis to be discussed in this chapter. This is because the analytical process is based on discipline-specific standards of evidence: what kinds of data, subject to what kinds of analysis, does one need to make a sound analytical claim about, for example, the meaning or representativeness of a particular instance of language?

Ethnographic research on language almost always involves the collection of a wide variety of *types* of data: visual (photos, drawings) and audiovisual (video and audio recordings), texts of multiple types and in multiple media, interviews (see Hoffman, this volume), and field notes documenting observations, conversations, and interactions. Underlying these diverse forms of data collection is the anthropological commitment to accumulating knowledge about habitual practices over time and in context. It is for this reason that participant observation is the hallmark of the ethnographic process.

What is context?

Context includes both physical and sociocultural features of a situation in which speech or writing take place. Some aspects of context are given that precede the moment of interaction: for example, in the data that follow, the fact that it takes place in a classroom where the teacher has greater power than the students. Other aspects of context emerge in interaction, and are shaped by linguistic choices. For example, the introduction of a second language in a monolingual context can highlight particular cultural and linguistic identities and/or frames for interaction and thus change the context.

Regularities and Variation

With respect to the focus on capturing patterns and regularities, participant observation can be oriented toward the observation of the *same individual(s)* over time and across different contexts: for example, a particular student in a classroom, at home, on the sports field, at a dance, and so forth. The outcome, a description of the “linguistic individual” (Johnstone, 1996), is a profile of a person’s linguistic and communicative repertoire and practices that accounts for both continuities and differences across different contexts of use. Participant observation can also involve the observation of the *same communicative context, genre, or practice* over time, as the same or different participants take part in their different iterations. For example, one could document a museum tour as given to different groups of visitors. This kind of data builds a picture of the scope or range of linguistic practices included in the cultural definition or enactment of a certain kind of event or activity. Taken together, then, these two systematic observational orientations enable the analyst to say whether or not a particular event under analysis is *representative* of wider patterns of individual and/or collective practice.

The Complexity of Context

As the data analysis in the following section will illustrate, participant observation is also a way of capturing the *dynamic, multilayered, and shifting* nature of context. First, one of the core tenets of both interactional sociolinguistics and linguistic anthropology is that context and talk are mutually constitutive rather than separable (see the now classic Duranti and Goodwin, 1992). That is, speakers, writers, and signers act “in” contexts that are defined by collective, historical processes that they do not control. But contexts are also created by their linguistic practices: participants who shift from formal to informal terms of address, for example, construe their interaction and thus the context as intimate or solidary. These choices, over time, can also play a role in shaping similar future events and contexts. Secondly, contexts are multilayered: any given moment that we wish to analyze is embedded simultaneously in multiple contextual frames. An interaction in a supermarket between a cashier and a client who are next-door neighbors, for example, is at a minimum part of both commercial (less personal) and social (more personal) contextual frames. Thus both anthropological research and analysis involve identifying those frameworks and then, in given ethnographic moments, interpreting which of these frameworks are made relevant for interaction and with what consequences. In other words, the answer to the question “What is going on here?” involves a simultaneous intense focus on the details of practice in a particular ethnographic moment and an attention to the other contexts that inform – or may inform – that moment. These include histories of practice – communicative and personal trajectories – as well as different *scales* of reference (see Blommaert, Collins, and Slembrouck, 2005). One of the key analytical focuses is, therefore, what kinds of contexts and frameworks are invoked by social actors in the data that we collect? What linguistic and other communicative tools are used to do so?

Context is also both *material* and *ideological*. First, there is the materiality of the physical locations and places in which action occurs; these places are saturated with social and cultural meanings and histories of practice. Context is material in the economic sense as well, which means we need to pay close attention to the economic exchange value of particular linguistic practices in various markets: what kinds of economic gains are associated with what kinds of language practices or competencies? Linguistic practice is also material in the sense that it is embodied and mediated by a variety of technologies. The physical (and thus material) acts of writing, texting, speaking into a microphone, filming, clicking a mouse, and so on all have consequences for the meaning of the practices we analyze.

Language Ideologies and Indexicality

Research on language ideologies has also emphasized the importance of tracing the connection between talk as social action and broader social and political structures and processes (see for example Irvine and Gal, 2000; Kroskrity, 2006). Language ideologies relate to a wide range of phenomena that include: (i) ideas about the nature of language itself; (ii) the values and meanings attached to particular codes, genres, media, and discourses; (iii) hierarchies of linguistic value (from how particular codes are ranked to more general aesthetic criteria used to evaluate spoken and written language); and (iv) how specific linguistic codes or forms are connected to identities (both individual and collective and at all levels) as well as sociocultural roles and stances. Ideologies are present both in the specific content of these four areas and in the nature of the connections posited in (iv) (Jaffe, 2009a). These complex ideas are illustrated in the analysis in the next section.

What is indexicality?

Indexical signs “point” to what they stand for (think of “index finger”). They rely for their meaning on the location (in time, space, or social space) of the person doing the pointing. It is for this reason that they are context-dependent. In the social domain, some linguistic features (accent, style, etc.) become conventionally understood to “point” to particular social categories and identities, stances, and so forth.

The notion of *indexicality* is central to the analytical processes by which we can trace connections between moments of talk, ideologies, and different types and scales of context. This is because the meanings of indexical signs are context dependent (see Hanks, 2008). To take a simple example, we can see that the meaning of the indexical sign “here” is not a specific geographical location that can be mapped independent of who utters or writes it. Rather, it is a place defined with reference to a particular utterance, spoken by a particular speaker, situated in space. Its contextual “scale” or

scope can vary depending on the “there” with which it is being contrasted: that is, it could mean “here in this [vs. some other] room” or at a much larger scale, “here in this [vs. some other] country.” Thus, one of the tasks for the analyst is to discover what indexical relations, with what contextual scope, are taken for granted or proposed in particular linguistic acts. Another kind of analysis focuses on what indexical associations between ways of speaking and social identities or types become conventionalized in a particular community of language practice.

A wide variety of types of linguistic and semiotic data can act or be mobilized as indices, ranging from micro-level features (a variant of a phoneme, an intonation contour, a single grammatical form, an orthographic choice) to poetic structures/elements (parallelism, metaphor) to features of vocal delivery (voice quality, pitch) to chunks of text that evoke prior texts, known genres, circulating discourses, or domains of practice.

Analytical Challenges

Given what has been outlined above, it is clear that one of the challenges of ethnographic analysis is to identify salient features of different types and sources (audio, video, notes, interviews, observations, texts) and to coordinate their analysis using appropriate analytical and theoretical tools. The assumption is that being able to “triangulate” evidence from different sources allows us to make more robust claims about the themes or patterns we identify. The question of salience is of course already an analytical one that begins with the process of data collection: that is, we enter ethnographic contexts with a set of theoretical interests and focuses that shape what we record, ask, and are attentive to. For example, my interests in the classroom data analyzed below were primarily on children’s apprenticeship to a culturally valued form of poetic practice. Thus, I chose to record classroom sequences devoted to this practice. Had my research interests been focused on bilingual language acquisition, my notes would have had more entries on linguistic form, and I would have systematically collected data on each child’s French and Corsican proficiency (I did not do this). Of course, the data I did collect can be studied in multiple ways. This means that once we have collected a corpus, deciding what data is salient to our analysis is also shaped by the analytical process itself. As I hope to show below, close analysis of a particular piece of data often leads us to connections that we can or need to make with other data types. This process, however, is not always a direct one, and every anthropologist has had the inevitable but disconcerting experience of feeling awash in a surfeit of data. This has to be understood as a necessary and productive stage of interpretation that we have to pass through in order to start to understand holistically the phenomena we are interested in.

A Data Example

Let us turn now to some concrete data in order to illustrate these processes. I am going to start with a single transcript, which is an extract from a recording I made in 2012 of a classroom session in which several children and the teacher in a bilingual

Excerpt 1: A classroom in Corsica

Note: In the transcript, regular typeface indicates talk in Corsican; French is in *italics*. **Bold** indicates emphasis; quotation marks are placed around utterances proposed as lines of poetry. Three full stops represent pauses between utterances.

1	Julia	“S’ellu hè troppu duveri, chjoderemu i purtelli”	“If it is too much homework, we will close the windows”
2	Alain	Innò, voi chjoder...	No, you will...
3	Teacher	Sè...ci...sò...troppu...duveri, chjoderemu i purtelli?	If...there...is...too...much...homework, we will close the windows...?
4	Julia	<i>je voulais dire [...?]</i>	<i>I meant to say [...?]</i>
5	Rosa	Chjoderemu ste cerbelli	We will close our brains
6	Teacher	Ah, i cerbelli allora	Ah, so it’s brains
7	Lucia	Splusemu i nostri cerbelli	We explode our brains
8	Teacher	Ah! Allora, què,	Ah! so that,
9	Julia	sè...ci...sò...trop...pu duveri	if...there...is...too...much...homework
10	Teacher	Maestru, s’ellu ci sò troppu duveri, ùn culleremu [?]	Teacher, if there is too much homework, we won’t go up to [?]
11	Teacher	<i>Ca veut dire qu’on n’y montera pas</i>	<i>That means we won’t go up</i>
12	Teacher	<i>Oui, ma, hà dettu qualcosa chì face ride, è chì hà un sensu, Lucia [?]</i>	<i>Yes, but Lucia said something that was funny, and made sense [?]</i>
13	Children	Splusanu i cerbelli	The brains explode
14	Teacher	Sè ci sò troppu duveri, ma, s’elli	If there is too much homework, but if

22		splosanu ùn hè micca avà, ghjè ind'u futuru, dunque, splu...	they explode, it isn't now, it's in the future, so they...
23	Children	seremu	{w} will explode
24	Teacher	splu...?	splu...? {who will explode?}
25	Children	Spluseranu	they will explode
26	Teacher	Spluseranu i cerbelli	The brains will explode
27		E i dui ultimi?	And the two last ones [lines]?
28		listessu: stranieri, belli,	the same [rhyme]: strangers, beautiful,
29		cultelli, fratelli,	knives, brothers,
30		meli	apple trees
31	Child	meli, ma meli...	apple trees, but apple trees....
32	Teacher	Fulelli	Fulelli [place name of nearby town]
33	Child	cullà è	to go up and
34	Teacher	[..?..]	[..?..]
35	Teacher	Mastru, ne aghju una	Teacher, I have one [lines]
36	Julia	Ah, ma ci vole duie	Ah, but you need two
37	Teacher	Mastru, "scambieremu di scote, faleremu in Fulelli"	Teacher, "we'll change schools, we'll go down to Fulelli"
38	Julia	Allora, "scam...bie...re...mu di scola, allora, manc'una, chì pudemu mette?"	So, we...will...change...our school, so there's one [syllable] missing, what can we put?
39	Teacher	Noi scambieremu	We will change
40	Child	No, noi,	No, we
41	Teacher	"E, scam..bi..er..e..mu di sco..la, fa..le..re..mu [in Fulelli]"	and we...will...change...our schools, we...will...go...down [to Fulelli
42		[in Fulelli	[to Fulelli
43	Children	Mastru, u possu leghje?	Teacher, can I read it?
44	Julia	Iè, allora ti stemu à sente	Yes, go ahead, we're listening to you
45	Teacher		
46			
47			
48			
49			

(Corsican–French) school collaborated on the creation of a specific genre of poetic verse called the *chjam'è rispondi*, or “call and response.” We will start by using this data extract as the point of departure for a discussion of what kinds of contextual data are necessary to be able to grasp the essential contours of the event and be able to enter into an analysis of its discursive and linguistic features. This is followed by a close analysis of the data transcript that will lead us back “out” of the data to explore additional indexicalities and their social and cultural significance.

Analysis

Sociolinguistic and institutional context

To begin to answer the question “What is going on here?” we need to start with some basic features of the sociolinguistic and institutional context: Who speaks what languages/varieties, with what kinds of competence? What sociolinguistic statuses, roles, and values are associated with these codes in the wider society and in the institutional context of the school? We also want to know what language ideologies inform these systems of value and practice. These questions imply access to particular kinds of data and bring us back to research practice. A researcher entering a field site for the first time will often be able to get preliminary answers to many of these questions by consulting the existing literature. In other cases, he or she will need to do that foundational research. In all cases, the new project should be envisioned as contributing to and possibly modifying existing understandings of the sociolinguistic context.

My analysis of this extract is grounded in the following essential contextual information. Corsican is a minority language with very high contemporary value as a language of heritage and identity. Over the last three generations, the number of Corsican speakers has dropped; since the late 1970s, Corsican has been the target of language revitalization. Since 1996, bilingual schools like the one in which I collected this data have been the cornerstone of language policies designed to create new speakers. French is the first language of most schoolchildren in Corsica and most children acquire the bulk of their knowledge of Corsican from school, though some speak Corsican at home with parents or grandparents. As institutions, these schools are organized around a principle of parity of status and practice between Corsican and French, with 50 percent of the curriculum taught through the medium of each language. Approximately 20 percent of Corsican schoolchildren are taught bilingually; in non-bilingual schools Corsican is taught as a subject three hours a week.

Even this very brief sketch provides a glimpse of one of the first fault lines in the school–society relationship: the gap between the use of Corsican with and by children *in* school and the dominance of French *out* of school. Secondly (and less obviously) is the issue of societal judgments of the authenticity of “school Corsican.” Because today’s adult speakers were not educated in Corsican, there is a tendency to negatively evaluate both academic registers of the Corsican and “learner” language as inauthentic. We will return to these issues below.

The genre

In the analysis of this kind of data, it is also important to identify the genres of speech and writing being used. This is also a form of context. In the classroom I studied, the key genre is the *chjam'è rispondi*. A form of sung, improvisational poetry, it involves a joust between two poets who try to best their opponents in the wittiness and linguistic sophistication of their verses. The basic poetic structure consists of six lines of eight syllables in a variety of rhyme schemes. The ideal response to an opposing poet's verse echoes the last line thematically and/or linguistically; this imposes and guarantees a rapid improvisational response time. Revived in the late 1970s after having fallen into disuse, the practice of the *chjam'è rispondi* was learned and performed in face-to-face interactions in gatherings organized by cultural associations and, more recently, on stage in front of a theater audience. Up until 2008, the practice was the almost exclusive domain of a handful of middle-aged to elderly men, with a few younger poets in their late thirties.

In 2009, the Internet emerged as a new medium for the practice and its apprenticeship. Several young men in their late teens and early twenties began to write verses on Corsican-language forums, gradually reducing their "allowed" response time until the written exchanges were almost synchronous. Several of these new online participants made the leap to public performance and competition. One of these young men was the teacher in this school.

Participants: linguistic individuals and their histories

The analysis of this data also requires knowledge of the participants and their social, professional, and linguistic characteristics and histories. In the Corsican school I studied, the teacher was not only one of the new generation of poets, but also one of a handful of bilingual teachers who experimented with teaching the practice of *chjam'è rispondi*. Like many young adult speakers of Corsican, he had grown up hearing a lot of Corsican but speaking mostly French. He had made a significant personal effort in his late teens/early twenties to become an active speaker, writer, and teacher of the language. In addition to his practice of *chjam'è rispondi* in and out of class, he was an active reader and writer of Corsican-language poetry and song lyrics.

The 12 children in his multi-aged village classroom ranged from eight to eleven years old. Several of them came from households in which a great deal of Corsican was spoken; others came from families in which they spoke and heard mostly French. Most of the children had acquired their active Corsican language competence in school. At the time of this recording, the oldest students – including the children taking the most active role in the excerpt above – had been with the teacher for three years.

The immediate interactional context: histories of practice

Any analysis of a given moment of interaction needs to be situated in both an immediate interactional context and, when possible, with reference to past practice. With respect to Excerpt 1, on the day it was recorded, the English teacher who came once a week to the school had complained that the children had not done their

homework. While she was still present, the teacher scolded the children, and told them that they needed to take this homework seriously. After she left, he initiated their poetry work by improvising the following verse:

Di ciò ch'ete fattu oghje	For what you did today
Un ci vole à esse fieri	You shouldn't be proud
Perchè vi site scurdati	Because you forgot
Di fà i vostri duveri	To do your homework
E aghju da ghjunghje à crede	And I am led to believe
Chì voi site sumeri	That you are all donkeys

This was the “call”: the children were invited to respond. A collective oral composition session ensued in which they developed a verse of six lines, which began, “No we are not donkeys, we are intelligent.” The teacher then improvised the following:

Sempre ci sera cummenti	There will always be comments
Chì ferma sempre un errore	Because there will always be an error
E chè vo stessi cuntenti	And if you are so happy
Senza avè nisun timori	And without fear
O zitelli sapete bè	O Children, don't forget:
Chè sò eiu u professore	I'm the teacher

At the moment that we pick up the activity in Excerpt 1, the children had come up with the first two lines of a response:

Site voi u professore	You are the teacher
Eppo noi i zitelli	And we are the children

And they were working on the remainder. The full verse, sung by Julia immediately following the extract, went as follows:

Site voi u professore	You are the teacher
Eppo noi i zitelli	And we are the kids
Sè ci sò troppu duveri	But if there's too much homework
Spluseranu i cervelli	Our brains will explode
E scambiareru di scola	And we'll change schools,
Falaremu in Fulelli	We'll go down to Fulelli

This immediate interactional context now needs to be situated in a longer time scale. Many features of this particular session were representative of patterns of habitual pedagogical practice in the school. Poetry sessions often started with the teacher initiating the first “call,” followed by collective brainstorming in which the students, with teacher scaffolding, produced a response. The process took place both orally and in writing: couplets and then whole verses were written on the board, where they were subject to further revision. Finished products were

copied from the board into children's notebooks and sung out loud both by individuals and by the whole class. In the extract, two 10-year-olds (Julia and, to a lesser extent, Lucia) take the most active roles; in general, it was the eight children in the two highest grades who engaged most heavily in the composition of verses. As they and the younger children explained to me in interviews, they had benefited from the previous year's work on the genre. All of the children, however, were active writers of poetry in Corsican; many kept poetry notebooks at home "just like their teacher."

The sequence in the excerpt and the entire exchange of verses (six in all) also introduces the issue of *key*, another factor to be considered in the analysis of ethnographic data collected in student projects. In the verse completed in the extract, the children particularly enjoyed the joking exaggeration about their brains exploding with homework. The last line is also a humorous "threat": that they will leave the school and go to one in a different town (Fulelli). This jocular key in the *chjam'è rispondi* was a topic that had been addressed explicitly in the class, as reported to me by the children in interviews where they recounted being told to be careful not to go too far with a joke, as people could take it seriously and get angry. In this case, the teacher's call is an interesting mixture of the serious and jocular. I do not have the data to say how typical this particular mixture was in the classroom's practice or in exchanges among adult poets, but have flagged this topic for future discussions/interviews, and as an issue to examine in online corpora of *chjam'è rispondi* sessions.

Instructional discourses and ideologies of language

So far, we have considered the genre of the poetry form being taught and the nature of the interactional context and its participants. The next step is to consider how that context is institutionally defined, and if there are speech genres associated with that institutional frame. The extract we are considering takes place in the institution of the school. A large body of educational linguistic research has identified the structures and features of instructional discourses. Many forms of teaching include what have been called *initiation–response–evaluation* sequences. Teachers elicit speech from students, students respond, and in the third part of these sequences, teacher utterances have an evaluative function. Thus one first point of entry in a transcript of this sort is to look for how the teacher responds to student proposals. We thus notice in line 4 that the teacher recasts Julia's proposal in lines 1 and 2. A recast, or reformulation, has the potential to be a correction – or at least to model preferred linguistic or discursive practice. If we compare the teacher's utterance to Julia's initial one, we can find two linguistic differences. First, "chjoderemu" is recast as "chjuderemu"; second, "s'ellu hè" is recast as "sè ci sò."

The first difference is a dialectal one: the [o] is a characteristic feature of the variety of Corsican spoken in the micro-region where the school is located; the teacher comes from another dialectal area (and uses [u]). These features are thus *indexical* of regional linguistic identities in Corsica. The next question is an *ideological* one: does one of these varieties have higher status or value? Is the recast a correction? In order to confirm or disconfirm this possibility, we can look at several kinds of evidence both internal and external to the talk in the extract.

First, taking a micro-analytical approach to the data in the extract, we can look at the teacher's delivery of the utterance in lines 4 and 5. Does he emphasize the [u] in "chjuderemu" (with changes in voice quality, intonation/stress, or volume)? Here, the answer is no. Next, we can look at whether or not the utterance is treated as a correction by any of the students. Here, the evidence is mixed. Neither Julia nor Alain (who have used the [o]) *self-correct* in response to the teacher; however, Rosa's adoption of the teacher's pronunciation in line 7 is potential evidence that his pronunciation has preferred status. However, her repetition of his pronunciation shows no signs of emphasis on the [u] or even on the word itself (since her use of "chjuderemu" is embedded in a new proposition), both of which would have been potential indices of an orientation to a teacher correction. The most important piece of information we are missing in this stretch of discourse is knowledge of Rosa as a linguistic individual: we do not know if the [o] variant is in her repertoire. It is possible, then, that she and the teacher share the [u], Armand and Julia share the [o], and both have equal status.

At this point, however, we have reached the limit of what the data in this specific stretch of talk can tell us, and it is inconclusive. If we want to confirm or disconfirm a hierarchy of phonological variants, we would need to do a systematic analysis of a much larger sample of recorded speech from this class in order to profile Rosa's and other children's uses of the [o] vs. the [u] as well as to see if there are any instances in which the teacher gives a response that shows clearer signs of being a correction. The phonological analysis is one that I have not yet undertaken; however, I can confidently say, based on my observations of the class over time, that I never heard the teacher correct for a regional variant.

Other kinds of data can also be marshaled with respect to the teacher's stance toward Corsican variation. In this particular case, my field notes include metalinguistic commentary: an account of a casual conversation that I had in class with the teacher about Corsican orthography. First, I noted his positive stance toward the explicit ideological agenda of the most widely adopted (though not official) orthography of Corsican: appreciation of diversity. That is, it provides a standardized set of sound-to-grapheme correspondences but allows speakers of different regional variants to spell many words the way that they pronounce them locally. However, one of the local particularities (the pronunciation of /d/ as [r]) is *not* reflected in this orthography, in which /d/ is conventionally written "d" no matter how it is pronounced. The teacher noted that some of the children in the school replaced "d" with an "r" in writing; rather than talking about it as a spelling error, he treated it as a sign of an authentic local linguistic identity.

In contrast, there is stronger discourse-internal evidence that the second recast made by the teacher (from "s'ellu hè" to "sè ci sò) is a correction. First, Julia (the original speaker) *self-corrects* in line 12, using the plural verb found in the teacher's formulation in lines 4 and 10. In Corsican, "homework" is a plural noun and thus should be introduced with "If there are" and not "If it is" (Julia's utterance in line 1). Secondly, we can see that within the excerpt, the teacher does focus on grammar elsewhere: in lines 19–21, he topicalizes verb tense, suggests that the action they are describing takes place in the future, and, using rising intonation, repeats the verb root while leaving a "blank" that he thus invites the children to "fill in" with a future tense ending (which they do in line 24). Finally, we can see that the grammatical recast is also embedded in a repeated pattern of delivery in which he pauses between

syllables when the count (do we have 8?) is still being held up for evaluation. When the “count” is ratified as good (for example, “spluseranu i cerbelli” in line 25), the line is delivered in a normal rhythm. The syllabic delivery can thus be seen as a suspension of full ratification, which is a form of correction. In fact, Julia’s second utterance is not ungrammatical, but it does have nine, rather than the allowed eight syllables per line. Elsewhere in the extract, we find another instance (lines 39–40) in which correcting for syllable count is a more explicit focus of the teacher’s utterance. Furthermore, following the same analytical move (widening the data sample) as above, these two categories of “error,” grammar and syllable count, were recurrent features in my classroom observations of poetry composition sessions.

In light of the work of teacher evaluation and scaffolding that we have seen in the preceding examples, and the sociolinguistic and institutional background introduced above, there is another linguistic feature in the transcript that calls for our attention: the use of French by Julia in lines 6 and 14 and the fact that it attracts no comment by the teacher. This suggests that it is acceptable, which in turn raises questions about classroom language policy: how (and if) alternation between Corsican and French is regimented institutionally and how the bilingualism of this particular school is enacted. The answer to the institutional question is that there are no formal guidelines: teachers are free to engage in and allow alternation between the two languages during classroom activities or to impose monolingual practices. The question about practice in this particular school clearly requires a systematic analysis of the distribution of the two languages in teacher and student discourse as well as teacher evaluation of student practice. Within the corpus of poetic practice, all teacher talk and most student talk takes place in Corsican; occasional uses of French by children were sometimes tolerated, as in this extract, but more often were the target of correction by the teacher, who would tell them lightly that he “didn’t understand them” or ask them directly to “speak in Corsican.” However, because I have only a few recordings and observations of classroom sequences that do not involve *chjam’è rispondi*, I would view my data as not being sufficient to characterize the language policy of the school more broadly. I also do not have much supporting metalinguistic data, as it was not a topic that I took up explicitly in conversation or interviews with the teacher or children.

Widening the framework: language socialization

Having considered the data in light of the nature of instructional discourses, we need to widen the framework to include the wider phenomenon of which they are a part. In linguistic anthropology, this wider framework has been studied under the rubric of “language socialization.” Beginning with a seminal review article by Schieffelin and Ochs (1986), the literature on language socialization has distinguished between *socialization to* the use of language (learning culturally approved ways of speaking) and *socialization through* language to culturally approved identities, ways of being and doing. Socialization *to* and socialization *through* language are of course intertwined, since the social identities and stances that novices are socialized to are indexed through particular language practices. Taking a language socialization perspective on the data we have looked at so far, we have focused on examples of socialization to “correct” linguistic practice and to “correct”

poetic form (number of syllables in a line) and meaning (the brief exchange around the word “meli”). But there is also a glimpse of socialization to practice that indexes a valued poetic *stance* and *identity* in lines 35 and 36, and is therefore a form of socialization *through*. In line 35, Julia says that she thinks she has a line; the teacher withholds the floor from her by saying “but you need two.” This comment alludes to a recent shift in his guidelines: he had raised the bar by saying that the children needed to think and invent in couplets, not single lines. In doing so, he established an indexical link between this way of composing and an expert identity (“poet”) and positioned the children as being on a trajectory toward that identity (see Jaffe, 2009b).

The children were also positioned as poets and experts in two additional contexts of performance that I documented. In the first, the teacher called the regional radio station during a Corsican-language call-in program called “Dite a Vostra” (“Your Turn to Speak”) that aired during the school day. He and the class performed their exchange live on air. Several months later, at a poetry festival, Alain and Julia performed the same exchange in front of a live audience, this time with Alain taking the voice of the teacher and Julia the voice of the children. Finally, the radio call-in was also downloaded by the teacher from the radio web site and included in a PowerPoint presentation projected for parents and friends at the end-of-year school festival. We can note the element of repetition and practice over time, the progressive appropriation of the piece of poetry by the children, and the fact that it became an emblematic feature of the class’s poetic repertoire and, by extension, identity. In other words, this particular exchange acquired new indexicalities over time. This line of analysis in turn opens up new avenues for linguistic and prosodic analysis of the successive iterations of this piece of poetry to see what elements of delivery speak to increasing ownership of the text.

We can now make the connection between the trajectories of texts composed in the classroom and the emergent practice of apprenticeship to the *chjam’è rispondi* in online forums. Like the online practitioners, the schoolchildren are learning and practicing the genre in both written and oral forms. Both written and oral forms “travel” through a variety of technologies and media.

Following the ethnographic trajectory of this text also leads us to contextualize its meaning with reference to performance theory, outlined in a now classic work by Bauman (1975). There are many aspects of the data that we could examine under this lens, but one that is salient to the ideological context that we have identified is *accountability* to an audience. This accountability connects performers to audiences and presupposes a certain consensus regarding aesthetic standards. While aesthetic criteria are always subject to debate, entering into the debate with others is one way of participating in a community of practice (see Dodsworth, this volume, for a discussion of this term). While space does not permit a full analysis here, this connection allows us to address the issue of the school–society connection, and the ideological judgments surrounding what counts as “authentic” Corsican and who counts as an “authentic speaker.” The hypothesis that we can put forward is that the practice of the *chjam’è rispondi* mediates the school–society gap, and offers children an entrée into a linguistic practice that is understood and accepted by the community as an authentic one. Questions still remain about the social evaluation of forms of expertise that fall short of full improvisation, as both online and school practice do.

The children were also, as noted above, being socialized to a form of social/interactional expertise: the ability to engage in a witty exchange without crossing into insult. In interviews, all of the children evoked this stance as a central element of the poetic form itself; several told me that people had “come to blows” over an exchange. In doing so, they positioned themselves as knowledgeable.

Advice

Every ethnographic project will present a unique collection of different kinds of data types with varying degrees of depth and breadth. The advice below presumes, however, a core of observed and recorded linguistic practice (spoken, written, or signed).

There is no single, simple recipe for doing an anthropological analysis. What I have presented above is meant to be an illustration of one (rather than a definitive) way of mobilizing a combination of analytical strategies and theoretical approaches used by linguistic anthropologists in order to connect the details of practice over time and across contexts to broader themes in the anthropology of language.

I can, however, recommend the sequence that I have tried to illustrate above:

- 1 Select a manageable sample of primary data for a detailed analysis. Ethnographic projects clearly involve observations over time, which means that if time is limited, you should seek access and permission to observe and/or record in social contexts where you may already be a participant, or where you have ready access through work, school, friends, or family. Alternatively, you may wish to observe and potentially participate in online communities of practice. You may also be able to draw on existing audio or video recordings of particular individuals, groups, or contexts that are already published in the public domain (online media, for example). If you collect recorded data or use others' recorded data, you'll be doing a preliminary transcription. In other cases (for example, online contexts), the primary data may be written. The selection should be shaped by a provisional assessment of the corpus as a whole, one that allows you to identify a piece of data as typical or exceptional/telling. In the case of the excerpt I presented, I knew before I transcribed it that the composition process was relatively typical, but the final product was exceptional in that, unlike other work done in class, it was reperformed multiple times. Keep in mind that your initial hunches about the data may end up being significantly modified by a systematic analysis.
- 2 Using a single tool from an analytical tradition that has guided the development of your research question and data collection, do a systematic analysis of your data sample. In the example above, I started with the evaluative dimension of instructional discourses (the initiation–response–evaluation sequence).
- 3 Step back from your first (and subsequent) interpretive passes through the data to ask the following, related questions (these are the implicit questions guiding the “background” data that I provided for the data sample above):
 - (a) What contextual information is needed to be able to answer the general question “What is going on here?” and to understand the detailed analysis? It is useful to start with the immediate interactional context and move progressively “outwards.”

- (b) How are the characteristics of practice that you can identify in this particular data set indexically linked to other practices? Some linkages can be temporal (in my explanation above, I evoke histories of practice and trajectories of texts and performances across time) or generic/aesthetic. They may lead you to the intersection of cultural and institutional, economic, or political frameworks, or to circulating discourses, language ideologies, or processes of individual or collective identification.
- (c) How are contexts invoked or created through linguistic practices you've described?

It can be very productive, at this stage of the process, to write a “thick description” (Geertz, 1973) of the practice(s) concerned, addressed to a reader outside the disciplines of sociolinguistics or linguistic anthropology who knows nothing about the context you are studying. This will force you to articulate dimensions of context which have become obvious – and thus obscure – to you. At this stage in the analysis, you also need to clearly identify the kinds of evidence and knowledge you do/do not have. For instance, if you analyze online video data on people you do not know, there will be contextual information that you will not have and therefore, certain interpretive claims that you will not be able to make.

- 4 Depending on what indexical links you identify and choose to follow:
 - (a) Mobilize or seek out additional relevant analytical and theoretical models in the research literature (for example, “performance theory” above).
 - (b) Develop one or more working hypotheses (one of mine was that performance of this genre integrated Corsican language learners as “authentic” speakers in a wider community of minority language practice).
 - (c) Use the models to return to your corpus for a systematic search for evidence that will allow you to confirm or disconfirm your hypotheses. This may involve a more detailed analysis of different aspects of your data and a corresponding revision of your transcript. For example, some of the lines of investigation I have flagged for additional work will require the annotation of phonetic and visual detail (focusing, for example, on the coordination of speech and writing, visual signs of student engagement like counting syllables on their fingers, and the use of non-verbal cues for turn taking). Be prepared to recognize, as I did above, when your evidence is not sufficient.
 - (d) Reevaluate and refine your initial ideas about patterns and regularities, whether they relate to individual (the “linguistic individual”) or collective practices, genres, values, and so forth.
 - (e) Re-evaluate your data sample: is it an exception that sheds light on a rule, or throws key themes into relief? Is it an example of routine activity?

Tips

- Do a detailed analysis of a data sample using one analytical approach.
- Work “out” from the detailed analysis to identify the contextual data and indexical connections between data types that need to be identified to answer the question “What is going on here?”

- Develop hypotheses that you can test with further or more detailed analysis.
- Deploy additional analytical and theoretical frameworks as called for by the first two steps and return to your corpus for follow-on analysis.

Further Reading and Resources

- Ahearn, L. 2011. *Living Language: An Introduction to Linguistic Anthropology*. Oxford: Wiley Blackwell.
- Brice-Heath, S., Street, B., and Mills, M. 2008. *Ethnography*. New York: Teachers College Press.
- Duranti, A. 1997. *Linguistic Anthropology*. Cambridge: Cambridge University Press.
- Duranti, A. 2001. *Key Terms in Language and Culture*. Oxford: Wiley-Blackwell.

References

- Bauman, R. 1975. Verbal art as performance. *American Anthropologist* 77(2): 290–311.
- Blommaert, J., Collins, J., and Slembrouck, S. 2005. Spaces of multilingualism. *Language and Communication* 25: 197–216.
- Duranti, A. and Goodwin, C. (eds) 1992. *Rethinking Context: Language as an Interactive Phenomenon*. Cambridge: Cambridge University Press.
- Geertz, C. 1973. Thick description: towards an interpretive theory of culture. In *The Interpretation of Cultures*, ed. C. Geertz, 3–30. New York: Basic Books.
- Hanks, W. 2008. Indexicality. *Journal of Linguistic Anthropology* 9(1–2): 124–126.
- Irvine, J. and Gal, S. 2000. Language ideology and linguistic differentiation. In *Regimes of Language*, ed. P. Kroskrity, 35–83. Santa Fe, NM: School of American Research.
- Jaffe, A. 2009a. The production and reproduction of language ideologies in practice. In *The New Sociolinguistics Reader*, ed. N. Coupland and A. Jaworski, 390–404. New York: Palgrave Macmillan.
- Jaffe, A. 2009b. Stance in a Corsican school: institutional and ideological orders. In *Stance: Sociolinguistic Perspectives*, ed. A. Jaffe, 119–145. Oxford: Oxford University Press.
- Johnstone, B. 1996. *The Linguistic Individual*. Oxford: Oxford University Press.
- Kroskrity, P. 2006. Language ideologies. In *A Companion to Linguistic Anthropology*, ed. A. Duranti, 496–517. Oxford: Blackwell.
- Schieffelin, B. and Ochs, E. 1986. Language socialization. *Annual Review of Anthropology* 15: 163–191.

15 Conversation Analysis in Sociolinguistics

Paul Drew

Introduction	231
The Research Process	232
Interactional Consequences of Different Action Constructions: Some Illustrations	237
Another Illustration of the Sequential (Interactional) Consequences of Different Action Designs	241

Summary

Conversation analysis (CA) has emerged as one of the most widely used and rewarding perspectives for investigating how people “do things with words” – that is, how they conduct their activities and relationships through talk-in-interaction. The methods of CA are equally applicable to ordinary social interactions between family and friends, and to institutional and workplace interactions such as medical consultations, calling the emergency services, criminal trials, and management–employee meetings. CA is also being widely used in applied research aimed at improving the effectiveness of communication

Research Methods in Sociolinguistics: A Practical Guide, First Edition.

Edited by Janet Holmes and Kirk Hazen.

© 2014 John Wiley & Sons, Inc. Published 2014 by John Wiley & Sons, Inc.

in medical and social welfare settings, among others. This chapter provides a brief introduction to the distinctiveness of CA's perspective, and then outlines the principal stages in the research process and the three elements on which that process rests – social action, turn and turn design, and sequence organization. These concepts play a central role in empirical research, in ways that I illustrate in the context of studies of mundane social interaction as well as medical and other institutional interactions. My aim is to highlight the steps you might take in conducting CA research of your own.

Introduction

Since its emergence from Californian sociology of the 1960s, conversation analysis (CA) has developed into one of the most distinctive and productive perspectives from which to analyze language use in interaction. Sociological approaches to language, sociolinguistics, and discourse analysis more generally are predominantly variationist; they seek to explore differences in language use – whether dialect, phonetic, sociolects or codes, syntactic, and so on – used by speakers who vary with respect to class, region, gender, ethnicity or other sociocultural identities. Some speaker identities are often taken to be associated with power differentials and asymmetries, so that the exploration of the ideological “work” done through language might also be considered part of the variationist research agenda. For the most part, then, sociolinguistics and related approaches focus essentially on variations in language associated with social identities.

Conversation analysis headed off in quite a different direction – to investigate and identify the *general* social interactional practices and competences shared by members of a speech community, competences which enable them to interact meaningfully with one another, and which (largely) do not depend on their particular speaker identities. Think of these different analytical paths by considering Bill's Problem – “Bill” being William Labov. Labov asked staff in New York department stores – some more classy than others – something like, “Could you tell me where the women's shoe department is, please?,” anticipating that the department in question was on the fourth floor of the store. When they responded, “Yes, it's on the fourth floor, sir,” he would initiate repair with an “open class repair initiator” (Drew, 1997), “Excuse me?”; to which the staff member would reply “The fourth floor,” spoken according to Labov's account “in careful style under emphatic stress” (Labov, 1991: 49). Labov would then make a note of the informant's independent variables (including race, class, age, gender, and which store), and the dependent variable – the pronunciation of the preconsonantal and final position *r* (Labov, 1991: 49–50). But another feature of this sequence probably escaped Labov's attention; in response to an open class repair initiator, the staff member would treat Bill's Problem as being one of hearing, repeating what he or she had said, but *without* repeating, “Yes, it's on the fourth floor, sir,” in its entirety. It would have been a partial repeat, omitting

components at the beginning and end of the turn, particularly. This is a general interactional practice, illustrated in these two examples:

(1)

Jean: *Well I mean* I won't be where she c'n get me *honey*,

Ans.: Pardon?

Jean: I won't be where she c'n get me.

(2)

Ava: *Yeh w'll I'll* give you a call then tomorrow. *when I get in 'r summ.* (0.5)

Bee: *Wha:t*

Ava: <I'll give yih call tomo[rrow.]

Bee: [Yeh:] 'n I'll be ho:me t'morrow.

In each case turn-initial components (here, including discourse connectives, e.g., *Yeh well*) and turn-ending components (the endearment term in (1) and the addition of the temporal *when I get in or something*) are omitted in the (partial) repeat in the repair (Schegloff, 2004). The pattern illustrated in these examples is quite general. Here then are the diverging paths of sociolinguistics and CA: sociolinguistic analysis focuses on variation and difference between speakers, whilst CA focuses on common, shared practices for talk-in-interaction, practices that underlie and are central to what we do when we use language in social interaction.

The Research Process

CA is a naturalistic, (largely) qualitative, micro-analytic, systematic comparative and inductive methodology for studying real-life interactions. We use audio and video recordings of authentic interactions to enable us to make direct observations and detailed analyses of language use in ordinary natural settings – in the home, between friends and family, in the classroom, in the doctor's office or hospital, when calling the emergency services, in the welfare office, in the workplace, in the courtroom, in the beauty salon, face-to-face, or over the telephone (so far there has been little CA research into interactions through other electronic media) – wherever people interact directly with one another, socially and/or purposefully.

- *Setting*: The first step is to choose your research setting. This is likely to be guided by the field or area of your research, the reason for the research, availability and limitations on access to certain settings for research purposes, in some cases your client's requirements, and ethical considerations and guidelines. So, for example, if you work in a health care (research) setting, then you'll choose the research site – and types of interactions – according to your particular interests and aims. In a project in which I was involved, we were interested in the role that patients play in making decisions about their treatment; we video recorded doctor–patient consultations across four clinical settings (ENT oncology, genetics counseling, homeopathy, and diabetes clinics) in order to enhance the generalizability of our findings. If you are studying ordinary social interaction, then you can either access

some of the data corpora that are widely available, or better still collect your own original data by video recording people – friends, relatives, acquaintances – in their home. Activities such as cooking in the kitchen, or eating together (inside or out), are quite focused activities and full of action, so well worth recording.

- *Recording and sample*: The aim should be to film face-to-face interactions, if at all possible, offering participants the option of audio recording if they are unwilling to be filmed. Don't be put off filming by assuming that people won't agree; in a recent study (for the UK's Department of Work & Pensions) of interviews with claimants in a welfare office (Jobcentre), although we anticipated difficulties in obtaining consent to film, in the event we achieved an 80 percent recruitment rate, the overwhelming majority agreeing to be filmed. There is no rule about sample size. Typically in CA research the numbers are low; recording, transcription, and analysis are labor intensive, inhibiting the collection of large data samples. For the study of Jobcentre interviews with claimants, we recorded about 220 interviews, each between 15 and 45 minutes long (Drew *et al.*, 2010). In an ongoing study of neurologists' interviews with seizure patients accompanied by a family member or friend, we video recorded only 50 interviews, though in other studies of medical interactions, especially projects focusing on doctor–patient interactions in US primary care, samples of several hundred consultations have been recorded (Heritage *et al.*, 2007). Frequently, however, projects in other areas content themselves with smaller samples. So sample size is a flexible matter, depending on the nature of the research setting, whether you're conducting undergraduate or postgraduate or funded research, the size of the research team, and so on.
- *Data analysis*: Given restrictions of space, here is a simplified account of four principal stages involved in analyzing data, and arriving at findings about the patterns and practices evident in language use in interaction.

Analyzing data

The **first preliminary stage** of data analysis is to transcribe recordings in considerable detail, to show not only *what* was said but *how* it was said, using symbols to represent features of both the timing of speech and the manner of speaking. For example, transcriptions show overlapping speech between speakers, pauses (timed to tenths of a second), aspects of intonation and prosody (loudness, speaking emphatically, quiet speech), and the way in which speakers often stretch sounds or “drag out” words. A glossary of our transcription symbols is to be found at the end of this chapter. It is generally not practicable to transcribe all one's recordings in full and in detail at the outset of a project, especially if the recorded interactions are over about 20 minutes long; usually researchers will transcribe a small sample (maybe 10%) of the corpus in full, then as the analytic phenomena to be explored come more clearly into focus, particular segments in which those phenomena are identified will be transcribed according to developing lines of inquiry.

The detail with which we transcribe seems often to mystify other scholars, so it's worth explaining briefly why we take such trouble to capture small details that are overlooked in other perspectives. When Jefferson first began to transcribe recordings, she indicated laughter by noting (*laughter*) beside the turn in which someone laughs, a practice that most other perspectives continue to adopt. But Jefferson explained

that it was necessary to transcribe laughter in detail in order to capture precisely the key interactional dimensions of laughter (Jefferson, 1985). Compare, for instance, precisely where in their turns speakers laugh in the following examples:

- (3) [Chicken Dinner] (Four students sitting around eating dinner; Nancy picks up and drinks from another person's wine glass)

1 NAN: Oh so(h)rr(h)y (h)I'm drin[kin your whhɪ](h)[ne
 2 VIV: [ehh heh heh] [You[want=
 3 NAN: °uhh!
 4 VIV: =s[m more Nance?]
 5 NAN: [hɪhh °()uh(h)hn)°
 6 (0.3)
 7 NAN: 'hhɪh (.) No I have my ow:n.

- (4) [NB:II:4:3:SO] (Emma had a toenail surgically removed)

1 EMMA: It's bleeding just a tiny tiny bit has to be
 2 dre:ssed, bu[t uh
 3 NANCY: [Oh::::[:::.
 4 EMMA: [Go:d it was he:ll. uh hahh! ·hhh[hh
 5 NANCY: [What a sha::me.

In (3), Nan laughs throughout her apologetic realization that she's drunk from someone else's glass (the *(h)* aspirations in line 1); but in (4), Emma laughs only right at the end of the continuation of her turn, indeed on completion of that turn in line 4. Notice how different these cases of laughter are, interactionally. When Nan laughingly apologizes for her mistake, her recipient (Vivienne) reciprocates by laughing along with her – indeed Vivienne begins laughing before Nan has finished her “apology” (see line 2) and then plays along by making a joke out of Nancy's having taken someone else's wine. By contrast, Nancy does not join with Emma's laugh or laugh along with her; Emma is reporting a trouble – and systematically when a speaker is telling about a trouble she has, she will often laugh at the end of her turn, or immediately after her turn completion, thereby displaying a kind of resistance to her trouble, or stoicism, whilst the recipient does not reciprocate but rather expresses sympathy, as Nancy does here in line 5 (Jefferson, 1984). If the recipient were to laugh in response, she would be *laughing at* the other's trouble, something that troubles recipients generally avoid doing! So it's crucial not simply to indicate that a speaker laughed, but to show in the transcript precisely where she laughed. The close detail of what's “said,” and how and where it's said, are vital elements in our investigations into what people are doing in interaction, and need to be captured – as far as possible – in transcribing.

In the **second stage** of data analysis, we often focus on specific activities that are especially germane to the interactions under investigation. In a recent project on affiliation in ordinary interactions, we focused on such activities as requesting (Curl and Drew, 2008), offering (Curl, 2006), and complaining (Drew and Curl, 2009). In more “institutional” settings, we are likely to focus on such activities as cross-examination, in courts; instruction, in formal classrooms; patients presenting their concerns, diagnosis, and treatment decisions, in medical interactions; how dispatchers elicit information about an incident, in emergency calls to the police or medical

services; or how interviewees answer or avoid answering questions, in media news interviews (on all these see Heritage and Clayman, 2011). In other studies, it is likely that we focus on activities that are even more specific to the setting in question; for instance, in the study of Jobcentre interviews with benefits claimants, we focused on such key tasks as advisers asking claimants about their job goals or childcare arrangements, or giving information about training opportunities, or concluding a Job Seekers' Agreement with certain claimants.

We make collections of *all* instances of the particular activity we have identified as salient to the participants in the setting, so that our analyses are systematic and not selective – we incorporate all cases rather than focusing on some exemplary or exceptional cases. Thus we examine all the recordings in a corpus in order (i) to identify what are the most salient activities, and (ii) to collect as many cases of that activity as can be found. Quite often, in sponsored research, we are guided by the research questions identified in collaboration with sponsors and other stakeholders, often through ongoing discussions with such parties, ensuring that we address key areas of policy interest.

The **third stage** of data analysis is to examine our collection of cases in detail, the aim being to identify similarities or differences in how a particular activity is accomplished (e.g., differences in words, phrases, or techniques used by advisers). This is crucial because we know from previous CA research that even a difference of a single word can be consequential for the interaction (Heritage *et al.*, 2007). So, for instance, in a study of overt requests in ordinary social interactions, we examined carefully the different ways in which requests were worded or *designed*, comparing particularly the most frequently used forms, namely requests done through imperatives (*Pass me the cauliflower*), with modal forms of the verb (*Could you bring up a letter when you come up*), or with a complement to the verb (*I was wondering if it was possible to see him ...*) (Curl and Drew, 2008).

The significance of the different *turn designs* through which the same actions can be conducted is that certain interactional consequences can follow from the selection of one from among the available turn designs or constructions. The **fourth stage** of data analysis is then to assess the impact or interactional consequences of speakers' selections of different turn designs – or more broadly, perhaps, to explore and identify the particular sequential and interactional environment in which a particular construction form is systematically used, or identify the “selection criteria” underlying the ways in which participants select from among the available forms. For instance, we showed that the three most frequently occurring constructions for making offers in English – the conditional (*if your husband would like their address, (then) my husband will give it to him*), declarative or assertive forms (*I'll take her in*), and “Do you want me to” (*Do you want me to bring the chairs?*) – occur systematically in a particular sequential environment, as summarized in Table 15.1.

Also we showed that the different overt request forms grammaticalize and embody two principal dimensions: the *entitlement* to make the request and the *contingencies* or lack of contingency that the requestor anticipated might be involved in – or get in the way of – granting the request. These dimensions are associated with different request forms as summarized in the cline shown in Figure 15.1.

In studies of institutional and workplace settings, an analytic strategy is to identify the different constructions used to conduct a certain action, such as advisers asking claimants about their job goals; and then to compare all instances of one approach

Table 15.1 The three most frequently occurring constructions for making offers in English (summarizing Curl, 2006)

Conditional forms	<i>If you would ... then I will ...</i>	(Self-focused) Reason for call	Beginning of call or topic initial
Declarative or assertive forms	<i>I'll do X</i>	Interactionally generated, by what recipient just said	<i>Explicit</i> trouble reported in adjacent <i>prior turn</i>
Interrogative <i>Do you want</i> forms	<i>Do you want me to</i>	(Other focused) Not interactionally generated	Educed from possible trouble <i>implicit earlier</i> in the conversation (e.g., several minutes earlier)

(i.e., construction or format) with all those of another(s), to explore whether they had different interactional outcomes. The aim is to see how the interaction progresses, whether in cooperative, collaborative ways or whether it runs into difficulties of confusion, misunderstanding, or misalignment. In this way, we aim to identify whether different constructions or strategies have different consequences for the progression of the interaction (and hence might even be considered more “effective” in achieving positive communicative progress in certain settings).

Just before we go on to consider how the design of certain actions might have consequences for the ways in which the interaction proceeds or progresses, it is worth summarizing and highlighting the steps we have taken so far in the research process.

Stages in the research process

- 1 Having decided on the research setting – e.g., informal social interaction, medical consultation, the workplace – identify specific appropriate site of interaction.
- 2 Usually it will be necessary to negotiate access to the specific site (often lengthy and difficult in clinical settings), following the relevant ethics rules (obtaining subject consent, etc.).
- 3 Record an appropriate and sufficient sample of interactions (for ordinary social interactions, roughly 10 hours is about right). Always try to video record face-to-face interactions.
- 4 Transcribe a small sample of your recordings in full detail. Thereafter transcribe as time allows, focusing especially on the segments that, as your research develops, emerge as especially relevant.
- 5 Focus on specific activities that seem most salient or analytically interesting. Collect all the instances you can find in your data corpus of that activity.
- 6 Look for any differences there might be in the specific design of the turn(s) in which those activities are managed or conducted.

High entitlement/ low contingency <i>Imperatives</i>	<i>I need you to ...</i>	<i>Modals (Could, etc.)</i>	High contingency/ low entitlement <i>I wonder if ...</i>
--	--------------------------	-----------------------------	--

Figure 15.1 A continuum or cline of request forms (summarizing Curl and Drew, 2008)

Now we move to the next stage, which is to investigate whether different patterns are associated with any differences in activity design.

Interactional Consequences of Different Action Constructions: Some Illustrations

It is worth emphasizing that this simplified, almost schematic account of the research process cannot capture the nuance and variety of some CA research strategies. Nevertheless, it represents a pathway followed by some significant recent CA research into the basic mechanisms and processes of ordinary social interaction, as well as the more specialized practices to be found in certain ethnographic or institutional and workplace settings. At the heart of this research process or strategy are three key concepts: *Action*, *(Turn) Design*, and *Sequence*.

Action

We focus on the action that participants are conducting in the setting, or more properly are recognized by one another as being engaged in. Many of these actions are recognizable as “speech acts” (Searle, 1969), such as promises, requests, offers, directives, and the like. Others may be labeled simply enough, such as agreeing, confirming, or acknowledging; whilst for other actions there may be no convenient or conventional label, such as the kind of activity that Schegloff termed “confirming allusions” (Schegloff, 1996), or a kind of discourse particle that Heritage termed a “change-of-state token” (Heritage, 1984a). When we investigate more ethnographically or institutionally specialized settings such as criminal courts, emergency calls to the police or health services, medical consultations, or interviews with benefits claimants in Jobcentres, then we focus on the kinds of specialized actions or activities associated with such settings, such as cross-examining, reporting an incident, examining the patient and diagnosing, or asking about the claimant’s job goals.

(Turn) Design

We have seen that requests are commonly designed either as imperatives, or with modal forms of the verb (*can you ...*) or with a conditional preface *I wonder if ...*; and that offers are most commonly made using one of three quite different constructions. Speakers design their turns by selecting from among such forms – and they do so on the systematic basis of the sequential position in which the offer is

being made. Turn design embodies speakers' orientations to *what* they are doing – that is, to the action(s) they are conducting in a turn – *where* in a sequence they are conducting that action/taking the turn, and *to whom* the turn is addressed, that is, *recipient design* (Drew, 2012). Turn design refers to the construction of a turn-at-talk using a range of linguistic resources or components, including word selection, syntactic and grammatical features, phonetic and prosodic resources, other non-lexical features of “language” (such as aspiration and laughter), and (in face-to-face interaction), gaze, posture, bodily orientation, and the like.

Sequence

Turns at talk are connected to and generate *sequences* of turns, in which each turn both “responds” in some fashion to the prior turn, and sets up the context for another speaker’s next and responsive turn. There are certain “constraints” on what should be done in a contiguous, next turn, with respect to a recipient’s understanding of what the prior speaker was “doing” in their turn and responding appropriately to that action (on contiguity, see Sacks, 1987) – especially those constraints associated with adjacency pairs. The recipient of a question, for instance, should respond by answering; the recipient of a request should either grant or reject the request; and the recipient of an invitation should either accept or decline that invitation (on adjacency pairs see Heritage, 1984b: 245–253; Sidnell, 2010: chapter 4). Where alternative responses to such “first pair parts (actions)” are possible, and these alternatives are either “positive” (acceptances, grantings, agreements, etc.) or “negative” (rejections, declinations, disagreements, etc.), there is a “preference” (structural, not psychological) for the positive response (Sidnell, 2010: chapter 5).

Sequences of adjacent turns and actions build progressively into other more complex patterns. Thus whilst (adjacent) turns at talk are the building blocks of conversation, and turn taking the most basic process (hence the extended research effort into the management of turn taking, turn holding, and many other aspects of turn transfer), our research focus is always the interconnections between action, turn, and sequence – and particularly the sequential consequences of speakers’ selections of particular design formats for given actions.

For example, consider the moment when the patient in ordinary general practice enters the consulting room, sits down, and is asked by the doctor what the problem seems to be. The doctor’s *opening inquiry* about what’s wrong is done in a turn that can be constructed in different ways, the two most common (in US medicine) being a closed-form inquiry in which the doctor reads a patient’s presenting concern(s) from their notes, thus:

(5) [From Robinson and Heritage, 2005: 484]

Doc: It’s in your left leg, that’s botherin’ ya.

An alternative format is to ask the patient a relatively open question, such as *What seems to be the matter?*, *What brings you in today?*, or *What can I do for you today?*, illustrated in the following example.

(6) [From Robinson and Heritage, 2005: 485]

DOC: An' what can we do for ya today.

Doctors have available these “closed” and “open” forms of opening inquiry, the choice between them being habitualized for certain doctors, whilst others may more freely choose between them on particular occasions. The real significance is that these formats have different *sequential consequences*; that's to say, they generate different kinds of sequences. Looking again at how the sequence develops after the doctor's closed-format inquiry in (5), we see that the patient *confirms* the doctor's account of the problem, simply by nodding her head. (Doctors' inquiries in these examples are highlighted, and patients' responses are boxed.)

(5) continued [From Robinson and Heritage, 2005: 484]

1 DOC: It's in your l:eft le:g, that's [botherin' ya.
 2 PAT: [(([3 nods])
 3 DOC: You were running an' felt (a:/uh:) like = a ya got hit there

The same pattern is evident in (6), in which the patient confirms verbally, though only minimally (line 2); notice that in the subsequent interaction, the doctor is content with only minimal answers by the patient (e.g., see the doctor's intervention in line 5 after the patient's minimal confirmation (line 4)).

(6) continued [From Heritage and Robinson, 2006: 95]

1 DOC: Okay so this last time for three da:ys, .hhh an' you're having body a:ches
 2 PAT: Y[ea:::
 3 DOC: [You're feeling we:ak, .hh uhm any other symptoms, right
 4 PAT: =N:o: [it's just that I woke-
 5 DOC: [Fe:ver::-
 6 PAT: N:o uh no fever

The sequential consequences of using the open-form inquiry are, by contrast, quite different. Here's what happens after (6) above:

(7) [From Robinson and Heritage, 2005: 485]

1 DOC: An' what can we do for ya today.
 2 PAT: .hh Well I was here on September =h twenty third because I had
 bronchial (.)
 3 an' I was put on z:i
 4 DOC: [Mm hm
 5 PAT: . hh thuh following: tuesday wednesday I had such a sore throat I could
 hardly
 6 swallo[w
 7 DOC: [Mm hm
 8 PAT: .th I came i:n fo:r a culture an' it was negative . . ((continues))

The patient is in quite a different position here; instead of just confirming the doctor's account of her problem, the patient launches an extended narrative about her problem – which is just what the patient does in this next example, also in response to the doctor's open-form inquiry.

(8) [US: Primary Care: Shoulder Pain]

1 DOC: So what can I do for you today.

2	PAT:	W'll- (.) I h <u>a</u> ve (.) som:e sh <u>o</u> ulder pa:in
3		a:nd (0.2) a:nd (.) (from) the t <u>o</u> p of my a:rm. a:nd (0.2)
4		thuh reason I's here is because > a couple years
5		ago < I had frozen shoulder in thee o <u>o</u> ther a:rm, an'
6		I had to have s <u>u</u> rger <u>y</u> . and = () this is s <u>t</u> arting to
7		get s <u>t</u> uck, and I want to s <u>t</u> op it before it gets stuck.

In each case, the patient prefaces her narrative account with *Well* (line 2 in each case), indicating that this will take some time to tell (Heritage, personal communication). So the same action – the doctor's opening inquiry – can be done using different construction formats. The different formats have contrasting sequential consequences; in response to the closed format, patients confirm (minimally) the doctor's account, whereas in response to the open format, patients give extended narrative accounts of their medical problems (a pattern that is highly associated with patient satisfaction, and hence with treatment adherence; Robinson and Heritage, 2006). But the principal point here is that action, turn design, and sequence are interlocked in such a way as to have consequences for the progressive unfolding of interaction.

Before illustrating this connection between action design and sequence further, let us just recap the key points that you might apply to your own research.

Action, turn (design), and sequence

- 1 Focus on some key actions or activities in the setting you're investigating.
- 2 Identify the different ways in which these "same" actions may be designed: What are the different ways in which the actions are worded? Are there any apparent paralinguistic differences?
- 3 What is the recipient's immediate response to each of the action designs you have identified? How does the sequence progress and unfold? Do there appear to be systematic differences between the action designs in terms of the sequences that follow?

Reflecting on these steps, you will perhaps appreciate the importance of working from recordings of more than one interaction; a sample, even if you are able to record only a limited sample (for instance if you're doing this for a student project), will provide you with evidence that does not depend on the possible habits of a single speaker. You're trying to explore the *general* ways in which certain actions are conducted and designed, and the *general* interactional consequences of the use of a particular form of an action.

Another Illustration of the Sequential (Interactional) Consequences of Different Action Designs

Returning to the sequential and interactional consequences of different formats used to conduct the same action, let us consider another illustration from the study of interviews with benefits claimants in (UK) Jobcentres. There is a particular moment during “work-focused interviews” with single parents claiming Lone Parent benefits, in their (usually) six-monthly Jobcentre interview, when the adviser asks the parent about her or his work plans. Again, we found two distinct constructions:

(9) [030: Lone Parent WFI]

- 1 PA: .hhh Right. So- I mean: (0.3) .klh Ou (0.2) > Obviously
 2 you're looking for a place to live and that's your
 3 priority. and getting your money sorted is < your priority
 4 at the moment[:. >.hhh < I mean (0.1) wha- once all every-
 5 CLA: [Yeah
 6 PA: everything's settled down what are your plans:
 7 What are you thinking you might do, >°*I mean*° < Are you
 8 looking for work[, at the m[oment.

9 CLA:	[>.hh < [No not at the (moment me)
--------	------------------------------------

- 10 (0.3)
 11 PA: Rig[ht.
 12 CLA: [K-
 13 CLA: ((Name)) (.) s:he's only one 'n a half so . .

(10) [087: Lone Parent WFI]

- 1 PA: Okay. Right. Now w- (0.7) one of the key things we,
 2 talk about in these interviews is what your future plans
 3 are with regards to work especially. And have you worked
 4 before?

5 CLA: Just as a training hairdresser

6 PA: Right, okay. And have you got any plans to go back to
 7 work in the, the future?

8 CLA:	I was thinking about going back to college when
9	(daughter's name) started school next September

- 10 PA: Right
 11 CLA: To finish me college course
 12 PA: Excellent, right. So was that a hairdressing course that
 13 you were doing at college? . . ((continues))

The difference between the (highlighted) inquiries will be plain to see, as will the differences between the claimants' responses. In (9) the adviser asks whether the claimant/parent is looking for work *at the moment* (line 8), whereas in (10) the adviser asks whether the parent has any plans to go back to work *in the future* (lines 6–7). The claimant answers negatively in the first of these examples (again, see her

boxed response in line 9) and positively in the second (lines 8–9). This pattern of response was evident across our data (see Drew *et al.*, 2010, especially chapter 5): when advisers asked whether claimants were looking for work *at the moment*, claimants almost invariably replied that they were not, but when instead advisers asked about future plans, claimants – again, almost invariably – said that they did have plans to go back to work and began to expand on those plans.

The different responses generated by the different forms in which the inquiry was made were enormously consequential for these interactions. When claimants answered negatively, this closed down all further talk about “looking for work.” But when claimants answered positively, this enabled the adviser to pursue ways in which the benefits system could assist the claimant in preparing herself for work, by providing childcare, by allowing part-time employment without compromising the benefits received, by financially supporting relevant training, college courses, and so on. In short, the latter future-oriented format was more effective in opening up discussion about gaining appropriate training and work experience. Here just a phrase made a world of difference in how these interactions played out. (For a similar observation about the dramatic difference one word can make – the difference between *anything* and *something* – in doctors’ closing inquiries in primary care consultations, a difference that impacts the extent to which the patient’s agenda is fully discussed, see Heritage *et al.*, 2007.)

Quagmires and Troubleshooting

It is really very important not to be intimidated by anticipating difficulties – of course there will be difficulties, but try to focus instead on what *is* possible, what you *can* do! Most of what pass as “difficulties” are in the researcher’s head, not really in doing the research.

Having said that, here are some of the principal difficulties researchers in CA seem to experience – with some tips to overcome them:

- *Gaining access to record in the desired research site.* It is generally easier than you might imagine to negotiate access. Be bold and charming, be succinct, and be as careful as you can be of people’s concerns. In particular, make it clear that whatever the research, you are not judging or assessing any individual’s ability of efficiency or effectiveness. It may take some time to get the access you want (it took a research student of mine a year before she was able to get access to record interactions between lawyers and suspects in the police station after being arrested; but when she did get access, she obtained fabulous data, and wrote a wonderful dissertation on lawyer–client interaction: Halldorsdottir, 2006).
- *What do I focus on? What shall I study?* Sometimes you’ll have decided, prior to recording your data, what specifically you’ll focus on, and be investigating. However, it’s an advantage in CA not to have decided that in advance; our research tends to be inductive – we collect the data, then consider what seems to be going on, what actions are people engaged in in this setting. When you can identify some particularly interesting or salient actions, then you can begin to follow the steps outlined above. Be guided by what goes on in your data, by what participants are doing.
- *How many examples do I need?* I have already suggested that there’s no simple answer to the question of how much data do you need, or how many examples.

If you're working on ordinary social interaction, 10 hours of recordings is often considered about right. Be aware, though, that there can be differences in the kinds of actions to be found in telephone conversation, as compared with face-to-face interaction. For instance, people commonly phone one another up to invite them for something, or offer them something; these actions cluster in telephone calls but are much less common face to face. Whatever it is you're focusing on, collect *all the instances* you can find in your corpus of that action or phenomenon; don't be selective, because that will compromise the representativeness of your data.

If you are investigating interactions in institutional or workplace settings, for instance in medical interactions or business meetings, you are likely to have to be pragmatic about "how many." It can be a matter of how many you'll be permitted to record or how long it can take to get the right "kind" of interaction (for example, it has taken us about 18 months to record a sufficient sample of 50 cases in neurology clinics of seizure patients accompanied by a relative or friend – the majority were unaccompanied). Also, many institutional and workplace interactions are long, and consequently can take a long time to transcribe. You need to judge how many hours or interactions you need given time constraints, and in relation to the funder's expectations (the Department of Work & Pension's statisticians were appalled when we suggested that we needed to record "only" 200 interviews with claimants).

Project Ideas

The inclination on the part of students and experienced researchers alike is to study a topic or subject that has previously been studied: there will be some "model" of how to approach the topic in question, there's a literature, there are concepts in place, there's safety and security in an approved or tried and tested approach. My advice is DON'T – don't pick topics that have been worked over already. As far as possible, steer clear of topics that have already been explored in the research literature and choose something fresh, something *you* have noticed or found in *your* data. Given that, it seems paradoxical, almost oxymoronic, to suggest some topics; nevertheless here are some.

- 1 You may notice that sometimes when people apologize, in English, they say "Sorry" (as in "Oh so(h)rr(h)y (h)I'm drjnk'n' your whh(h)ne," in (3) above) and sometimes they say "I'm sorry" (as in "I'm sorry I didn't call but ...") – the difference being that in the latter full form the speaker uses the pronoun, but in the former short form the pronoun is omitted. Explore the other differences in turn construction that may be associated with these different formats. Explore also, and especially, the different circumstances in which each is used – in other words, why use one form rather than the other?
- 2 When they are working together in a kitchen, people sometimes ask one another to do something or help with something (e.g., "Would you open this can for me?"). But much of the time one participant may help or assist another without having been explicitly asked. How did that come about? Did the one who is assisted indicate that they needed help, or was there something that alerted the other to some need? Compare explicit requests for assistance with those cases where no explicit request was made.

- 3 Record two or three meetings in some workplace setting. Identify places where participants make *proposals*. Consider what makes them proposals – rather than offers, for instance. Look carefully at the precise ways in which the proposals are designed. Are there differences, and can you sort them into groups on the basis of some differences in design? Then examine the sequences in which the different format types are used, to investigate whether different design forms are associated with particular sequential or interactional environments.

Transcription Conventions

Co:/Pt:	Speaker labels (Co: = counselor; Pt: = patient)
=	Links talk produced in close temporal proximity (latched talk)
><	Talk between symbols is rushed or compressed
°°	Encloses talk which is produced quietly
Underline	Underlining used to mark words or syllables which are given special emphasis of some kind
CAPS	Words or parts of words spoken loudly marked in capital letters
s::::	Sustained or stretched sound; the more colons, the longer the sound
. ? ,	These are not used as punctuation markers. Instead a stop indicates falling intonation; a question mark indicates rising intonation over a word; and a comma indicates a slight hitch, a brief rising intonation at the end of a word
.hhh	Inbreath, the number of <i>hs</i> representing, in some approximate fashion, the length of the outbreath (it's sometimes said that each <i>h</i> represents a tenth of a second)
hhh.	Outbreath, the number of <i>hs</i> representing, in some approximate fashion, the length of the outbreath (it's sometimes said that each <i>h</i> represents a tenth of a second)
[]	Encloses talk produced in overlap (i.e., when more than one speaker is speaking)
(word)	Parentheses indicate transcriber doubt
(this/that)	Alternative hearings
((description))	Description of what can be heard, rather than transcription, for example, ((shuffling papers))
cu-	Cut-off word or sound
(0.6)	Silence in seconds
(.)	Silence of less than two-tenths of a second
^ or -	Indicates marked pitch rise
-	Indicates marked fall in pitch
(hhenhh)	Indicates laughter while speaking (aspiration)

Further Reading and Resources

- Drew, P. 2005. Conversation analysis. In *Handbook of Language and Social Interaction*, ed. K.L. Fitch and R.E. Sanders, 71–102. Mahwah, NJ: Lawrence Erlbaum.
- Heritage, J. and Clayman, S. 2011. *Talk in Action: Interactions, Identities, and Institutions*. Oxford: Blackwell.
- Sacks, H. 1992. *Lectures on Conversation*, vols. 1 and 2, ed. G. Jefferson. Oxford: Blackwell.
- Sidnell, J. 2010. *Conversation Analysis*. Cambridge: Cambridge University Press.

References

- Curl, T.S. 2006. Offers of assistance: constraints on syntactic design. *Journal of Pragmatics* 38: 1257–1280.
- Curl, T.S., and Drew, P. 2008. Contingency and action: a comparison of two forms of requesting. *Research on Language and Social Interaction* 41: 1–25.
- Drew, P. 1997. “Open” class of repair initiators as responses to sequential sources of troubles in conversation. *Journal of Pragmatics* 28: 69–101.
- Drew, P. 2012. Turn design. In *Handbook of Conversation Analysis*, ed. J. Sidnell and T. Stivers, 131–149. Oxford: Wiley-Blackwell.
- Drew, P. and Curl, T.S. 2009. “Going too far”: complaining, escalating and disaffiliation. *Journal of Pragmatics* 41: 2400–2414.
- Drew, P., Toerien, M., Irvine, A., and Sainsbury, R. 2010. *A Study of Language and Communication Between Advisers and Claimants in Work Focused Interviews*. London: HMSO, DWP Research Report 633.
- Halldorsdottir, I. 2006. *The Client’s Instructions: Lawyer–Client Interaction and Criminal Defence Case Preparation*. PhD dissertation. University of York.
- Heritage, J. 1984a. A change-of-state token and aspects of its sequential placement. In *Structures of Social Action*, ed. J. Maxwell Atkinson and J. Heritage, 299–345. Cambridge: Cambridge University Press.
- Heritage, J. 1984b. *Garfinkel and Ethnomethodology*. Cambridge: Polity Press.
- Heritage, J. and Clayman, C. 2011. *Talk in Action: Interactions, Identities, and Institutions*. Oxford: Blackwell.
- Heritage, J. and Robinson, J. 2006. The structure of patients’ presenting concerns: physicians’ opening questions. *Health Communication* 19(2): 89–102.
- Heritage, J., Robinson, J.D., Elliott, M.N., Beckett, M., and Wilkes, M. 2007. Reducing patients’ unmet concerns: the difference one word can make. *Journal of General Internal Medicine* 22: 1429–1433.
- Jefferson, G. 1984. On the organization of laughter in talk about troubles. In *Structures of Social Action*, ed. J. Maxwell Atkinson and J. Heritage, 346–369. Cambridge: Cambridge University Press.
- Jefferson, G. 1985. An exercise in the transcription and analysis of laughter. In *Handbook of Discourse Analysis. Vol. 3: Discourse and Dialogue*, ed. T.A. van Dijk, 25–34. New York: Academic Press.
- Labov, W. 1991. *Sociolinguistic Patterns*, 11th edn. Philadelphia: University of Pennsylvania Press.
- Robinson, J.D. and Heritage, J. 2005. The structure of patients’ presenting concerns: the completion relevance of current symptoms. *Social Science and Medicine* 61: 481–493.
- Robinson, J.D. and Heritage, J. 2006. Physicians’ opening questions and patients’ satisfaction. *Patient Education and Counseling* 60: 279–285.
- Sacks, H. 1987. On the preferences for agreement and contiguity in sequences in conversation. In *Talk and Social Organisation*, ed. G. Button and J.R.E. Lee, 54–69. Clevedon, UK: Multilingual Matters.
- Schegloff, E.A. 1996. Confirming allusions: toward an empirical account of action. *American Journal of Sociology* 104(1): 161–216.
- Schegloff, E.A. 2004. On dispensability. *Research on Language and Social Interaction* 37(5): 95–149.
- Searle, J.R. 1969. *Speech Acts: An Essay in the Philosophy of Language*. Cambridge: Cambridge University Press.
- Sidnell, J. 2010. *Conversation Analysis*. Cambridge: Cambridge University Press.

16 Geographical Dialectology

David Britain

The Dialectologist in Space	247
Traditional Dialect Geography	247
Geolinguistic Dialectology	251
Reviewing the Methodological Process: Weighing up and Compromising	255

Summary

This chapter considers the methodological decisions that need to be taken when conducting dialectological research on multiple geographical locations. Geographical dialectology is the oldest branch of dialect study and has made important contributions to sociolinguistics. This chapter presents the methods used in the pre-sociolinguistic era as well as more recent approaches. The student researcher needs to understand this range of methods in part because some of the earlier methods have survived to the present day. Additionally, we can problematize and critique the many different ways of deciding how to examine a particular region dialectologically, how to appropriately select speakers, and how to capture appropriate language data from them.

Research Methods in Sociolinguistics: A Practical Guide, First Edition.

Edited by Janet Holmes and Kirk Hazen.

© 2014 John Wiley & Sons, Inc. Published 2014 by John Wiley & Sons, Inc.

The Dialectologist in Space

This chapter examines how linguists have investigated the very obvious fact that different places house different dialects. We will look neither at the results of such work nor how they have been used to answer linguistic and sociolinguistic questions (see Britain, 2009, in press). Here, we simply examine the steps dialectologists take and have taken to conduct multi-locality research on language variation. In order to do so, five studies from different time periods are presented and critiqued, examining a number of key methodological elements in each:

- 1 The aim of geographical dialectology is to examine variation across space, in different places. How do dialectologists then decide *which places in that space to analyze*? Why choose one village and not its neighbor? Why avoid that city? This question goes to the very heart of the geographical motivation of the research.
- 2 What sorts of *speakers* will be sampled from these locations?
- 3 What type of *data* is to be collected from these speakers?
- 4 In what circumstances is that data to be *recorded*? Who will collect it, in what setting, and how will the voices of the speakers be captured for later analysis?

As we will see, dialectological methodologies always involve compromises; no approach is ever flawless. Ultimately, a good number of difficult practical decisions have to be taken – how long can this research take, and what are the financial restrictions on the project? As we will see, geographical dialectology is probably the most expensive and the most time consuming of all forms of language variation research.

In many ways, geographical dialectology has played a relatively peripheral role in linguistics. Alexander Ellis, one of the most prolific early dialectologists of English, lamented that “collecting country words is looked upon as an amusement, not as laying a brick in the temple of science” (1874: 1087).

Traditional Dialect Geography

Non-sociolinguistic approaches to the study of the geographical distribution of dialect forms have a remarkably long history, though detailed and systematic studies do not begin until the second half of the nineteenth century. In order to examine the methods applied in traditional dialectology, we'll consider two studies, one from the late nineteenth century and one from the mid-twentieth century. Although the two differ in many ways, there are some common methodological principles that both share.

Ellis's On Early English Pronunciation, Part 5

Alexander Ellis was the first to produce a comprehensive dialectological survey of the English of the British Isles. His aim was to “determine with considerable accuracy the different forms *now* or *within the last hundred years* assumed by the descendants of the same original word in passing through the mouths of uneducated people, speaking an inherited language, in all parts of Great Britain where English is the ordinary medium of communication between peasant and peasant” (1889: 92, emphasis in the original). He developed a battery of reading tasks, including long (the “Comparative Specimen”; 1889: 7) and short (the “Dialect Test”; 1889: 8) reading passages and extensive word lists.

The lists and passages were sent to various contacts across the country, mostly clergy, who were asked to “translate” (1889: 1; inverted commas in the original) them “into the idiom and pronunciation of the place.” He eventually gathered information – “transcriptions” of peasants’ dialect – from 811 people in 1145 locations (Ellis, 1889: xvii). Ellis often sent out a helper, Thomas Hallam, who was able to travel to several of the locations from which “translations” had been sent, in order to check and fine-tune them.

There are a number of methodological problems with this whole approach:

- The eventual sample was geographically unevenly distributed. Ellis sent out 1700 copies of the word list, but only 500 were returned (1889: 3).
- From some locations he was able to get detailed translations of his entire battery of reading passages and word lists, but from others he sometimes received very little data, perhaps just the Dialect Test or just a few local words and phrases.
- The speaker sample is poorly defined – beyond the specification that the transcriptions should be rendered into the speech of “uneducated peasants,” no other criteria are set.
- The people asked to “translate” local speech into orthography had no linguistic training. There was, at the time, no IPA (International Phonetic Alphabet), and although Ellis had invented his own “palaeotype,” knowledge of it was extremely restricted.
- We have no way of knowing how accurate the transcriptions were because we have no sound recordings from this period. These transcriptions cannot now be checked.

It is likely that whenever the “peasants” were talking to the clergy, they wouldn’t have spoken in the same way as they spoke to each other, but would have accommodated their speech in the direction of the vicars’ almost certainly more standard dialects.

It is important to remember, however, that this research was conducted in an era that could only dream of the technological advances that we take for granted today. There were, obviously, no voice recording devices and no computers onto which recorded speech could be digitized; there were also no cars, no phones, and no household electricity. Ellis was an extremely sensitive dialectologist, however, and was fully aware of many of the problems with his research. He recognized that his approach failed to adequately access grammatical variation, because too few of the “translators” did more than a phonetic representation of the text presented to them. He recognized, furthermore, the problem of getting clergy to do his translations: they were not users of the dialect themselves

and had “only more or less observed what was said” (1889: 3); they all “spoke ... ‘received pronunciation’ ... and endeavoured ... to impart their impressions of dialectal pronunciation ... by means of ‘received orthography’. Here were many possible sources of error” (1889: 3). Finally, he was, over 60 years before Labov’s early work, fully conscious of the observer’s paradox: “But why not go to the peasantry at once? ... the peasantry throughout the country have usually two different pronunciations, one which they use to one another, and this is that which is required; the other which they use to the educated ... is absolutely worthless for the present purpose” (1889: 3–4).

Survey of English Dialects (*Orton et al., 1962–1971*)

The *Survey of English Dialects* (SED) was originally conceived in 1946, its aim being “the compilation of a linguistic atlas of England” (Orton, 1962: 14), which was eventually published over 30 years later (Orton, Sanderson, and Widdowson, 1978). Across England, 311 locations were chosen, with preference given to “agricultural communities that had had a fairly stable population of about five hundred inhabitants for a century or so ... newly built up locations were always avoided” (Orton, 1962: 15). Unlike Ellis, the SED sought a very much more specific sort of informant:

elderly speakers of sixty years of age or over belonging to the same social class in rural communities, and in particular by those who were, or had formerly been, employed in farming, for it is amongst the rural populations that the traditional types of vernacular English are best preserved to-day ... They were mostly men ... dialect speakers whose residence in the locality had been interrupted by significant absences were constantly regarded with suspicion. (1962: 14–16)

Once in an appropriate locality, such speakers were sought by inquiring with locals to determine the most suitable people. Data were collected in people’s homes, and interviewers were told to adopt the pupil role in a master–pupil relationship.

It was the focus on Non-mobile, Old, Rural Men that led Chambers and Trudgill to label this sort of informant, typical of traditional dialectological work of the time, as NORMs (1980: 33). There is, then, a much more focused (and therefore comparable) set of speakers in the sample – overwhelmingly the data compares NORM with NORM.

In each of the 311 locations, a questionnaire was administered by one of 11 field-workers (1962: 33). The questionnaire contained over 1300 items, grouped into different themes and targeted at not just phonological, but also grammatical and lexical variation. Unlike in Ellis, “never is the informant asked to translate any word, phrase, or sentence into his vernacular” (1962: 14). Instead, the questionnaire includes questions to answer, such as (1) below (all examples are from Orton, 1962: 49–101); gaps to fill (2–3); items on pictures or actions; or items to identify (4–5). In each case, there was a default answer (in parentheses below), but naturally and expectedly, replies often diverged from this, providing the survey with examples of lexical variation.

Some questions from the SED questionnaire:

- 1 What is left in a cornfield after harvesting? (stubble);
- 2 A hen that wants to sit, you call a ... (broody hen);
- 3 I’m old fashioned: I’ve always done it that way and I think I always ... (shall);

- 4 Show an aerial photograph of a farmstead and surrounding fields: ... these? (fields); ... this? (farmstead); ... this? (farmyard); ... this? (stackyard);
- 5 What am I doing now? (hiccupping).

Orton admitted that the questionnaire was “‘archaic’ rather than the up-to-date type” (1962: 46). Answers to each question in the questionnaire were transcribed on the spot into IPA. For very practical reasons, then, answers to the questions were designed to be short, so the interviewer could (in theory) retain the reply long enough to transcribe it accurately. The administration of each questionnaire was extremely time consuming: “under favourable conditions ... each of the nine sections ... of the questionnaire took at least two hours to answer. But the whole questionnaire could be recorded satisfactorily and conveniently in some four days” (1962: 17). Tape recordings of spontaneous speech were also made of the “unscripted speech of suitable informants” (1962: 19) – extracts of these recordings can be heard on the British Library’s web site.¹ However, in what were early days, technologically, for voice recording, there were difficulties both with the quality and storage of the data (1962: 19–20).

As with Ellis, we can point to some methodological problems with the approach that was taken:

- The sample is more clearly defined than Ellis’s, but nevertheless it focuses on the idealized, “authentic,” but ultimately mythical character of the NORM.
- As before, the interviewers were educated strangers in the eyes of the informants – we do not know whether what was captured was, to use Ellis’s phrase again, “the ordinary medium of communication between peasant and peasant.”
- The questionnaire usually elicits just one response to each question. But how typical is that one response of that informant’s speech (even to strange interviewers) more generally?
- These data, short one- or two-word answers, transcribed on the spot, cannot tell us about the characteristics of vernacular rapid and continuous speech in these communities.
- Without recordings of the questionnaires, it is impossible to check the transcriptions of the fieldworkers or to re-examine the original voices.
- A number of dialectologists have questioned both the transcription consistency and accuracy of some of the fieldworkers as well as their ability to elicit vernacular speech (see, for example, Trudgill, 1983: 35–41).

The SED has been hugely influential. It remains the most recent systematic survey of the dialects of England and serves as an incredibly detailed resource and reference point for early twentieth-century speech. As well as leading ultimately to the production of the *Linguistic Atlas of England* (LAE), it has enabled a whole host of other cartographical investigations, popular and academic (e.g., Upton and Widdowson, 2006; Shackleton, 2010).

It is clear that the traditional dialectological research exemplified above approaches data collection in ways that appear often deeply problematic. We must, however, understand this work within its own sociohistorical context. Traditional dialectologists are hardly to blame for not being able to provide crystal-clear digital recordings. Their informant sampling was limited to what they considered the most “authentic” dialect speakers in the community, and whilst the sample in individual locations is limited, both numerically and socially, this tradition is unsurpassed in its sheer scale.

We will revisit how these methodological questions might affect your own research in more detail later in this chapter, but for now we can point to the following advice:

- Since recording devices are now so widely available, the default should be that your interviews are recorded, and there should be a very good reason if you decide not to do so. Although some types of study may not appear to require recording (some might say that studies of lexical variation fall into this category), the fact that recordings provide a permanent record of the data collection that can be checked later makes them an invaluable resource and enables others to validate your findings.
- Always conduct the fieldwork in the same way in each location – record the same sorts of speakers in each place; if you are using word lists and reading passages, make sure everyone in your sample reads them – direct comparability between locations is very important.
- What sorts of people will fill your sample: NORMs or a more varied sample of the population (see the box *Choosing informants*)?
- Word lists can provide examples of individual words in isolation, but ensure that you collect fluid speech from your speakers, too.

Choosing informants

The traditional dialectologists are often criticized for their focus on NORMs, but all geographical dialectologists have had “ideal,” “prototypical” dialectological informants in mind when they have done their work (see Eckert, 2004). When you conduct your research, consider how “native” your informants should be to the cities, towns, and villages you are studying. Is it enough that they went to school in the community, or should they actually have been born there? Some researchers have found that if an informant’s parents were not born in the community, they are unlikely to ever acquire the finer details of the traditional local dialect. Others have argued that we need to include non-natives to a community because linguistic changes may begin in these non-native groups and spread to the locals. Think about how this issue might affect your communities and how you might deal with it.

Geolinguistic Dialectology

Spatial dialectology in the sociolinguistic tradition brings with it all of the theoretical assumptions and data collection methods of Labovian sociolinguistics (e.g., Schilling, 2013). It assumes the central role of the linguistic variable as a tool to describe and measure variable linguistic structures. It assumes the primacy of relaxed and informal, mundane conversation as the most systematic and regular form of speech, the type to collect in order to investigate the orderly heterogeneity of the speech community. And it assumes a somewhat more sociologically sensitive speaker sampling, expanding the criteria for deciding who is and who is not an appropriate speaker and examining how language variation and change are embedded in different groups in society. Many of the methodological tools, then, come from sociolinguistic dialectology (see Hoffman,

Dodsworth, and Mesthrie, this volume). What is specific, though, is the motivation for geolinguistic dialectology and how locations are sampled. In order to examine this, three case studies will briefly be discussed.

Trudgill's geolinguistics of southern Norway

One of Trudgill's goals in his early geolinguistic work was to "arrive at an understanding of the sociolinguistic mechanisms that lie behind the geographical distribution of linguistic phenomena, the location of isoglosses, and the diffusion of linguistic innovations" (1983: 54). Traditional dialectologists had collected lots of data, but to put it very simply, all they had done with it was to show it off; they hadn't sought theoretically motivated explanations for the spatial patterns displayed in their atlases. Trudgill argued, furthermore, that dialectologists' selection of locations needed to be much better motivated to enable such explanation.

Arguing that dialectologists should learn more from geographers, he therefore adopted geographical sampling methods used by Hägerstrand, a Swedish human geographer (e.g., 1952). Hägerstrand had mainly been interested in the geographical spread of the purchase of technological innovations (for example, car ownership in early twentieth-century southern Sweden). Trudgill took his sampling approach and applied it to the geographical spread of the adoption of innovative phonological forms in southern Norway. This involved, first, dividing the area under investigation into a number of areas of uniform size and shape (Trudgill, 1983: 67). Trudgill then placed a hexagonal grid over the area to be investigated. One locality within each area was then randomly selected, and people in that locality were recorded using usual sociolinguistic techniques. A variation analysis was conducted on these recordings, and the proportions that each variant under scrutiny was used were calculated. The proportion used in each sampled locality was the "score" given to that area, and each area had a score calculated in the same way. Furthermore, different social groupings within each area could be calculated separately (for example, different age groups in the same area) (for results, see Trudgill, 1983: 69–71). This technique has the advantage that, for the first time, geographic principles for location selection have been applied (see Britain, in press). Furthermore, the variable analysis made apparent the geographically *transitional* nature of the diffusion of linguistic changes. Whereas many of the maps of the LAE suggested that locations either did or did not have a particular variant, this variationist cartography enabled a more nuanced view which both recognized that locations could be variable and facilitated "apparent time" comparisons of the spread of change across an area. This survey shows the value, then, of looking at accent and dialect features in different geographical locations as *linguistic variables* and highlights the fact that the differences between places may exist not because they use different linguistic features, but because they use different *proportions* of different variants of a variable. If a phonological innovation is spreading across a region, it may be found in 80 percent of all relevant words in one place, 50 percent in another, 30 percent in another, and only 5 percent in another. This distribution suggests that although every place "has" the innovation, some have been affected by it more than others. It is important to measure and track these sorts of frequencies to be able to highlight geographical differences and then, importantly, to be able to explain them. Why are the former locations more affected by this innovation than the latter ones?

The Atlas of North American English

The *Atlas of North American English* (ANAE) (Labov, Ash, and Boberg, 2006) is the nearest that anglophone variationist sociolinguistics has come to replicating the coverage and scale of the traditional dialectological enterprises we saw earlier. Its aims were both to “report on the regional phonology of the English of the United States and Canada” but also the “reestablishment of the links between dialect geography and general linguistics” (2006: v). The authors wanted the work to inform about vowel mergers and vowel chain shifting, and so on, using dialectological evidence.

Locations sampled were all urbanized areas in the United States and Canada with a population of 50,000 or more, with smaller centers being added to achieve greater geographical coverage. Most sound changes, it was argued, are initiated in cities, and it is there that one will find speakers who are the most advanced drivers of linguistic change (2006: 21). The sample in each center was usually just two speakers. One condition was that each had been born or raised in the community. The authors recognized that each local sample was small but said that “the Atlas is designed to produce an overall view of regional patterns that will guide and stimulate local studies to provide a more detailed view of the sociolinguistic and geographic variation in a given area” (2006: 3). The number of people sampled was 762; they were

Some ANAE questionnaire items

- To test minimal pairs:
 - “What kind of animal runs in the Kentucky Derby?” (horse)
 - “What do you call the way you feel when your throat is kind of scratchy and sore and you can’t talk very well?” (hoarse)
- Semantic differential tests:
 - “What’s the difference between a COT and a CRIB?” (to elicit examples of the word “cot” to compare with the answer to the following question)
 - “What’s the past tense of ‘catch’, like if today I catch the ball, yesterday I ... ?” (caught)
- Regional vocabulary:
 - “What’s the general term you use for a carbonated beverage in your area?” (pop, soda, coke, etc.)
- Acceptability and use judgments: informants were asked if they thought they used the following constructions themselves, or if they’ve heard them in the area, or have never heard them:
 - “What if there were crumbs on the kitchen floor and someone said ‘The floor needs swept?’”

between the ages of 12 and 89, and from a wide variety of different “national ancestry groups” (2006: 23), especially German, English, Irish, Scotch, Scandinavian, and Polish. Ultimately 439 of the recordings were subjected to acoustic analysis. As well as eliciting demographic information, and a conversational segment “designed to replicate friendly conversation” (2006: 24), a questionnaire was administered during the recording that was much more linguistically oriented than the questionnaires we saw earlier.

So far, so good. One remarkable characteristic of this project, however, is that this interview and questionnaire were conducted *on the telephone*. This obviously saved an immense amount of travel time and money. The researchers present a very detailed and careful defense of this method (2006: chapter 4), discussing whether using telephone directories as sample frames distorted their chances of a random sample, the difficulties of finding locally born and bred residents, and the quality and clarity implications of recording over the phone. The recordings lasted between 30 and 45 minutes and on average managed to elicit around 300 examples of vowels relevant for their analysis.

One more general question at this point is whether people talk on the phone (given the lack of face-to-face interaction, and lack of facial expression and gesture to accompany talk) in exactly the same way as they do face to face, regardless of “formality.” Citing an earlier telephone study of Philadelphia, the authors (2006: 8) claim that there was “good agreement” between it and data collected face to face. There is, perhaps surprisingly, though, very little evidence about the dialectological equality of phone and co-present conversation. Baker (2007), recording one adult English woman’s talk across many activities, locations, audiences, and modes, found, for example, that the glottalization of /t/ in discourse marker “right” was significantly less likely when she was talking on the phone than when she was engaged in co-present interaction.

Comparing contexts

Comparing accent/dialect and linguistic variable use on the telephone versus face to face (and in other contexts such as Skype) would make an interesting project in its own right. Do you think that a telephone survey would work for the area you are studying? What problems do you think you would encounter if you tried to conduct one in the way that Labov *et al.* (2006) did?

The East Anglian Counterurbanization Project

The final case study we will briefly discuss is a project in which I am currently engaged, examining the diffusion of linguistic change in eastern England in the context of population growth as a result of counterurbanization from London. The aim was to examine how urban and rural areas had been affected linguistically both by the influence of London’s vernacular culture and the influx of mostly middle-class professional counterurbanizers. Data were therefore required from both rural and urban communities of different kinds in the area. The UK’s Department for

Environment, Food and Rural Affairs devised a rural–urban classification system to distinguish different degrees of rurality or urbanization.² The sample guided by this classification was therefore motivated by different levels of rurality, and data were collected from 11 locations across the region. This is a low number for a geographical survey, but it was compensated for somewhat by the fact that a more sizeable number of speakers were collected from each location – at least 12, stratified by age and gender. Consequently, internal variation within each community could be examined, as could a consideration of the broader regional picture. Data were collected by fieldworkers brought up in each community. No questionnaires or word lists were used; however, the target was always prolonged and relaxed mundane conversation. This approach attempts to strike a balance between density of geographical coverage (here, lower than in many other similar studies), on the one hand, and, on the other hand, the collection of informal conversational data from a reasonably sized stratified sample of the population in each location (here, more speakers per location than is usual).

Discussion

Geolinguistic dialectology within the sociolinguistic tradition made a very slow start. Chambers and Trudgill (1980: 207) argued that “regional dialectology ... stands woefully neglected in contemporary dialectology, exactly the reverse of the situation when dialect geography held sway and urban studies were woefully neglected.” The past 20 years has seen a steady increase in interest in applying sociolinguistic data collection techniques to the study of the spatial variation (see Britain, 2009, 2010, in press), especially as the study of innovation diffusion and dialect contact picked up steam as topics of variationist inquiry.

What this approach, with the exception of that of the ANAE, has abandoned is any attempt at the sheer scale of geographical coverage that was once routine in the traditional dialectological era. In its place we have a more geographically motivated selection of localities, and, often, an attempt at a stratified and differentiated sample of speakers within them. Such studies often provide a window on the speech of the young and urban, as well as the old and rural. The collection of recordings of informal conversation facilitates the examination of variability in connected speech as well as linguistic constraints on variables within and across locations. The adoption of the linguistic variable, furthermore, enables quantitative rather than just qualitative differences between dialects to be highlighted.

Reviewing the Methodological Process: Weighing up and Compromising

Having critiqued a number of dialectological studies of different kinds (and different eras), we are now in a position to return to and review our four key methodological questions.

What is the geographical motivation of the research?

The aims of the traditional dialectologists were descriptive and historical, and ultimately, they were more cartographic than geographic. It was not geographical questions that they were trying to answer. This focus is largely true also for ANAE, where the motivations were more (historical) linguistic. The Norwegian and East Anglian studies, however, had more geographical motivations for their work, examining the interrelationship of settlements within regions and how in-migration differentially affects the dialects of localities of different types. This question will, then, help shape the geographical sample you decide to adopt (see Britain, 2010, for a discussion of how “space” has been conceived and studied in dialectology).

What sorts of speakers will be sampled from these locations?

The traditional dialectologists had an ideal “authentic” speaker in mind – the uneducated peasant for Ellis, the NORM for the SED – so their geographical sampling was motivated by where they would be most likely to find such people. Consequently, the SED had a list of locational criteria designed to help them find the “right” sort of informant – rural, village with a stable history of around 500 people, agricultural, no locations that had seen demographic disruption. This certainly provides comparability. If all speakers are NORMS, we at least have a consistent and comparable sample.

Variationist dialectology has tended to broaden and deepen the sample with a wider range of participants from the community and a larger sample size. It is difficult to make the sample as differentiated as it might be in research on a single location, but often age and gender are distinguished in such investigations. Nevertheless it is still the norm to set tight criteria for inclusion in such research – usually speakers must have been born in the community, or at least raised from a fairly early age in it.

What type of data is to be collected from these speakers?

We have examined the use both of questionnaires on the one hand and the collection of relaxed mundane conversation on the other. The SED and ANAE did both, but in the case of the former, recording quality and preservation were problematic, with few studies having used their more discursive data for analysis.

Questionnaires, as we have seen, can be extremely cumbersome – the SED gathered many volumes of data, but the administration of each questionnaire took many, many hours. With carefully and selectively constructed questionnaires, such as those used in the ANAE, this approach can be more efficient. But, how can we assess the quality of questionnaire data? One could argue that many more barriers to informality are built up through the administration of a questionnaire than through conversational data collection. Answering a questionnaire, especially *about* language, is a non-mundane, relatively rare task, and questionnaire respondents are likely to have preconceived ideas of what might be required and the sort of behavior expected from them. However informally it is administered, interviewees see their role as to answer, succinctly and to the point, and not to ask questions or digress. This is not, ultimately, the sort of data sociolinguists typically strive to collect.

Often, dialectological questionnaires elicit intuitions about language use, and not language use itself, but we know (Labov, 1996) that intuitions are often unreliable. If someone asked, I would say that I think I “go to the pictures” (and not the “movies” or the “cinema”), but don’t hold me to that. What I actually say and what I think I say do not necessarily coincide.

Unobserved conversational data is to the variationist sociolinguist what the NORM was to the traditional dialectologist – an idealized target. Ultimately such data are elusive because all speech is observed. The goal, however, is to collect the sort of speech that our informants would use to friends and family, at home, and in informal settings. It provides us with ongoing multi-turn continuous speech, rather than short answers to questions. We are able to capture both linguistic phenomena that questionnaire approaches find difficult – grammatical variation – but also information about prosodic factors such as intonation, rhythm, and hiatus resolution. Usually we are able to find many examples of the variable features we are investigating interspersed in the conversational data, and we are able to examine a whole host of linguistic, psycholinguistic, and conversation management constraints on variation.

Variationist analysis is rarely, however, able to shed much light on the geographical distribution of lexical variation. This was one of the apparent success stories of traditional dialectology. The LAE, for example, was able to paint an intricate, detailed, and highly variable picture of many lexical choices across England. To be fair, since one of the main aims of variationism was to highlight the orderly heterogeneity of grammatical systems in flux, research on lexis has never been central to the enterprise.

Beal (2010: 53) claimed that “the study of regional lexis has been the ‘Cinderella’ of academic dialectology in the late twentieth and early twenty-first centuries.”

But nevertheless, if we really were interested in whether the community said “going to the movies” or “going to the cinema” (or “pictures,” etc.), recording an informal conversation for an hour would not be the best way. We might get an example of that in our one or two hours of conversation, but we probably wouldn’t. So we still, as ANAE did, resort to questionnaires for this, but we must nevertheless contemplate the possibility that someone’s answer in the decontextualized surroundings of a questionnaire completion session may well differ from their choice of word for the same concept in everyday talk.

Another weakness of informal conversational data is the lack of tight comparability from one speaker to the next. In the SED and the ANAE, using a questionnaire, the researchers could be pretty confident that they would get answers to the same questions from everyone. The ANAE researchers got data on the pronunciation of both “cot” and “caught,” so it was easier to investigate whether the vowel in each was the same or different for each speaker in their sample. They know they will extract tokens of relevant words in relevant phonological environments from each speaker, too. Strict comparability is made possible by this approach. One highly efficient multi-locality variationist analysis of a linguistic variable was carried out by Barbara

and Ron Horvath (e.g., 2002). They were interested in the geographical dispersal of the vocalization of /l/ in the main urban centers of Australia and New Zealand. They designed a short reading passage and word list with /l/ in many different phonological environments and administered the questionnaire in the street by simply approaching people and recording them reading the passages there and then. In this way, they got data from six cities in Australia and three in New Zealand, with over 80 examples of /l/ from each speaker – a total of almost 25,000 tokens from over 300 speakers. Their method was quick, but it still retained a strict comparability across each speaker and each city. They were able to use the data to examine the linguistic constraints on vocalization that were operative in each location. A reading passage may lead to a slightly more conservative pronunciation of /l/ in comparison, say, to what might be found in informal conversation, but at least the same data had been gathered from everyone. The disadvantage of this approach is that because the reading passages and word lists had been especially designed to examine the vocalization of /l/, the collected data may well be of only coincidental use for the study of other linguistic variables.

How is the data to be recorded?

We have seen that while today the recording of data is deemed absolutely essential, at earlier times the technology did not exist to do so. The techniques Ellis used to gather data seem incredibly rudimentary today but understandable in the context of the mid-nineteenth century. Today, technology has moved on to the extent that data can now be recorded in situations where the interviewer and interviewee are quite some physical distance from each other. ANAE saved both time and money by administering their questionnaires and even collecting their casual conversations over the telephone.

Another question to be addressed here is *who* will collect the data. As Trudgill (1983) has demonstrated in particular detail, when many fieldworkers are involved in the collection of data, some of the discovered regional distinctions are due to differences in the way fieldworkers have transcribed the data, rather than “real” variation across the communities. It has often been the case that sociolinguists, when embarking on data collection, “go home” and collect their data in the places they grew up, the places where they have many potentially useful social network ties, the places in which they understand and appreciate the local cultural norms. In multi-locality research, of course, this is less feasible. If speakers in one place are recorded by a local, but in the next place by a non-local, the strict comparability of the recordings is jeopardized.

Geolinguistic dialectology has come on quite some methodological journey over the past 150 years. Whilst technological advances have helped us overcome some of the most obvious difficulties with data collection, there are still many difficult decisions and many compromises to make when investigating language variation across space. Some methods from the past have proven to be extremely durable, while more modern approaches have not always provided straightforward, practical, affordable, nor appropriate solutions.

Quagmires and Troubleshooting

- *If two or more places share a particular linguistic feature, we cannot assume that there is a single source or origin for its appearance – it may be an independent*

development in each place. For example, if we find, in Scotland, a dialect feature stereotypical of southern England, we have to ask ourselves whether it spread (somehow, but how?) from one to the other, or whether its appearance in one place is unconnected to its appearance in the other. In nineteenth-century Britain, for example, glottal stops as ways of pronouncing /t/ were found both in southern England and Scotland, but generally it is not believed that it had spread from one to the other. Today, [f] variants of /θ/, stereotypical of London, are also being found in Scotland, and most have argued that London is probably the source (whilst there has been considerable disagreement about how they got from London to Scotland). It is our task to try and differentiate, where possible, cases of diffusion from independent developments.

- *Be careful not to base your geographical selection of research sites on stereotypical assumptions.* We cannot assume without further evidence, for example, that one place will be linguistically conservative simply because it is rural and another will be innovative simply because it is urban. We need to probe each location's demographic history rather carefully.
- *You may find that two neighboring locations seem to have quite different dialect characteristics,* but that there appear to be no obvious present-day geographical explanations for these differences. Dialectologists have often found, however, that dialect differences can remain long after the disappearance of some earlier geographical cause, so potential explanations need to be sought in the *historical* geography of an area.
- *Selecting places to investigate can be tricky, so think practically.* Where do you have family, friends, or other contacts who might be able to help in the search for speakers or to provide local accommodation during your fieldwork trip?
- *Much geographical dialectology treats speakers as “representative” of places,* yet many people in the West are routinely highly mobile, often spending considerable periods of time outside of the communities they “represent.” In Western Europe this is, perhaps surprisingly, especially true of many people in rural areas, who have to travel relatively long distances to work now that agriculture employs very small numbers even in the countryside. How do we deal with such people in our research? Do we exclude them or embrace them, and how might our decision here ultimately affect our results?

Tips

- There should be a clear motivation – dialectological or geographical – for the locations you select for analysis. Ask yourself WHY you are choosing this location and not another. How will this choice help you answer your descriptive or theoretical questions? Think more deeply than simply “places across space.” Find out about these places: their social and demographic histories, their places within the regional network of other localities, what makes them different from other nearby places, and how people in these places perceive themselves and others.
- Decide who is an appropriate speaker for your survey – you will have to justify this choice. So much of the value of your final research depends on careful selection and comparability at this point. On the one hand, a set of speakers who are able to “represent” different parts of the community is important – men and women, the old, the young, and so on – but, on the other hand, the greater the

variation permitted at this point, the larger the survey will have to be, as you absolutely need comparable samples from each location.

- What sort of data will you collect from these speakers? Why? Will you get an adequate amount of appropriate data if you collect recordings of conversations? If you use questionnaires, is the lack of ongoing fluid speech problematic for your purposes? Have you designed and tested your questionnaire to make sure that you stand a good chance of actually eliciting the word, sounds, and constructions you need? You need to choose a data collection tool that provides you with the fullest amount of evidence possible to address your research questions.
- Think carefully about how you will collect these data. If possible, collect it face to face, in person. Think about how you as the data collector will be viewed by the people you record. Will your own dialect background affect the sort of data you will be able to collect? Have you familiarized yourself with the recording device, if you are using one?

Project Ideas

- 1 Although there are many dialectological studies of cities, researchers don't often investigate dialect variation across different parts of the same city. *Carefully select a number of different parts of a city and conduct dialectological fieldwork.* How did you choose which different parts of the city to collect data from? How can you explain the differences between the different parts of the city?
- 2 Geographers will be quick to tell you that rural areas are not all the same. *Examine different kinds of rural areas and the dialect differences within them.* You could compare, for example, a rural area witnessing a fall in population with one experiencing rapid in-migration. Schilling-Estes and Wolfram (1999) conducted a study of this kind on two island communities off the eastern coast of the United States. One community, Ocracoke, was experiencing ever greater contact with the mainland, whilst Smith Island was undergoing depopulation. Different types of linguistic change were found in each.
- 3 Labov's (1963) research on Martha's Vineyard showed that communities that have lots of outsiders moving in react by changing their dialects to become less like those of the outsiders. Compare local speakers in a community heavily affected by tourism with those in other nearby places that have been less affected.

Further Reading and Resources

Many texts on dialectology place method as a core element of their coverage, probably because the different traditions employed such different techniques. Chambers and Trudgill (1980) remains the prime text for geographical dialectology. Since geolinguistic dialectologists tend to adopt and adapt sociolinguistic dialectological research methods, guidance can be found elsewhere in this volume, and in Schilling (2013). There has been a surge of interest in theoretical considerations of space and place across sociolinguistics. Extremely thorough reviews of these recent developments can be found in both Auer and Schmidt (2009) and Lameli, Kehrein, and Rabanus (2010). The latter picks up dialectological efforts and other work on dialect mapping. Britain (in press) provides a summary of dialectological work in relation to space and mobility.

- Auer, P. and Schmidt, J. (eds) 2009. *Language and Space: An International Handbook of Linguistic Variation*. Berlin: De Gruyter.
- Lameli, A., Kehrein, R., and Rabanus, S. (eds) 2010. *Language and Space: An International Handbook of Linguistic Variation*. Vol. 2: *Language Mapping*. Berlin: De Gruyter.

Notes

- 1 <http://sounds.bl.uk/Accents-and-dialects/Survey-of-English-dialects> (last accessed April 15, 2013).
- 2 <http://www.defra.gov.uk/statistics/rural/what-is-rural/rural-urban-classification/> (last accessed April 15, 2013).

References

- Baker, S. 2007. "Right, do interactional functions other than turn finality constrain phonological variation? Well, that rather depends": An investigation of the interactional constraints of turn finality and the discourse particles "right" and "well" on language variation. Unpublished PhD dissertation. University of Essex.
- Beal, J. 2010. *An Introduction to Regional Englishes: Dialect Variation in England*. Edinburgh: Edinburgh University Press.
- Britain, D. 2009. Language and space: the variationist approach. In *Language and Space: An International Handbook of Linguistic Variation*, ed. P. Auer and J. Schmidt, 142–162. Berlin: De Gruyter.
- Britain, D. 2010. Conceptualizations of geographic space in linguistics. In *Language and Space: An International Handbook of Linguistic Variation*. Vol. 2: *Language Mapping*, ed. A. Lameli, R. Kehrein, and S. Rabanus, 69–97. Berlin: De Gruyter.
- Britain, D. In press. Space, diffusion and mobility. In *Handbook of Language Variation and Change*, 2nd edn, ed. J. Chambers and N. Schilling. Oxford: Wiley-Blackwell.
- Chambers, J. and Trudgill, P. 1980. *Dialectology*. Cambridge: Cambridge University Press.
- Eckert, P. 2004. Elephants in the room. *Journal of Sociolinguistics* 7: 392–397.
- Ellis, A. 1874. *On Early English Pronunciation: Part IV*. London: Truebner and Co.
- Ellis, A. 1889. *On Early English Pronunciation: Part V*. London: Truebner and Co.
- Hägerstrand, T. 1952. *The Propagation of Innovation Waves*. Lund: Gleerup.
- Horvath, B. and Horvath, R. 2002. The geolinguistics of /l/ vocalisation in Australia and New Zealand. *Journal of Sociolinguistics* 6: 319–346.
- Labov, W. 1963. The social motivation of a sound change. *Word* 19: 273–309.
- Labov, W. 1996. When intuitions fail. *Chicago Linguistic Society: Papers from the Parasession on Theory and Data in Linguistics* 32: 76–106.
- Labov, W., Ash, S., and Boberg, C. 2006. *The Atlas of North American English: Phonetics, Phonology and Sound Change*. Berlin: De Gruyter.
- Orton, H. et al. 1962–1971. *Survey of English Dialects: Basic Materials: Introduction and 4 Volumes (each in 3 parts)*. Leeds: E.J. Arnold & Son.
- Orton, H., Sanderson, S., and Widdowson, J. 1978. *Linguistic Atlas of England*. London: Routledge.
- Schilling, N. 2013. *Sociolinguistic Fieldwork*. Cambridge: Cambridge University Press.
- Schilling-Estes, N. and Wolfram, W. 1999. Alternative models for dialect death: dissipation vs. concentration. *Language* 75: 486–521.
- Shackleton, R. 2010. *Quantitative Assessment of English–American Speech Relationships*. Groningen: Rijksuniversiteit Groningen.
- Trudgill, P. 1983. *On Dialect*. Oxford: Blackwell.
- Upton, C. and Widdowson, J. 2006. *An Atlas of English Dialects*. Oxford: Oxford University Press.

17 Speech Communities, Social Networks, and Communities of Practice

Robin Dodsworth

Introduction	263
Speech Communities	263
Social Networks	266
Communities of Practice	270

Summary

In the study of sociolinguistic language variation, an individual speaker is rarely the primary unit of analysis. Instead, sociolinguists seek patterns of variation that are visible when multiple speakers are examined together. The possible conclusions about linguistic variation depend upon the number of speakers investigated, the methods used to study them, and the assumptions about the relationship between language and social interaction – in other words, the framework within which multiple speakers are viewed as a group. This chapter describes three such frameworks that offer complementary units of analysis: the speech community, the social network, and the community of practice. The speech community is a framework for investigating aggregate data and comparing linguistic practices across demographic categories. The social network is used to explore the

Research Methods in Sociolinguistics: A Practical Guide, First Edition.

Edited by Janet Holmes and Kirk Hazen.

© 2014 John Wiley & Sons, Inc. Published 2014 by John Wiley & Sons, Inc.

relationship between the spread of linguistic changes and the patterns of interaction among people. Finally, the community of practice foregrounds the social meanings of linguistic variables and their use in day-to-day contexts. The choice among these options is determined by your research question(s) and by your access to data.

Introduction

In doing sociolinguistic research, one of the earliest decisions to make is which group of people to study, and which individuals in the group. If you know you want to study the linguistic practices of a particular group, such as the members of an ethnic enclave in your community, then you already have some sense of your population. But you probably won't be able to collect data from every person in the group, and so you will need a sampling strategy. If, on the other hand, you're interested in the social distribution of a particular linguistic variable, such as multiple negation or /ai/ ungliding, then you need to determine a bounded population within which to study it. Three constructs that can be used to decide upon a set of speakers are the traditional *speech community*, the *social network*, and the *community of practice*. These three options facilitate different but overlapping research goals.

Speech Communities

There are many definitions of the sociolinguistic speech community (see, for example, Hudson, 1999: 24–30). The speech community is, fundamentally, a collection of people who have linguistic interaction. In practice, the speech community may be large enough that any individual directly interacts with only a small fraction of the other members, such as when the speech community is defined as the city of Philadelphia or London. Therefore, our definition of speech community cannot hinge on true interaction among individuals. Rather, the most influential definition holds that the members of speech communities share *linguistic norms and behaviors* (Labov, 1972). This does *not* mean that everyone in the community talks alike or wants to talk alike. It means, among other things, that all members of the speech community will associate the same social meaning(s) with a given sociolinguistic variable, and that they will share many region-specific linguistic features. We expect speech communities to exhibit “orderly heterogeneity” (Weinreich, Labov, and Herzog, 1968), which means that linguistic variation within a speech community is constrained by social factors, such as age, and linguistic factors, such as the characteristics of the surrounding sounds.

For example, in the southeastern United States, most speakers growing up during the twentieth century were exposed to the Southern Vowel Shift (Labov, 1991; Bailey, 1997; Thomas, 1997, 2003; Fridland, 2000, 2001, 2003; Labov, Ash, and Boberg,

2006; Dodsworth and Kohn, 2012). However, the details of this vowel shift differed by region and city, and it is being lost among younger speakers. Therefore, the members of any single community in this region are likely to have had exposure to a lot of the same linguistic input, but there are differences across region, age, gender, ethnicity, and so on. In practice, linguists assume that most of the people who have grown up in the same city or town have had similar enough linguistic experiences that they can be considered to have shared linguistic norms.

Building upon the idea of shared evaluative norms, Bell (1984) argues that the definition of the speech community should take into account the degree of *style shifting*, or the variation observable in any single speaker's language from one situation to the next. Bell (1984: 154) offers the following revision of Labov's definition:

We may regard speech community as one where speakers acknowledge the quantitative limits to style shift as set by the extent of interspeaker differences within the community. They do not share merely the qualitative norms and direction of style shift (Labov 1966). Nor do they share just a common set of evaluative reactions to variables (Labov 1972a, 120). Members of a speech community have both evaluation and limits to style shift in common, as one would expect since evaluation and style shift always co-occur.

This is to say that within a speech community, members implicitly know to what extent, and in what ways, any single speaker's language is likely to vary from one context of speaking to the next.

The central questions that are typically addressed in speech community studies include:

- In what ways, and to what degree, do subgroups of speakers within the speech community differ in their production of particular linguistic forms?
- In what ways is the local dialect changing over time?
- Do individual speakers vary linguistically from one context to another? In particular, do they talk differently when they are paying close attention to their speech?

In addressing these questions, speech community studies normally show patterns that emerge from aggregating linguistic data across speakers (e.g., Labov, 1966, 2001; Wolfram, 1969; Hazen, 2002). For example, in the southern US city of Raleigh (North Carolina), we can see change over time by combining data from multiple speakers born between the beginning and end of the twentieth century (Dodsworth and Kohn, 2012). In Figure 17.1, each circle is one token of the pronunciation of the sound /e/ as in *shake* or *bait*. The vertical axis indicates the degree of "southernness" of the pronunciation, such that lower values are more southern. Over time, Raleigh speakers are drifting away from the southern pronunciation.

Standard conclusions from speech community studies include:

- Linguistic changes are incremental, meaning they occur gradually across time.
- Adolescent speakers show higher rates of new linguistic variables than other age groups.
- Changes from below the level of consciousness – those that begin without community members noticing – are led by middle socioeconomic groups rather than the most or least affluent.

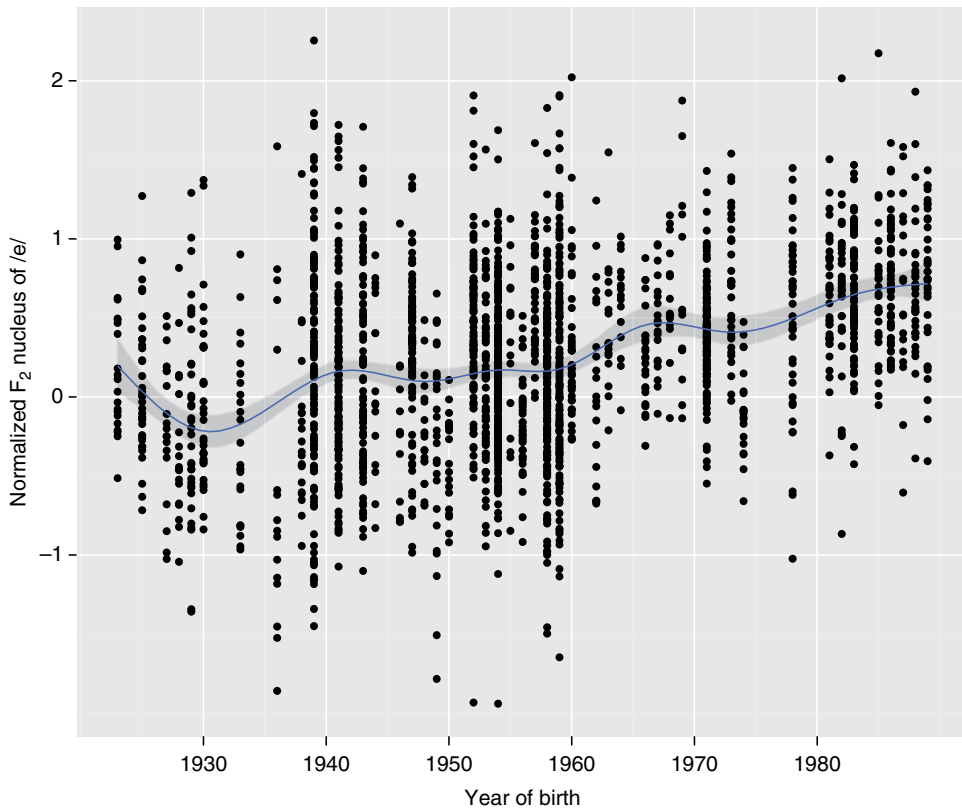


Figure 17.1 Pronunciation of /e/ by year of birth in Raleigh, USA.

- Changes from above the level of consciousness – those that speakers are aware of, and are often borrowed from other communities – are led by the more affluent end of the socioeconomic scale.
- Males show higher rates of socially stigmatized variants than women.
- Females show higher rates of new/innovative variants than males.

There are, of course, exceptions to all of these generalizations, the last one in particular.

When the speech community is defined as a whole city, as is quite common, collecting linguistic data from every individual is, of course, impossible. You need a sampling strategy. In theory, there are three broad types of sampling strategy: balanced, representative, and random. A *balanced* sample of speakers has the same number of males and females, the same number of older and younger speakers, the same number of blue-collar and white-collar speakers, and so forth. The advantage to this strategy is that different subsets of the population can be easily compared with one another (e.g., males can be compared with females). By contrast, a *representative* sample mirrors the proportions of demographic groups in the speech community. For example, if the speech community consists of 60 percent working-class people, 30 percent middle-class people, and 10 percent upper-class people, then a representative sample will have the same proportions. This is useful when the goal

is to construct a linguistic profile of the community rather than to compare subsets with one another. Finally, a *random* sample is an unbiased selection of community members, without regard for demographics. A large enough random sample will resemble a representative sample; its main advantage, a very important one, is that it avoids the danger that the sample will be biased toward people most easily accessible to the researcher (Labov, 2001: 37–41).

Due to the difficulty of collecting good-quality linguistic data, it is rare for samples of speech communities to be truly random. Instead, researchers often aim for balanced samples that draw as widely as possible from the community but at least begin with people with whom the researcher already has some kind of connection. You will probably have the most success using this strategy, assuming you have existing contacts in the community. As you identify speakers and collect data, you might learn about locally salient social distinctions that will cause you to revise your original sample. For example, in the course of interviewing Raleigh speakers, we learned that a local geographic distinction – essentially, proximity to the original center of the city – was locally believed to correlate with a certain type of Southern identity. In order to tap into this (potential) identity variable, we adjusted our data collection plans so that the sample would include enough speakers who grew up in both regions.

When your linguistic data are in hand, the basic idea is to use quantitative methods to determine to what extent your linguistic variables are correlated with your social variables, such as year of birth, sex, social class, and/or other variables that are relevant to your study. In the Raleigh study, the social variables include year of birth, sex, ethnicity, several distinct social class variables, and area of residence. The last variable in particular is defined with respect to local sociogeographic facts. Similarly, your study will have its own variables appropriate for the place and time of your fieldwork and for your research questions. As you begin to look at the relationships between your linguistic variables and social variables, a good starting point is to make multiple descriptive graphs that will show correlations or the lack thereof. The graphs will inform your subsequent statistical analysis. (See Guy, this volume, for a discussion of relevant statistical methods.)

Social Networks

Although traditional speech community studies have revealed several consistent patterns of language variation and change, they usually do not offer data that show how these patterns come about. In other words, speech community studies typically do not say very much about interactions among people. As Milroy and Milroy (1985: 345) argue, “it is not languages that innovate; it is speakers who innovate.” In contrast to traditional speech community studies, social network studies in sociolinguistics typically show that a certain subset of a community’s population, such as young females, lead linguistic changes because they come into contact with a relatively wide range of people as a result of gender-segregated work or socializing. Conversely, unusually conservative speakers – those who do not take part in local linguistic changes – are typically found in network studies to be constrained by small,

close-knit networks in which there are strong social norms and little opportunity for exposure to linguistic innovations.

Accordingly, two key concepts in social network studies within sociolinguistics are the *strength of weak ties* and *dense, multiplex networks*. Weak ties are relationships between people who do not know each other very well and probably do not have many friends in common. Weak ties are important in sociolinguistics because they are believed to be conduits for linguistic innovations. You and your close friends are likely to have similar experiences and therefore know similar things, but you can learn about new trends from more distant people who have exposure to different information. By contrast, in a dense network, in which most people know one another well, there are very few weak ties. Dense networks also tend to be *multiplex*, which means that people know one another in multiple ways. For example, they may work together and also be neighbors or relatives. Dense, multiplex networks are believed to inhibit linguistic change for two reasons. First, they lack weak ties, which means they have little access to linguistic innovations. Second, they tend to have strong social norms, and it is difficult to deviate from those norms without social sanction.

For example, Milroy and Milroy (1985, 1992) investigate the social distribution of the backed variant of /a/, as in *bad* in Belfast. The backing of /a/ was a change from below led overall by males, but the Milroys observe that in the West Belfast neighborhood of Clonard, young females lead young males in /a/ backing. They posit that this results from high male unemployment in Clonard, which has caused young women to find work in East Belfast where /a/ backing is more advanced. Through work, the young women are developing weak ties that give them greater exposure to the backed /a/ variant. By the same token, the Milroys find that the lowering of /ɛ/ as in *bet* is disappearing in Belfast, a change from above led by women. Older men, they argue, disproportionately maintain the older, lowered variant because they have dense, multiplex social networks that inhibit change.

Conclusions from social network studies can be seen as complementing the standard conclusions from speech community studies. In fact, some early research into speech communities looks to network factors to account for aggregate linguistic patterns. For example, Le Page and Tabouret-Keller (1985) appeal to social networks, as well as social identity, in accounting for variation among speakers of Caribbean creoles. Trudgill (1974) offers an implicitly network-based explanation for the [middle] working-class lead in the centralization of (e) before /l/ in Norwich, positing that “the LWC [lower working class], as a relatively ‘underprivileged’ group, is isolated from innovative tendencies” (Trudgill, 1974: 104). In other words, members of the lower working class do not readily participate in linguistic changes because their social isolation results in less exposure to the linguistic changes. More recently, Milroy and Milroy (1992) suggest a network-based explanation for the common finding that linguistic changes from below are led by middle socioeconomic groups: at the higher and lower ends of the socioeconomic scale, networks tend to be dense and multiplex, which means that linguistic change will be slower.

Labov (2001) examines changes from below that originate in the Philadelphia community, asking whether the statistically significant effects of socioeconomic class can be attributed to network factors. Labov operationalizes social network as the combination of (i) number of friends on the block, coded on a five-point scale, and (ii) proportion of friends off the block (2001: 336–337). Socioeconomic class and social network show independent effects for the new Philadelphia changes, (eyC)

and (aw), among females; males did not show network effects for any linguistic variables. For both variables, the leaders of linguistic change are those characterized by what Labov (2001: 364) terms “expanded centrality,” possessing both high numbers of contacts on the block and a high proportion of friends off the block.

Assessing network position

Milroy (1987) used a questionnaire to assess the extent to which 46 Belfast speakers were embedded in their local neighborhoods. The indicators were:

- membership in a local group or club with a dense network structure, such as a card-playing group;
- having relatives in more than two neighborhood households;
- working in the same place as at least two other people from the neighborhood;
- working in the same place as at least two others of the same sex from the neighborhood;
- socializing with workmates outside of work.

On the basis of these indicators, Milroy formulated a “network strength scale” such that every speaker had a single score between 1 and 5, with higher values indicating greater embeddedness in local social networks as opposed to networks reaching outside the neighborhood. Milroy found that scores on the network strength scale showed significant, positive correlations with some of the local linguistic variables that she studied, including the deletion of [ð] in words such as *either*. In other words, the more a speaker was involved in local as opposed to non-local networks, the more often he/she used a local vernacular linguistic variant. The importance of this conclusion from a variationist sociolinguistic perspective is that it takes a step toward explaining why one neighborhood shows higher rates of a linguistic variant than another neighborhood. Dense, multiplex local networks bolster local linguistic variants.

Additional sociolinguistic network studies include Lane (1998, 2000), Nichols (1983), Cheshire *et al.* (2008), and Stuart-Smith, Timmins, and Tweedie (2007). There are not very many large quantitative network studies in sociolinguistics, in part because collecting network data is quite difficult.

Because collecting network data is tricky, having a strategy tailored to your research goals is important. What you want to know, for every person in your sample, is who that person interacts with, and how often. Further, you need information about the interactions among that person’s acquaintances: does the person belong to a dense, multiplex network? Does the person have ties to other networks that would give him/her access to innovations? There are two types of strategies for obtaining this information. The first is to observe individuals throughout the day, tracking their interactions with others. While rich in potential for nuanced and accurate data collection, this approach has the major disadvantage of requiring

enormous amounts of time and energy, and it is not realistic for large samples. The second and much quicker approach is to ask speakers questions about their networks, as in Milroy (1987). For example, you might ask how many friends a person has at work, or how many friends or family members a person interacts with outside of work during a typical week. This method can be especially effective when you already know that the linguistic phenomenon under investigation is more common among one group of speakers, such as urban speakers, than another group, such as suburban or rural speakers. In that case, you can ask how many urban friends or acquaintances a suburban speaker has, and thereby construct a variable that can be used in quantitative analysis. The major disadvantage of this method is that it does not guarantee accuracy, as individuals may misrepresent (intentionally or unintentionally) their contacts.

Unless your community of interest is small enough that ethnographic observation alone is a sufficient means of collecting network data, you will most likely need to directly ask speakers questions about their networks. The first step is to choose a sample of speakers, as described in the last section. If you want to know, as Milroy and Labov did, whether social ties to a particular neighborhood or city are a significant predictor of a given set of linguistic variables, then you may want to construct a network strength scale similar to Milroy's. If you want to know whether a speaker's weak ties to other neighborhoods or cities correlate with his/her use of linguistic innovations, then you will want to ask about these. Don't forget to ask about phone or Skype conversations in addition to face-to-face contacts. Try to construct questions that will be easy for speakers to answer accurately. For example, asking *How many times in a normal week do you talk to people outside your city, either in person or on the phone?* will probably yield more accurate answers than *How many people do you know who live outside your city?* Also, it will simplify your later analysis of the data if you give speakers categories of answers to choose from, such as *0–1 times per week, around 5 times per week, around 10 times per week*, and so on. It is very important to try out your questionnaire on several people before starting your study, in order to identify any confusing or difficult questions.

After you have collected the network data, your task is to look for correlations between the network variables and the linguistic variables, and possibly correlations between the network variables and other social variables, such as sex or class. Making graphs is a good first step, as in the case of a traditional speech community analysis. Network variables often do not show clear, strong correlations with linguistic variables, for two reasons. One reason is that speakers' answers to questions about their contact with others are prone to imprecision if not inaccuracy. Another reason is that in most, perhaps all, societies, social networks are subject to some degree of segregation by sex, age, economic status, ethnicity, and/or other dimensions of identity. As a result, you may find that interactions between network variables and other variables, such as sex, correlate significantly with linguistic variables, rather than finding a simple correlation between network variables and linguistic variables. For example, suppose you are investigating -ing variation (e.g., *walking* pronounced as *walkin'*) in a community where some speakers are members of dense, multiplex local networks and some are not. You might find that membership in a dense, multiplex network does not, by itself, predict high rates of alveolar -in', but that *women who belong to dense, multiplex networks* use higher

rates of alveolar -in' than *women who do not belong to such networks*. For men, there may be no network effect. In other words, the network/sex interaction could be what predicts rates of -ing variation.

The primary value of network data lies in its potential to elucidate the aggregate conclusions of speech community studies. For that reason, a social network study of a linguistic variable in a community will be most useful when larger-scale data about the variable's distribution across the community are already available. Social network studies do not *replace*, but rather *supplement*, speech community studies. The social distribution of linguistic variables is complex enough that neither method alone can tell the whole story.

Communities of Practice

While quantitative social network data can lend insight as to the interactional dynamics underlying patterns of language variation and change, the study of communities of practice represents a further attempt to understand these patterns by investigating the social meanings of linguistic variables. Communities of practice (Wenger, 1998) are groups of people who interact around a shared goal. The goal could be something relatively mundane, such as playing tennis, or something more ideologically driven, such as advancing a political cause. Whatever the goal, the members of the community of practice communicate via a shared repertoire of linguistic and other symbolic resources. For example, the members of a tennis team share not only tennis jargon, but also the points of view, habits, jokes, and ways of doing things that derive from shared experiences. Most people are members of multiple communities of practice, including officemates, family, and groups of close friends. In this perspective, individuals both acquire and construct their social identities through their interactions with their communities of practice. Therefore, the shared symbolic repertoires, including linguistic variables, are seen as meaningful resources used to negotiate individual and group identity. Note the contrast with social network studies, in which a speaker's frequency of a linguistic variant reflects the type and frequency of his/her interactions with others, rather than the speaker's construction of identity.

In addition to its focus on identity, the community of practice differs from the speech community and social networks in foregrounding ideological *conflict* and *difference* as opposed to *consensus*. Recall that most definitions of speech community highlight the linguistic norms or ideologies that are *shared* by the members of the community. These are consensus-based definitions. The community of practice model, however, is built on the belief that within a community, opposing ideologies coexist. Personal and group identities are, in part, constructed in opposition to one another. Linguistic and non-linguistic practices reflect and reify conflict and difference within the community.

This foregrounding of conflict can be seen in Eckert's (2000) analysis of the distribution and meaning of the Northern Cities Chain Shift (NCCS), a set of vowels undergoing change in the urban Great Lakes region of the northern United States. Eckert carried out ethnographic research in a suburban Detroit high school and

collected linguistic data from students. She identified two small groups of students that have parallels in many other US high schools: the jocks, who identified with institutional (school) and middle-class values and were preparing for college; and burnouts, who rejected school values and instead identified with urban, working-class culture. A quantitative assessment of the vowels that constitute the NCCS revealed that the burnouts led the newest changes, those that most strongly indexed urban toughness. The older elements of the NCCS, those that had become widespread enough to lose some of their urban association and stigma, were led primarily by females – both jocks and burnouts – rather than showing a primary burnout lead. Eckert concluded that the newer elements of the NCCS are elements of the burnouts' shared symbolic repertoire with which they construct group and individual identities. Further, the construction of burnout identity is, in Eckert's analysis, both reflective of and constitutive of an early orientation to working-class identity. Therefore, the NCCS variables have both local meaning (burnout) and supra-local meaning (urban, working class).

Community of practice studies tend not to involve quantitative network data (though the analysis of linguistic variation will be quantitative). Instead, the researcher uses ethnographic methods to identify one or more groups of people who can be considered communities of practice, as in Eckert's study of jocks and burnouts. In addition, some community of practice studies are not concerned with aggregate linguistic variation, but rather with specific uses of linguistic forms to achieve social ends.

Nerd girls in San Francisco: A community of practice study

Bucholtz (1999) looks in detail at discourse among a small group of nerd girls at a San Francisco high school, exploring the linguistic tools they use to achieve nerd identity in opposition to "cool" identities. During lunchtime discourse, the girls:

- display knowledge;
- discuss schoolwork;
- perform wordplay;
- jokingly adopt academic or educational discourse styles;
- discuss "unfeminine" topics.

In these ways, they construct a positive nerd identity that distinguishes them from others in the high school community. They also resist the clothing and makeup that are popular among "cool" girls, thereby constructing opposition to a mainstream feminine identity.

The community of practice is a useful unit of analysis if you are primarily interested in the local social values associated with linguistic variables (and you may be trying to explain a known pattern of linguistic variation between groups). In such cases, you are not attempting to show broad distributional patterns across age, sex, class, and so forth, but rather to demonstrate the specific social meanings that linguistic

forms are used to achieve in a given place at the time of your fieldwork. This typically requires a great deal of ethnographic fieldwork because you need to become sufficiently familiar with the people and practices in the community in order to be able to recognize the meanings associated with linguistic forms. It is not uncommon for researchers to spend a year or more observing and recording the members of a community of practice.

The way to get started with a community of practice study depends upon your research goals. If there is a linguistic variable and you already know something about its demographic distribution in a community, then you may want to examine its use within the context of a community of practice in order to explore the variable's interactional meanings. In that case, you can let your existing knowledge of the variable's distribution guide you. For example, in the case of a linguistic variable that shows a female lead, you could start by identifying female speakers with particularly high rates of the innovative form. Then, through ethnographic research, you could identify communities of practice within which you suspect that you could observe the linguistic variable serving interactional goals. If, on the other hand, you have already identified a community of practice and you want to explore its members' linguistic practices, as in Bucholtz's study of nerd girls, then your task is to record their conversational speech. As you collect the recordings, you need to search for existing linguistic research on the region or community in order to begin identifying the linguistic features that could be at play. For example, Bucholtz observed that the nerd girls were resisting some trendy regional phonological variables, including the fronting of the back vowels /u/ and /o/.

As in the case of social network studies, language-oriented community of practice studies are most useful in the context of larger-scale research. The interactional meanings that linguistic practices convey in the contexts of communities of practice are ultimately derived from those variables' distribution in the wider community (cf. Johnstone, Andrus, and Danielson, 2006; Eckert 2008). The three abstractions discussed here – the speech community, the social network, and the community of practice – complement one another in the investigation of sociolinguistic variation.

Quagmires and Troubleshooting

The following are some problems or questions you may confront as you design your study:

- It can be difficult to determine the boundaries of a speech community or community of practice. For example, in the Raleigh study discussed above, the speech community is, in theory, the city of Raleigh. But does the city of Raleigh include the suburbs, or does it stop at the city limits? Also, should we consider everyone who lives in Raleigh to be a member of the speech community?

The answers to questions like these depend upon your research goals. In Raleigh, we are investigating the linguistic effects of the migration of people from the northern United States into Raleigh, specifically the loss of the Southern Vowel Shift. Many of the northern migrants settled in suburban Raleigh, and so we include the suburbs in the study. We keep track of where each speaker grew up (city vs. suburbs) so that it can contribute to the statistical analyses. But not

everyone in the city is eligible for the study. We are only including people who grew up in Raleigh or its suburbs, not people who moved to Raleigh after childhood. In addition, some of our research questions are specific to either white speakers or African American speakers, and so we need to collect information about speakers' ethnicity and ethnic identity.

- It is common for students (or any researcher, for that matter) to work with data collected by someone else. In that case, you did not design the sample, and even if you are using your own data, it likely has gaps. That is to say, it does not have as many speakers, or as many hours of data, as would be ideal. Therefore, it is important that you tailor your research questions to the available data. This means that you will typically not be able to fully address the questions that interest you; rather, you will have to limit the scope of your questions according to the limits of your data. For example, during the early stages of the Raleigh study, we had very little data from working-class speakers. Therefore, we first addressed questions that were specific to middle-class speakers.
- If you have carried out a speech community study and you have found linguistic differences between broad demographic categories, such as males vs. females or older vs. younger speakers, keep in mind that these differences are quantitative facts about your sample, not explanations, and not direct indications that the linguistic variables carry particular social meaning. For example, if you find that males use higher rates of alveolar *-in'* (as opposed to velar *-ing*) than females, you should not immediately conclude that alveolar *-in'* has "male" connotations. The male lead is quite likely the product of another type of social meaning that itself is associated with some male identities.
- Try not to operate on the basis of assumptions about your linguistic variables or about the linguistic or social practices of the speakers in your sample. Instead, make empirical claims, that is, claims for which you have evidence (quantitative, ethnographic, etc.). Making limited empirical claims is not a bad thing; in fact, it is better to make a limited claim for which you have strong evidence than to make a more sweeping claim for which your evidence is weak.

Advice

The speech community, the social network, and the community of practice are conceptual tools that can be used to investigate distinct but complementary aspects of linguistic variation. In choosing among them, let your research question(s) guide you. The speech community is a good model for examining the broad distribution of a linguistic variable across demographic categories in a city or region. Social network data, by contrast, has the potential to illuminate the relationship between patterns of human contact and the spread (or lack thereof) of linguistic variables. The community of practice, which foregrounds locally meaningful practices and allows for conflicting ideologies, offers a framework within which to explore the social meanings that linguistic variables carry and the interactional goals they serve. The combination of these models would yield a fuller analysis than any of them in isolation, but it is rare to have the resources for this, particularly time and access to data.

No matter what type of study you are embarking upon, it is important to begin with specific research questions and to tailor your questions to the available

resources. As you are designing your research questions and the study itself, read the existing sociolinguistic literature on your variables and on your community. Finally, regardless of whether you are carrying out a large quantitative analysis or a smaller ethnographic discourse analysis, or some combination, draw conclusions that are supported by your data.

Tips

- Start with specific research questions that are tailored to the available resources (time, money, access to data).
- Let your choice of model (speech community, social network, community of practice, or other) be guided by your research questions.
- Read existing literature on your linguistic variables and/or speech community.
- Draw empirically supported conclusions.

Project Ideas

- 1 *Investigate the social distribution of a linguistic variable* local to the community in which you live and have contacts.
- 2 *Find the linguistic factors* (phonetic, morphological, syntactic, etc.) that favor or disfavor an existing linguistic innovation among people in your age group, such as the use of quotative *be like* as in *I was like* vs. *I said*.
- 3 *Explore the linguistic practices* of a community of practice to which you have easy access.

Further Reading and Resources

The American Dialect Society: www.americandialect.org/

The blog Language Log: <http://languagelog.ldc.upenn.edu/nll/>

Chambers, J.K., Trudgill, P., and Schilling-Estes, N. (eds.) 2002. *The Handbook of Language Variation and Change*. Malden, MA: Blackwell.

References

- Bailey, G. 1997. When did Southern American English begin? In *Englishes around the World*. Vol. 1: *Studies in Honor of Manfred Görlach*, ed. E. Schneider, 255–275. Amsterdam: John Benjamins.
- Bell, A. 1984. Language style as audience design. *Language in Society* 13: 145–204.
- Bucholtz, M. 1999. Why be normal?: Language and identity practices in a community of nerd girls. *Language in Society* 28: 203–223.
- Cheshire, J., Fox, S., Kerswill, P., and Torgersen, E. 2008. Ethnicity, friendship network and social practices as the motor of dialect change: linguistic innovation in London. *Sociolinguistica* 22: 1–23.
- Dodsworth, R., and Kohn, M. 2012. Urban rejection of the vernacular: the SVS undone. *Language Variation and Change* 24: 221–245.
- Eckert, P. 2000. *Linguistic Variation as Social Practice*. Malden, MA: Blackwell.

- Eckert, P. 2008. Variation and the indexical field. *Journal of Sociolinguistics* 12: 453–476.
- Fridland, V. 2000. The Southern Shift in Memphis, Tennessee. *Language Variation and Change* 11: 267–285.
- Fridland, V. 2001. The social dimension of the Southern Vowel Shift: gender, age, and class. *Journal of Sociolinguistics* 5: 233–253.
- Fridland, V. 2003. Tie, tied, and tight: the expansion of /ai/ monophthongization in African-American and European-American speech in Memphis, Tennessee. *Journal of Sociolinguistics* 7: 279–298.
- Hazen, K. 2002. Identity and language variation in a rural community. *Language* 78: 240–257.
- Hudson, R.A. 1999. *Sociolinguistics*, 2nd edn. Cambridge: Cambridge University Press.
- Johnstone, B., Andrus, J., and Danielson, A.E. 2006. Mobility, indexicality, and the enregisterment of “Pittsburghese.” *Journal of English Linguistics* 34: 77–104.
- Labov, W. 1966. *The Social Stratification of English in New York City*. Washington, DC: Center for Applied Linguistics.
- Labov, W. 1972. On the mechanism of linguistic change. In *Sociolinguistic Patterns*, 122–142. Philadelphia: University of Pennsylvania Press.
- Labov, W. 1991. The three dialects of English. In *New Ways of Analyzing Sound Change*, ed. P. Eckert, 1–44. New York: Academic Press.
- Labov, W. 2001. *Principles of Linguistic Change*. Vol. 2: *Social Factors*. Malden, MA: Blackwell.
- Labov, W., Ash, S., and Boberg, C. 2006. *The Atlas of North American English: Phonetics, Phonology, and Sound Change*. Berlin: De Gruyter.
- Lane, L.A. 1998. Emergence and transformation of a dialect. PhD dissertation. University of Chicago. Thyboronsk (Danish).
- Lane, L.A. 2000. Trajectories of linguistic variation: emergence of a dialect. *Language Variation and Change* 12: 267–294.
- Le Page, R. and Tabouret-Keller, A. 1985. *Acts of Identity: Creole-based Approaches to Language and Ethnicity*. Cambridge: Cambridge University Press.
- Milroy, L. 1987. *Language and Social Networks*, 2nd edn. Malden, MA: Blackwell.
- Milroy, L. and Milroy, J. 1985. Linguistic change, social network, and speaker innovation. *Journal of Linguistics* 21: 339–384.
- Milroy, L. and Milroy, J. 1992. Social network and social class: toward an integrated sociolinguistic model. *Language in Society* 21: 1–26.
- Nichols, P.C. 1983. Linguistic options and choices for black women in the rural South. In *Language, Gender, and Society*, ed. B. Thorne, C. Kramer, and N. Henley, 54–68. Boston, MA: Heinle and Heinle.
- Stuart-Smith, J., Timmins, C., and Tweedie, F. 2007 “Talkin’ Jockney”? Variation and change in Glaswegian accent. *Journal of Sociolinguistics* 11(2): 221–260.
- Thomas, E.R. 1997. A rural/metropolitan split in the speech of Texas Anglos. *Language Variation and Change* 9(3): 309–332.
- Thomas, E.R. 2003. Secrets revealed by Southern Vowel Shifting. *American Speech* 78: 150–170.
- Trudgill, P. 1974. *The Social Differentiation of English in Norwich*. Cambridge: Cambridge University Press.
- Weinreich, U., Labov, W., and Herzog, M. 1968. Empirical foundations for a theory of language change. In *Directions for Historical Linguistics*, ed. W. Lehmann and Y. Malkiel, 97–195. Austin: University of Texas Press.
- Wenger, E. 1998. *Communities of Practice: Learning, Meaning, and Identity*. Cambridge: Cambridge University Press.
- Wolfram, W. 1969. *A Sociolinguistic Description of Detroit Negro Speech*. Washington, DC: Center for Applied Linguistics.

18 Analyzing Sociolinguistic Variation in Multilingual Contexts

Rajend Mesthrie

Introduction	277
Central Concepts in Multilingual Research	278
Data Collection for Multilingual Communities	279
Multilingualism and Code-switching	283
Language Endangerment in Multilingual Contexts	286
Conclusion	288

Summary

This chapter advises students about analysis of language data from multilingual communities. The challenges facing the student researcher are different from those involved with monolingual communities, and the embarking researcher must understand the special circumstances the multilingual and multicultural community and speakers present. Concepts such as domain, diglossia, and code-switching are covered in this chapter as part of the repertoire the student researcher will need to learn in order to conduct multilingual analysis. The chapter also provides illustrations within multilingual communities of phonetic variations and syntactic innovations within a single language, of convergence (or mutual influence) between two or more languages, of the structural and social characteristics of code-switching, and of issues surrounding salvage work in endangered languages.

Research Methods in Sociolinguistics: A Practical Guide, First Edition.

Edited by Janet Holmes and Kirk Hazen.

© 2014 John Wiley & Sons, Inc. Published 2014 by John Wiley & Sons, Inc.

Introduction

This chapter deals with the analysis of variation in multilingual societies from the perspective of language variation and change as well as language contact. An important part of this work is also covered in allied fields like the sociology of language (e.g., Fishman, 1972) and the ethnography of communication within anthropological linguistics (see Jaffe, this volume). The latter two subfields have their own concerns and methodologies, but no serious student of language contact and variation can afford to neglect the social context of multilingualism and the insights emanating from these two subfields.

In the first place, it must be acknowledged that multilingualism is the norm in much of the world, even as large and powerful languages have spread at the expense of the more localized ones. Colonization by Europeans overturned the old linguistic order in many African, Asian, and American societies, creating a hierarchical colonial multilingualism, with a European language often in the ascendancy. Postcolonial governments have found it hard to change these arrangements, since the end of colonization tended to be superseded by the not dissimilar forces of a new globalization. Globalization and a new economic mobility, fueled by critical economic problems in some former colonies, has in turn made Western countries like the UK, USA, France, Germany, and Holland more multilingual than before. This is an era in which the empire is making return visits to the erstwhile colonizers. Much variationist sociolinguistics has focused on studying variation within a single language, which is most often the dominant language of the metropolis, achieving a hegemonic position as the seemingly natural language for public and formal interactions within that society. This has implications for what counts as “statusful” usage and hence for language and style shifting for those who speak other languages or varieties.

Turning to non-Western postcolonial contexts, it is often the case that a European language retains prestige but is not the dominant language numerically. In sub-Saharan Africa, for example, postcolonial societies are often highly multilingual, but the language of education and prestige is not always the numerically dominant language. The concept of the vernacular, in the Labovian (1966: 100) sense of the language used in the most informal contexts when people laugh and chat with friends and close family, with “minimum attention ... to the monitoring of speech,” certainly applies in multilingual societies. However, particular vernaculars are not necessarily widespread throughout a multilingual society: if one’s home and/or neighborhood language is not widespread, then an intermediate lingua franca might be a necessary part of one’s multilingual repertoire. In West Africa, Pidgin is spreading as such a lingua franca; in East Africa, Kiswahili is a well-established lingua franca with considerable prestige; and in southern Africa, certain vernaculars have become more widespread as lingua francas, but are not all-pervasive in the territory – Zulu in South Africa, Chichewa in Malawi, Shona in Zimbabwe. Furthermore, more formal contexts often require a switch to another language. This is often English in the three territories cited.

There is no single method for sociolinguistic research in such multilingual territories. Much depends on the scope of the research: is the focus on a particular

language, on switching between two or more languages, or in characterizing the full repertoire of a community? Underlying these approaches are the concepts of domain, code-switching, and prestige. Other factors like individual intentions and community-based rights and obligations are also important.

Central Concepts in Multilingual Research

“Domain” is the term popularized by Fishman (1972: 248) for “institutional contexts and their congruent behavioural co-occurrences.” The concept aims to “summate the major clusters of interaction that occur in clusters of multilingual settings and involving clusters of interlocutors.” Ferguson’s work on diglossia predates this terminology, and hence does not refer to the term “domain,” although the concept permeates this pioneering paper of 1959. Ferguson (1959: 236) noted that “the importance of using the right variety in the right situation can hardly be overestimated.” Fishman credits his own use of the term “domain” to Schmidt-Rohr’s (1932) concept of “dominance configuration,” suggesting that languages are not equally distributed by domain. Diglossia, as is now well known, describes the situation in some societies where an older (classical) and a related contemporary vernacular form exist side by side but function in complementary (non-overlapping) domains. Ferguson’s main example was the coexistence of Classical and Colloquial Arabic in Cairo in the 1950s, two related but distinct forms of Arabic. The Classical form was used in more formal domains (religion, formal lessons, literature), whereas the Colloquial form thrived in other spheres (informal face-to-face interaction, folk songs, etc.). An outsider researcher who may have been trained in Classical Arabic will find that he or she has to learn the colloquial form or work in conjunction with a local fieldworker, but that in more public contexts a demonstrable knowledge of Classical Arabic is advantageous. Issues of overt and covert prestige (Labov, 1972) and the mismatch between stated attitudes and actual language behavior also come into play. Fishman (1967) later noted how diglossia could be extended to cover bilingualism of some societies where two unrelated modern languages co-occur in ways reminiscent of Ferguson’s original dominance configuration. In sub-Saharan Africa, the effects of European colonization made English, French, or Portuguese the languages of modern formal domains compared to the indigenous vernaculars, which are often favored in more informal domains and oral literature, though there are notable exceptions like Kiswahili.

In other societies, domain specialization is not nearly as stringent as in diglossic societies. Two languages may co-occur in the same domain and be used interchangeably. Code-switching – the use of two or more languages in the same speech event – may even be the norm in informal domains. As emphasized above, there is no “one size fits all” approach in multilingualism research. This chapter will cover some of the main methodological approaches that researchers have found effective in different kinds of multilingual settings. These pertain to data gathering via interviews, other means of corpus building, observing code-switching, and undertaking “salvage” work in situations of language endangerment.

Data Collection for Multilingual Communities

The sociolinguistic interview in the Labovian tradition follows well-established routines. Since this topic is covered in Chapter 2, our discussion will be brief. The aim of such an interview is to collect colloquial speech data that comes fairly close to representing the norms of the local speech community being studied. This is not as easy as it might seem, since, as Labov noted, speech to strangers or figures of authority (like a middle-class university graduate) usually evokes a more formal style than that of the local vernacular, which is deemed appropriate mainly in face-to-face informal interaction with friends and close acquaintances. Labov devised a schedule of topics that help the researcher defuse the potential formality of an interview. These topics focus on the local community and the experiences of the interviewee. Topics that help the interview flow reasonably well are childhood games, personal experiences at school, righteous indignation about wrongful blame (at school, home, or neighborhood), and the well-known “danger of death” narrative (when an interviewee, asked if his/her life was ever seriously threatened – “when you thought ‘This is it!’” – gives an uninhibited account of personal danger). While avoiding a focus on language itself during the main part of the interview, Labov supplemented it at the end with more consciously linguistic (or metalinguistic) activities like reading out a list of words and a reading passage containing a variety of sounds of potential interest. These methods work extremely well, and critics (e.g., Wolfson, 1979) either do not understand the aims of variationist sociolinguistics, or misapply the method to situations it was not designed for (e.g., to study how conversation unfolds). And of course a good research project will adopt methodology to suit local conditions – for example, one wouldn’t ask about love and sex in a society where this is a taboo subject.

The question for this chapter is whether this interview methodology applies in multilingual communities. Again, it depends on one’s aims and the variety or varieties one is studying. The methodology works best if one is studying a single community within a multilingual community and its dominant home language. In this case, questions about everyday activities, past and present, are indeed likely to elicit vernacular speech in this language. Thus in studying South African English of White speakers who have (by and large) a historical connection with nineteenth-century Britain, there is little need to adapt the sociolinguistic interview radically, though it would be vital to record background information like the degree of bilingualism with Afrikaans or other South African language. This could in fact be a variable explaining the frequency of certain features – for example, a centralized rather than front realization of /t/. The analyst will also need to be alert to the number of borrowings used by speakers, as this could be an index to the social variable of “local orientation” vs. “international orientation” of speakers in an increasingly global world. If a speaker used international terms like *barbecue*, *traffic light*, and *four-way stop* rather than the usual local ones like *braaivleis*, *robot*, and *stop-street*, this would suggest that the speaker was not using South African vernacular English, and might therefore not be a reliable informant if one were reporting on this variety. The student would do well to craft a short section at the end of the interview focusing on such words that differ across national boundaries.

As an example of phonetic variation in one language, English, in a multilingual society, Mesthrie's (2010) study on fronting of the GOOSE vowel among young South Africans is instructive. The study was based on the large-scale changes that followed the demise of apartheid in South Africa. Whereas the four major ethnic groups were previously rigidly segregated, from 1994 onward it became illegal to have separate schools, universities, restaurants, parks, hotels, cemeteries, and so on. I used the traditional methods of Labovian sociolinguistics to examine whether young people of the major ethnic groups were simply adopting prestige White middle-class English norms, adapting them, or resisting change. The study focused on one particular vowel: the high, back rounded vowel traditionally transcribed as /u:/ and also referred to as the GOOSE vowel – *goose* being one of hundreds of English words having this vowel (also *fool*, *who*, *true*, *crude*, etc.) Interviews with young people who had some experience of the post-1994 non-racial schooling were undertaken. These interviews focused on their experiences of school, friendship patterns, best and worst moments, their relations with their immediate and extended families, and their experience of crime – a regrettably common theme that evoked fluent extended narratives. Interviews were transcribed into ordinary English without any special phonetic or discourse conventions. These were used to locate all instances of the GOOSE vowel per interview. These vowels were then characterized in terms of whether they had the back values expected of older, more traditional varieties of Black, Colored, and Indian English of the country, or whether the influence of prestige White varieties from early non-racial schooling was causing a degree of fronting of the vowel. The analysis was done acoustically using the free program PRAAT (Boersma and Weenink, 2008). It would have been feasible to use “ear training” to judge whether each token was relatively back, central, or front, but computer-based acoustic readings are becoming the norm in sociophonetic research (see Thomas, this volume). So it was possible to give an average reading in hertz for each speaker. Speakers were then grouped into one of the four ethnicities that their parents' generation would have been classified by, and averages given for each of these four groups. Since gender is of interest in issues of prestige and language change, boys and girls were treated separately.

In the South African context, “Black” is differentiable from “Colored” insofar as the former prototypically refers to a speaker with a Bantu language (Xhosa, Zulu, Sotho, etc.) as the language of the home and community; the latter refers to people of multiple ancestries prototypically having shifted from a Khoesan language (e.g., !Xam, Griqua) or a Bantu language to Afrikaans and/or English. “Indian” in this context refers prototypically to people who trace their ancestry to nineteenth-century India.

The study showed that all young people of middle-class background in South Africa are fronting the GOOSE vowel to varying extents. In terms of ethnicity, Whites have the most front values. Of the three historically “non-white groups,” it is the young Black schoolchildren who accommodate the most to these norms, and

Colored schoolchildren the least. Amongst the Indian children I identified two subgroups, one with relative back values, the other with front values. In interpreting the results, I suggest that Colored and Indian children feel the pull of community norms much more in varieties in which acrolectal or prestige varieties had arisen a generation or so ago. By contrast, Black English in the country was very much a second language, with an African language (like Zulu or Sotho) being the one with community associations. Young Black children did not have a prestige variety of English to draw on from within the community, and hence adopted the norms of their White peers, who were the majority in the schools around the time of their entry into schools from 1994 on. In this process the English language has become deracialized in South Africa: it is no longer possible to identify a fronted GOOSE vowel with White speakers alone.

This study provides several pointers as to the significance of sociolinguistic research and methods:

- Language is not fixed but responds to changing societal conditions, especially those resulting in new interactive patterns between young people (i.e., changes in social networks).
- Accents are highly significant in matters of identity, and either respond to changes in identity or actively create such new identities among young people.
- Particular vowels can be analyzed by modern computerized methods to show such changes in progress.
- Phonetic changes are usually not of a categorical nature; they are often gradual, incremental, and quantitative (here, involving a degree of fronting, rather than a simple front–back dichotomy, as well as relative proportions of fronted to non-fronted tokens among speakers).
- Changes are unconscious: people are unaware of which variables they are manipulating or imitating, for what end, in what styles, and in what quantities.

The more interesting case arises when studying a community's second language (or L2), as is the case with many "New Englishes" – that is, varieties that have arisen around the globe in response to British colonialism, which introduced English as a resource in education, administration, and government. Because such varieties were introduced mainly in the classroom or were used by locals in contact with a British ruling class (or later with tourists), they did not always show the colloquial norms associated with a vernacular. The influential scholar of Indian English Braj Kachru (1983: 39) noted a tendency toward a kind of Latinity (*demise* for *death*), polite diction (*your good name*), hyperbole (*Himalayan blunder*), and a "moralistic tone" (e.g., the frequent use of *God* or *Oh God*). Till today, the sociolinguistic interview is less common in studies of New Englishes than the use of written corpus material, drawing on projects like the International Corpus of English (ICE) – see, for example, Nelson, Wallis, and Aarts (2002). This project itself draws on a variety of materials (spoken and written) to build up a comparable machine-readable database from the territories in which English is

used as a major language. The spoken texts are divided into dialogues and monologues. The dialogues are either private (conversations and phone calls without an audience) or public (in which the speech or dialogue takes into account an audience). Monologues like a lecture or legal presentation are often more planned than dialogues. Written materials in the ICE also come from a variety of sources, including newspaper texts. However, it would be an oversight to ignore the sociolinguistic interview as a resource for characterizing an L2 in detail. Students embarking on their own projects are encouraged to do sociolinguistic interviews. If this is not feasible – if there are too few speakers, for example – then corpus data may be used. However, one should be fully alert to possible differences of genre within a corpus, and not make strong claims about colloquial speech norms based on a written corpus. I illustrate the value of an oral corpus with my study of the syntactic norms of Black South African English (Mesthrie, 1997). Until recently this was a variety introduced mainly via schooling or work, rather than as a home language. However, the urbanization that frequently accompanied colonization resulted in speakers of different languages coming together to form new communities, which didn't have a link language. This link language was often a second language. In the case of Soweto, a large township in Johannesburg, a number of languages still coexist as dominant home languages: Sotho, Tswana, Zulu, Tsonga, and Venda (to name a few). No single lingua franca exists: speakers are multilingual and use a language like urban Zulu or urban Sotho as a lingua franca. Increasingly, English is used as the lingua franca amongst more educated speakers, especially in formal and semi-formal contexts. I was interested in describing some of the features of this variety, from the viewpoint of its characteristic syntax.

In many ways the sociolinguistic interview for an L2 is like that of an L1, except that some attention has to be paid to non-vernacular usage. If people acquired the L2 in formal educational settings, then the style will not be close to the vernacular (in the speaker's mother tongue), even though informality can easily be achieved by fluent speakers. Useful topics – rather specific to South African social history – related to people's memories of school, the hardships under apartheid, and their present experiences of a changing society. When I undertook my interviews with university students in the early 1990s, a good question which elicited extended narratives was "What do you remember of the 1976 uprisings by school pupils?" The students also had much to say on their experiences in making the leap from Black education in school to a university formerly reserved for Whites, but slowly transforming into a non-racial (or perhaps multiracial) student environment. Since my interest was in showing that the syntactic variation was of a relatively consistent nature, it was important to transcribe all the data into ordinary English. I then went through this corpus of extended interviews with 50 speakers to pick out instances of the constructions I was interested in: namely, the use of "topic – comment" structures like *My brother – he was studying at university then*. These sentences are different from ordinary "Subject – Verb – Object" sentences in that they outline a topic (*my brother*) and follow it up by a "comment" sentence which usually adheres to normal sentence order (*he was studying at university then*). The topic is usually repeated as a pronoun in the comment section. In variationist sociolinguistics, it is equally important to note standard occurrences when speakers didn't use this structure (e.g., *The policeman were running ahead of us*) in order (i) to establish the frequency of the construction one was studying and (ii) to work out from contextual clues when the one was more appropriate than the other or whether they co-varied at random. One of the things I was interested in was what functions

Table 18.1 The topicalization hierarchy for noun phrases in Black South African English (based on Mesthrie 1997: 128)

SUBJECT	LOCATIVE	TEMPORAL	DIRECT OBJECT	GENITIVE	OTHER
>	>	>	>	>	
56%	15%	10%	9%	3%	7%

of the noun phrase (NP) lent themselves most to topicalization. Table 18.1 shows a hierarchy from that study illustrating the distribution of topicalization according to function (subject, object, possession, etc.) of the topicalized NP. Percentage occurrences are given beneath each function. The arrowheads are conventional symbols for indicating relative frequencies: $x > y$ is to be read as “ x occurs at a higher frequency than y .” An example of subject function occurs above (*My brother – he was studying at university then*). An example of object function is *Tswana – I learnt it in Pretoria*; and of locative, *Ya, you see, at school when I was doing my standard seven, I was – we were – mixed up with Sotho-speaking students* (see further, Mesthrie, 1997: 128).

If one were interested in researching the sociolinguistic norms of the *first language* of such a multilingual community, then obviously an English-medium interview is not feasible. An interviewer from within the community, sharing their L1 norms as well as multilingual sensitivities (e.g., knowing what can best be talked about in which language) is a desideratum. Even if the researcher were fluent in the L1 of the community, other barriers might arise – like status of the researcher, their own ethnic status in a formerly racially charged country, issues concerning gender, and so on. For this reason, the employment of a paid interviewer or research assistant from within the community is sometimes desirable.

Beginning students will have to keep in mind these constraints when embarking on small-scale studies of their own. They should preferably be fluent in the language(s) they choose to research; they should stick to one linguistic mode (e.g., conversational speech, written texts, SMS texts, formal radio/television interviews); they should work with a small corpus of data which they study in detail. There is no answer to the question which type of corpus is best; it all depends on the aims and claims of the study. A good project would go through the entire corpus carefully to report on, say, the number of relative clauses of type A versus type B, each in relation to the total number of sentences in the corpus, and noting the conditions under which each type occurs. Presenting one’s data via tables and then pointing to the results they suggest is a good practice that aids the writer as well as the reader.

Multilingualism and Code-switching

A frequent characteristic of modern urban multilingual societies is that the languages will not stay put according to particular domains, topics, or speakers. The diglossic model or other specialization by domain is frequently flouted by young multilingual speakers who refuse to keep their languages apart and force the analyst to devise ways

of coming to terms with a new linguistic order. If one's aim is to elicit and study code-switching practices, then the outsider-interviewer is unlikely to succeed. For one thing, code-switching is a very skillful practice (with the syntactic constraints not fully understood even by professional linguists), and the risk of an outsider who was trying to code-switch sounding awkward or patronizing is quite large. Here one would have to be a functioning member of such a multilingual community to really succeed. However, beginning researchers can take heart that other, non-oral sources also prove useful (e.g., informal letters). These days, social networking sites often have informal multilingual and code-switched data that researchers are increasingly drawing on as rich sources of data mining. It is a debatable point whether written data of this sort closely accords with the naturalistic rules of oral code-switching; in this case – once again – researchers would do well to limit their generalizations to the domain under study, and not to all spheres of language use.

Kay McCormick (2003) studied the code-switching practices in the remnants of District Six, Cape Town in the 1980s and early 1990s, amongst people characterized as Colored in South African terms. She was interested in documenting and characterizing the multilingual practices of this working-class community who were known to use Afrikaans and English interchangeably in speech events. These were the two official languages of the country at the time, though what existed in the community were local variants of each, plus a mixed variety that McCormick considered to be the vernacular. McCormick notes that in such a context the researcher should ideally be a participant observer with access to a range of domains and to documentary or other sources of historical information that would help illuminate the factors giving rise to two languages coexisting fairly intimately. But certain barriers made this impracticable, including the fact that McCormick was classified “White” in South Africa, at a time of apartheid. Moreover, it would have been impractical and somewhat artificial for her to leave her own home not far away and come down the hill to live in the fieldwork district. McCormick settled on the next best option: to build up a relationship as a trusted, regular, visiting participant observer and to use a range of methods, including informal discussions with residents, tape-recorded interviews, and recordings of data from other situations, such as children at a local pre-school and community meetings. It was also necessary to employ and train part-time fieldworkers from within the community. The use of “insider fieldworkers” gave access to a wider stylistic range than was likely to have been achieved by an outsider. Interviews were opened in whatever language the fieldworker judged to be appropriate depending on context and participant. They were also encouraged to switch languages as naturally as possible, thus covertly offering interviewees a choice of taking up this option or not. Family members and neighbors congregating around the interview were included in the discussions, and often participated by challenging or reinforcing the comments of the interviewee. In this way, large sections of the interview turned into spontaneous discussions.

There is no doubt that McCormick's eclectic methodology elicited natural data from the community at its most informal, as the following example of intimate code-switching from a child talking to herself shows (McCormick, 1995: 193):

- (1) *Ek het die colour, nou where's it.*
 I have the now
 ‘I have this colour, now where's it?’

In addition to showing the deft weaving of English and Afrikaans into a seamless whole, the above example also illustrates how analysts should present their data. The first line presents the actual data using font variations (here italics for Afrikaans material and roman for English). Immediately below (and spaced out so as to align with the words of the first line for ease of reference) is an interlinear word-by-word gloss (or morpheme by morpheme for languages with more complex morphology than this). The third line gives an idiomatic rendering into English. For even more complex switching than this, more font variants are necessary – for example, bold or underlining for materials from still other languages. For extended texts, analysts prefer to give the idiomatic translation as a parallel column for ease of reading.

The most famous sociolinguistic studies of code-switching in Africa are those of Myers-Scotton (1993) in East Africa, opening up new avenues of understanding the motivations for the phenomenon. Muysken (2011) points out that individual switches can be accounted for by theories of interaction such as that of Myers-Scotton. This work uses notions like negotiations in interaction, the need for a balance between rights and obligations in a community, and a markedness scale for switching. The latter refers to the expected occurrence of one code over the other in particular domains, with speakers of particular languages, or with particular roles and relations between interlocutors. This work was highly successful in teasing out the social and pragmatic rationale for switching between localized languages, the more widely used and statusful Kiswahili, and English in East Africa. Briefly, the different codes in a contact situation frequently have different sets of rights and obligations associated with them. English may become associated with degrees of education, formality, status, and snobbishness, while a local language may be associated with informality, community values, solidarity, and, of course, local practices. A lingua franca like Kiswahili might be intermediate between these two poles and have additional positive political associations. Myers-Scotton demonstrated how code-switching often serves to change the existing rights and obligations in any particular situation and to send a meta-message about the speaker or situation that goes beyond the content of what is said. The “social motivations” model of Myers-Scotton is recommended to first-time students, who should concentrate their analytic methods on working out the social and pragmatic rationales for each instance of code-switching in their data. Of course, since human behavior is not always conventional or consistent, there might be individual switches which are not easy to explain.

Muysken (2011) indicates that when switching becomes extremely frequent (code-mixing to some linguists), interactive accounts become less useful. Rather surprisingly, there is no discussion of fieldwork practices in Myers-Scotton’s (1993) book. It is clear for some of the data that she wrote down utterances that she overheard showing code-switching between English and Kiswahili. In other instances she appears to be relying on the services of a fieldworker conversant with local norms, including those of code-switching.

In a large-scale study of language use in Botshabelo, a multilingual South African township, Finlayson and Slabbert (1997) focused on code-switching patterns involving two Bantu languages (Tswana and Sotho) and two Germanic ones (Afrikaans and English). It is cited here for the research opportunities offered by multilingual practices as well as the kind of analytic decisions that researchers have to make in the face of such multilingual complexity. The project drew on a larger investigation

by Van den Berg and Slabbert (1993), which sought to establish the dynamics of multilingual usage in townships and discover whether any particular language was emerging as a lingua franca. The wider project used a range of methods, but the one that Finlayson and Slabbert found most useful for the analysis of code-switching was the use of a group discussion of 80 minutes involving six male teenagers aged 15–16 from the township. The discussions were overseen by a “moderator” fluent in all the languages concerned and with experience in coordinating commercial research groups. In code-switching studies, there is less of a tradition of quantitative work, though there are some exceptions, like Poplack (1990). But some counting is necessary if one wishes to convince one’s reader that a particular type of switching, say after pronouns, is common, rare, or impossible. Finlayson and Slabbert generally used the technique of illustrative sentences for their claims, but they did provide some quantification of their important claim that where people were switching between two closely related Bantu languages – Sotho and Tswana – they did so without one of them predominating as a base language with morphemes from the other language embedded into this matrix. This was the pattern (matrix vs. embedded language) when residents inserted words and phrases from English into a Bantu language matrix. But for switching between Tswana and Sotho, no base vs. embedded language distinction could be made. Rather, a new amalgam between the two seemed to be developing. In one of their illustrative extracts, the authors count 77 shared morphemes between the two languages, 4 from Tswana alone, 9 from Sotho alone, and another 19 from English. They consider this to be strong evidence for language convergence and the likely rise of a new Sotho–Tswana lingua franca. One difficulty at the stage of analysis in this kind of research is making a decision about the affiliations of words and morphemes – that is, assigning a morpheme to one of the languages in contact and not the other. The problem here is that borrowings are common in situations of contact, so that a word like *sekolo*, though historically a borrowing from English *school*, is now very much a part of Tswana. Analysts usually consider the degree of integration of such borrowings as criterial for membership of the borrowing language. In this case, *sekolo* has been integrated into Tswana phonology, whereas an allied word *classroom* appears not to be yet so integrated and must therefore count as a switch. This distinction is not always clear-cut in practice: in time’s fuzzy flow, yesterday’s borrowing is slowly turning into tomorrow’s loanword. So what is the poor analyst to do today? A sensible approach would be to try multiple approaches: a first analysis treating all post-contact borrowings and switches as belonging to one set, and then refining that set by other criteria like phases of borrowing, degree of integration, or frequency, and so forth.

Language Endangerment in Multilingual Contexts

What if the language being studied were rapidly declining in status and usage? Here a variety of methods would be needed, depending on one’s aims and the fluency of different generations of speakers. In the 1980s, I studied the Bhojpuri language as it had evolved over 120 years in South Africa. It was possible to find people for whom it was still an L1 (into the second or third generation of descendants of migrants),

others for whom it was an equal L1 with English, and younger people with less than full fluency in it, for whom English was the L1. Community norms required that a young male interviewer should use an intermediary in speaking to the oldest women; here the help of a daughter-in-law in a joint family was successfully enlisted in conducting the interview in South African Bhojpuri. I conducted interviews with middle-aged persons in a mix of English and Bhojpuri, while for the youngest speakers I employed English, as it proved incongruous for them to speak in Bhojpuri to another young person or to a stranger. It had become a language young people understood but did not generally speak, except occasionally with elderly grandmothers. I had to be content with asking such people to narrate stories in Bhojpuri and to undertake translations of English sentences and word lists. (I discuss some caveats about this below.)

What if one were researching a truly moribund language, one that had no speakers left anywhere except a few in the geographical area one was working in? Dorian (1989: 7) cites a summarizing comment by a “veteran researcher in a questionnaire about field methods and experience” which gives a dramatic picture of the urgency and desperation of researchers:

Every case is special. You must deal with the idiosyncratic situation (Sunday in Scotland, keeping a bottle handy, avoiding a meddling ignorant [spouse], avoiding street commotions when Cyprus and Anglos [don't] mix, keeping infirm or senile people awake, concealing your identity to authorities, dealing with Marxist bureaucracies, flat tyres, impassable roads, writing between the steering wheel of a car to keep your subject trapped, living through indigestion, diarrhea and body lice, humouring your hosts in every improbable way). You simply cater to every obstacle as if there will never be another chance. Never offend if you want to go back. Wait an afternoon for 3 sentences or phrases. Assume you'll be the last linguist ever to get there.

Brenzinger (2008), who has worked on a number of endangered languages in Africa, mentions the need to include old speakers who may not have undergone the considerable conceptual shift characteristic of younger speakers influenced by Western education. The latter may show a great deal of surface as well as deeper influences from a more dominant language, which may be interesting to the variationist studying language shift. However, it is of secondary importance to the scholar of endangered languages concerned with documenting the internal structure of a language before it underwent attrition and change under the influence of other languages like Afrikaans.

How much translation should a fieldworker rely on in multilingual contexts? As a general rule, translation is a metalinguistic skill, and fluent speakers of two languages may not be very adept at translation. The researcher should particularly be aware of the possibility of the interviewee being influenced by the model offered by the sentence they are asked to translate from. Thus in my Bhojpuri fieldwork, when I asked speakers to translate a sentence like “You are a lazy child: you must go to school tomorrow,” most interviewees used an overt second-person pronoun in each clause in their Bhojpuri translation, whereas they were more likely to drop the pronoun of the second clause (“pro drop”) in untranslated idiomatic speech. But there are fieldwork situations when translation is the only viable mechanism. Researchers working with an endangered language who did not speak the language themselves would have no option but to use

translation, assuming that there was a viable common language that could be used. In an endangered language situation, it might even be necessary to resort to a “chain of interpretation” or translation by using an intermediary if the researcher does not share a lingua franca with the consultant-speaker of the endangered language.

Conclusion

In researching and analyzing multilingual data, again there is no set method to follow. It all depends on what one intends to focus on from the data. In this chapter, I have given some pointers toward analyzing: (i) phonetic variation within a single language; (ii) syntactic innovations along the same lines; (iii) convergence (or mutual influence) between two or more languages; (iv) characterizing the structural and social characteristics of code-switching; and (v) issues surrounding salvage work in endangered languages.

Project Idea

Increasingly in globalized urban settings, young people of different cultural, geographic, and linguistic backgrounds are coming together and in so doing are evolving new styles of speaking that appear to draw on several different languages. In Nairobi, Kenya, there is a variety called Sheng (the term is a blend based on “Swahili” and “English”), which uses English words with changed associations (much of it therefore slang) attached to a Kiswahili syntax. Find out whether there is such a phenomenon in your state or country. How would you go about designing a small research project to study such a phenomenon?

Further Reading and Resources

- McCormick, K. 2003. *Language Use in Cape Town's District Six*. Oxford: Oxford University Press.
- Mesthrie, R. 1997. A sociolinguistic study of topicalisation phenomena in South African Black English. In *New Englishes: Studies in Honour of Manfred Görlach*, Vol. 2., ed. E. Schneider, 119–140. Amsterdam: John Benjamins.
- Muysken, P. 2011. Code-switching. In *The Cambridge Handbook of Sociolinguistics*, ed. R. Mesthrie, 301–314. Cambridge: Cambridge University Press.

References

- Boersma, P. and Weenink, D. 2008. PRAAT: doing phonetics by computer (version 5.0.08). [Computer program]: www.praat.org/.
- Brenzinger, M. 2008. Reviewing the African language market: are there roles for African languages in the future? In *African Society & Language: The Past, Present & Future*, 65–77. Proceedings of IAS (Institute of African Studies) International Conference.

- Dorian, N. 1989. Introduction. In *Investigating Obsolescence: Studies in Language Contraction and Death*, ed. N. Dorian, 1–10. Cambridge: Cambridge University Press.
- Ferguson, C. 1959. Diglossia. *Word* 15: 325–340.
- Finlayson, R. and Slabbert, S. 1997. “We just mix”: Code switching in a South African township. *International Journal of the Sociology of Language* 125: 65–98.
- Fishman, J. 1967. Bilingualism with and without diglossia; diglossia with and without bilingualism. *Journal of Social Issues* 23: 29–38.
- Fishman, J. 1972. *Language in Sociocultural Change. Essays by Joshua A. Fishman*, selected and introduced by A.S. Dil. Stanford, CA: Stanford University Press.
- Kachru, B. B. 1983. *The Indianization of English: The English Language in India*. Oxford: Oxford University Press.
- Labov, W. 1966. *The Social Stratification of English in New York City*. Washington, DC: Center for Applied Linguistics.
- Labov, W. 1972. *Sociolinguistic Patterns*. Philadelphia: University of Pennsylvania Press.
- McCormick, K. 1995. Code-switching, code-mixing and convergence in Cape Town. In *Language and Social History: Studies in South African Sociolinguistics*, ed. R. Mesthrie. Cape Town: David Philip.
- McCormick, K. 2003. *Language Use in Cape Town’s District Six*. Oxford: Oxford University Press.
- Mesthrie, R. 1992. *A Sociolinguistic History of Bhojpuri-Hindi in South Africa*. London: Routledge.
- Mesthrie, R. 1997. A sociolinguistic study of topicalisation phenomena in South African Black English. In *New Englishes: Studies in Honour of Manfred Görlach*, Vol. 2, ed. E. Schneider, 119–140. Amsterdam: John Benjamins.
- Mesthrie, R. 2010. Socio-phonetics and social change: deracialisation of the GOOSE vowel in South African English. *Journal of Sociolinguistics* 14(1): 3–33.
- Muysken, P. 2011. Code-switching. In *The Cambridge Handbook of Sociolinguistics*, ed. R. Mesthrie, 301–314. Cambridge: Cambridge University Press.
- Myers-Scotton, C. 1993. *Social Motivations for Code-Switching: Evidence from Africa*. Oxford: Clarendon.
- Nelson, G., Wallis, S., and Aarts, B. 2002. *Exploring Natural Language: Working with the British Component of the International Corpus of English*. Amsterdam: John Benjamins.
- Poplack, S. 1990. Variation theory and language contact: concept, methods and data. In *Papers for the Workshop on Concepts, Methodology and Data*, Basle, January 12–13, 1990, 33–66. Strasbourg: European Science Foundation.
- Van den Berg, I. and Slabbert, S. 1993. *Project T-one. Management Report*. Report prepared for the South African Broadcasting Corporation. Johannesburg.
- Wolfson, N. 1979. The conversational historical present alternation. *Language* 55: 168–182.

19 Social Context, Style, and Identity in Sociolinguistics

Nikolas Coupland

What Is Style?	290
Styling Identities	292
The Macro and the Micro	294
Choosing a Context and Data for Analysis	296

Summary

Identity is a central concern in sociolinguistics, because so many aspects of language use are involved in marking and negotiating identities. Speech styles, or ways of speaking, are rich sources of social information – about our social characteristics and backgrounds. But we can also think of “styling” of social identities, when speakers are able to manipulate the identities that they project, often very creatively. This chapter focuses on acts of social identity making through speech.

What Is Style?

Is “style” a noun or a verb? In common usage, it is a noun; we talk of styles of dress or the literary style of an author. Sociolinguists have also thought of styles as entities of some sort, most importantly when William Labov (1972) developed the idea that

Research Methods in Sociolinguistics: A Practical Guide, First Edition.

Edited by Janet Holmes and Kirk Hazen.

© 2014 John Wiley & Sons, Inc. Published 2014 by John Wiley & Sons, Inc.

“there are no single-style speakers,” on the basis that his informants in sociolinguistic interviews could be shown to shift from a “careful style” to a “casual style,” for example as they got more engrossed in telling personal narratives. These styles were established as positions on a scale of formality, and sociolinguists have commonly interpreted style and “stylistic variation” in relation to formality. Labov thought of different styles occupying a dimension of variation, namely “stylistic variation,” cutting across “social variation” (related to social class differences). His concept of “casual style” was therefore a matter of speakers using fewer “standard” speech features than they did when they were using “careful style.”

From a wider perspective, however, there is no need to restrict the study of style to shifting levels of formality. The world is full of social styles, and they include socially meaningful ways of speaking (and writing, although speech has received more attention). We might try to divide them into two general types, as Michael Halliday did in his early research on social semiotics. Halliday (1978) thought that some speech styles and linguistic features relate to “who speakers are,” while others relate to “what speakers are doing”; this gives us a theoretical distinction between “user” and “use” dimensions of linguistic variation. He suggested the term “dialect” for the user-related dimension (but not restricting this to traditional rural dialects, as commonly conceived) and the term “register” for the use-related dimension. This distinction hasn’t survived in modern sociolinguistics, although we find the concept of speech style being applied both to specific groups of users (e.g., New Zealand English, Pittsburghese, African American Vernacular, Cockney, gay speech, or posh speech) and to different contexts of use or communicative functions (e.g., small talk, argumentative talk, or narrative, which are also referred to as speech genres). Some styles of speech implicate both users and uses in equal measure (e.g., auctioneers’ style or political speech making).

These examples might suggest that the objective of researching style in sociolinguistics is to develop a vast grid of style types within any given language, to describe their characteristics, and to establish how one style differs from another. That would be an impossibly open-ended endeavor, but it would also ignore some important theoretical issues, which will eventually bring us back to nouns and verbs. A listing approach would assume that styles are fixed entities with describable characteristics, and this isn’t really the case. While it makes some sense to talk of “Welsh English” (one of my own personal interests) as a rough-and-ready concept, it can only be an approximation to the sociolinguistic realities. There are clearly different ways of speaking English in Wales, so “Welsh English” is necessarily an abstraction. We also need to bear Labov’s point in mind – that even an individual speaker within the group of users that we might associate with the label is likely to speak in different ways across or within social situations.

But we should also ask whose labels these are, and what status they have in relation to social acts of speaking, that is, to discourse. In the case of “Pittsburghese,” Barbara Johnstone (2011) has been able to show that this is a label used by many people living in Pittsburgh, Pennsylvania, to designate a local way of speaking, but that it is taken to denote a highly restricted set of speech features, some of which are not actually in widespread use in the city. So “Pittsburghese,” or Pittsburgh speech style, is as much an ideological concept as a descriptive linguistic one. It gives locals (and some non-locals) a way of defining and talking about being from Pittsburgh; it is a resource for group identification. If we come at style from this perspective, then

the social grid that arguably matters most is the set of beliefs and assumptions that people make about ways of speaking – their own and others’ – which they use to shape their identities and which they draw on as a resource when they communicate. The “thing-ness” or noun-like quality of styles is a matter of social attribution. It is the result of a social process through which a style comes to be thought of as fixed and to have boundaries around it. Asif Agha (2007) has referred to this fixing process as “enregisterment,” implying that a way of speaking has been entered into some sort of abstract “register” or list of socially known styles.

Enregisterment is the process by which speech styles and their social meanings come to be recognized in a particular cultural setting. Once speech styles are “enregistered” in this way, they are available to be discussed, evaluated, and used in new ways.

So, enregisterment gives speech styles the impression of being fixed and known social objects, when in fact style is a characteristic of social interaction; it is more of a verb than a noun, something we do rather than something that exists independently of what we do. In this verbal sense, we “style” our talk, and we style ourselves through our talk, and this is how contemporary research in the sociolinguistics of style generally approaches its data. Under the bland and potentially misleading heading of “style,” sociolinguists are interested in how speakers draw on their social beliefs and understandings of language differences in order to make social meaning in their talk. Seen in this way, research relating to style appears to be fundamental to the concerns of sociolinguistics. This is a constructionist approach to style which sees communicative styling as an active process of meaning-making; it sees social meaning as an emergent quality of discourse. The meanings in question have to do with identity, and before coming on to more practical matters, we therefore need to take a look at what identity itself means in the style paradigm.

Style can be defined as how speakers draw on their social beliefs and understandings of language differences in order to make social meaning in their talk; an active process of meaning-making.

Styling Identities

Another way of saying that styles (in that consolidated, thing-like, ideological conception of them) are associated with particular social groups or to particular social activities is to say that styles have indexical value. As Michael Silverstein (2003) explained, styles, or particular features within them, index or “point to” those social groups or activities. This indexing process allows social characteristics that are believed to be linked to those groups or activities to become salient in the present

moment of speaking. At least potentially, they may “transfer” and be perceived as part of the current speaker’s identity in themselves. But it is important to stress the indirectness and indeterminacy of such processes.

In early sociolinguistic studies, researchers were probably overconfident in using the concept of identity, for example arguing that social groups had distinctive speech styles which functioned “to mark their social identities.” In some ways this might seem to be a reasonable claim, until we look into it more closely. Early research into gender and language made the claim that women use more tag questions than men tend to do (as in “That’s a great film, isn’t it?”). But even if this happened to be true, in what sense could it be true that a woman’s “female identity” is constituted in her use of a certain number of tag questions? Some sorts of tag questions can imply tentativeness or a desire for someone else’s agreement, but linking that to gender identity is a huge further step. We would also need to examine the local dynamics of the context of speaking. Individual speech features tend not to be socially meaningful in their own right, or at least their meaning is conditional on many things, including co-occurrence relations – whether that particular feature is surrounded by several other features which, taken together, conspire to create a social image or a persona. Also, we shouldn’t expect a style or a feature to have the same social meaning in any and every context of speaking. Social class-related meanings (which many sociolinguists have been interested in) are a case in point. In an early study I did on the speech of travel agency assistants in Cardiff (Wales), it was clear that the assistants’ use of local, vernacular accent features was “invisible” to them when they chatted together, but would have been strikingly meaningful when they were talking to “posh” clients. This motivated them to shift their accent styles in some situations, but not in others. Identity is indeed a matter of social indexicality, but identities are constructed and inferred in the subtle dynamics of acts of speaking.

Indexicality is the relationship between language forms or styles and social meanings. Speech features and styles index or “point to” particular clusters of social attributes.

The range of contextual factors impinging on how identities are constructed and inferred is difficult to summarize. Dell Hymes’s (1974) famous SPEAKING mnemonic is a checklist of relevant contextual considerations, encouraging us to ask questions like the following about how social meaning arises in speech events. (I have simplified Hymes’s original list.)

- *Participants*: Which people in which social roles are actively or passively present in the social environment of talk, and are indexical meanings salient to them all in the same ways? Do participants share identities or are they defined in particular identity relationships to one another? Is talk targeted at establishing identities for speakers, or for listeners or others?
- *Setting and scene*: Does the physical setting of a speech event have a bearing on how talk proceeds, for example in dictating or excluding particular styles and identities? Do participants construct more local “scenes” (in the theatrical sense of

- a “scene”), for example when they might redefine themselves as taking part in a casual conversation, even though the institutional context is a business meeting?
- *Norms and genres*: As the above example suggests, the social meanings constructed and inferred in interaction have to be gauged in relation to particular speech genres, which we can define as sets of normative expectations about how communication will proceed. Do genres position people in particular ways, such as storyteller and audience members (discourse identities), or professional and client (institutional identities)?
 - *Purposes, frames and keys*: Do speakers have specific identity goals in episodes of social interaction, such as wanting to sound proficient or likeable or powerful? To the extent that they do, their self-styling can readily be called “performance.” All language use can be thought of as performative, but with highly variable levels of control and “persona management.” Do speakers intend their self-projections to be interpreted in a playful or ironic “key” (a musical metaphor)? Do they set up a “frame” (or a set of local assumptions about how talk is proceeding) that makes this clear? Do they “stylize” their talk, deliberately projecting ambiguous identities? Do they “voice” other speakers?
 - *Instrumentalities*: This slightly awkward term suggests that social meaning and meaningful social identities are constructed through different communicative modes at the same time. Do the most important indexical meanings arise from speech itself, for example in meanings that attach to accent and dialect variation? How does this dimension of meaning interconnect with what speakers are saying? Are visual modalities salient too? Are the meanings constructed in different modes compatible with each other, or not? A style analysis has to be holistic, attentive to multiple dimensions of meaning concurrently.

I discuss some of these ideas in more detail below, in relation to some specific examples. But we should note that, in any given speech event, some of these contextual considerations will be more important than others. Hymes’s framework is best used as a sensitizing tool, a resource to encourage us to ask (either as participants or as analysts) what specific facets of a social context are relevant to meaning construction. If identity is an important theoretical concern in a particular piece of sociolinguistic investigation (and in the style paradigm it inevitably is), then it can be useful for us, as style researchers, to work through the five summary paragraphs above, to begin to consider how the various factors fit into the social context, and to develop a holistic analysis of how speakers style their identities in relation to them.

The Macro and the Micro

More or less any context of social interaction is likely to throw up interesting issues of social indexicality and identity construction. In some sociolinguistic traditions, it has been suggested that “ordinary” or even “banal” talk should be the focus of sociolinguistic interest. The ordinary has a definite appeal, particularly in relation to sociolinguists’ long-standing commitment to researching non-elite, non-establishment groups and linguistic practices. This might therefore suggest that we should set out

to research “the ordinary language of ordinary people,” although I will put forward a contrary argument in the next section. The preference for the ordinary is, I believe, part of a wider preference – a preference for the survey-type research that dominated early sociolinguistics. If we research “ordinary practices,” there might be a better chance of studies being replicable, and the demand that research should be replicable is a key criterion of good practice in the empiricist research tradition, where the usual term is “reliability.”

Reliable research is research where, under the same circumstances, a second researcher will get the same results as the original researcher.

It should be clear from my comments above about context and the contextual construction of social meaning that the sociolinguistics of style (as I present it here, anyway) can not and does not aspire to being replicable, or indeed to being generalizable, in the usual sense of that term. Style research needs to engage with local processes of sociolinguistic indexing; it focuses on the particular case, not on the general pattern. If it can generalize, it is only in the sense that it can explain the basic processes at work – the ways in which social meanings can be made and inferred. (Labov, on the other hand, was interested in reliability, and his studies captured the general tendency for speakers across a whole community to shift their speech styles toward high-prestige features when their speech became more closely self-monitored. But his approach didn’t tell us much about the identity consequences of this sort of style shifting.) Style research is certainly an empirical project, but nowadays not typically an empiricist one. Its validity is not achieved by carefully controlling research conditions, procedures, and “subjects.” Rather, it aspires to have ecological validity, to explain and theorize the detailed symbolic processes that are actually at work in local environments, and for its explanations to model how social actors themselves make and take meaning in and from speech events.

Ecological validity in sociolinguistic research is when research accurately reflects how social actors themselves experience language use in social settings.

Style research is a form of micro analysis, although this doesn’t mean that larger (“more macro”) issues are excluded from it. Good studies are motivated by a desire to understand some socially significant process – for example, how people orient to each other and to themselves as social beings, perhaps in relation to class, gender, age, or ethnicity; how they symbolically negotiate interpersonal relationships; or how they project identities (sometimes pejorative ones) onto others. If style research can expose processes like these, it contributes to our understanding of how language mediates the social world in both macro and micro respects. “The micro in the context of the macro” is something of a slogan in contemporary social scientific and humanities research, but it captures an important quality of sociolinguistic style research.

In practical terms, when ecological validity is aimed at, researchers will need to have a rich prior knowledge of the “macro” sociolinguistic environment they are studying. Style research is nowadays usually conducted as a form of linguistic ethnography, with a commitment to reducing social distance between the researcher and the people who “are researched,” and based on substantial periods of engagement with a group or a community of practice. Insider knowledge of course brings its own potential limitations – for example, if researchers are too ready to anticipate their findings and conclusions, or if they impose their own research agenda – when interpretive ethnographies need to allow insights to flow, as far as possible, from the data themselves. In practice, though, it is difficult to build interpretations of stylistic processes without a good level of awareness of the social indexicalities that are recognized and active in a given social space. For example, I have needed to draw on my cultural experience of living in Wales in order to build critical interpretations of dialect play and stylized performances in Welsh English. I would not have been able to do comparable research in social settings where I lack “grounded” sociolinguistic sensibilities.

Having said that, there is undoubtedly a cyclical process of self-sensitizing whereby one learns more about the macro social environment through paying critical attention to micro-level styling processes and outcomes, just as one’s wider awareness feeds into the local analysis. This cycle in research interpretation directly mirrors the core community-level sociolinguistic processes themselves. It is in local contexts of social interaction that social actors perform and interpret indexical norms, which they then rely on as an interpretive repertoire and a backdrop to their local stylistic operations. This theoretical model of social reproduction and change makes style analysis indispensable for sociolinguistics.

Choosing a Context and Data for Analysis

Apart from the social familiarity point, two alternative criteria suggest themselves when choosing a social context and data to analyze; the first is theory-driven, the second is social issue-driven. In the first case, the researcher would be designing a study that will help to build on what we already know about general processes of style shifting and identity construction. There are rich traditions of research in audience design (developed by Allan Bell) and accommodation theory (developed by Howard Giles), both of which have helped us to understand the adaptive processes through which speakers build interpersonal and intergroup relations. We know, for example, that speakers are able to symbolize social proximity to others by converging their speech styles to those of recipients, and to symbolize social distance from each other by diverging linguistically or in some other semiotic way. We know that style shifting can involve sociolinguistic crossing (a perspective pioneered by Ben Rampton, 1995), when speakers (sometimes very fleetingly) use speech styles associated with groups other than their own. Mary Bucholtz and Kira Hall (2004) have developed a rich model of identity management that they refer to as tactics of intersubjectivity. New studies can be designed specifically to elaborate frameworks like these, to test out their applicability and to assess their social implications in specific contexts.

Audience design is a sociolinguistic model of how speakers adapt their speech styles to their audiences. It relates quite closely to *accommodation theory*, a sociopsychological model of how speakers converge toward and diverge away from others during social interaction.

Crossing is when a speaker uses a speech style that is indexically linked to a different social group. British children of Anglo or Asian descent, for example, sometimes use creole speech styles or features to affect a “cool” way of speaking.

Research oriented to a specific social issue might well draw on frameworks like these, but it might also provide a springboard for new theoretical approaches to style. From this stylistic point of view, a researcher would set out to illuminate a social issue or a social problem in light of the various principles I have been discussing. Studies have often been motivated this way, particularly when the expression or curtailment of legitimate social identities has been in question.

Advice on Developing a Style Analysis

Being familiar with a social context and/or a social issue must of course include reading the literature. An ideal situation is one where a researcher has some personal experience but where there are published sociolinguistic studies to draw on. For style analysis it is particularly helpful if there is prior survey research – for example a variationist study that has established broad patterns in the distribution of indexical features, or language attitudes surveys that have compiled information about how local speech styles and local vernacular speakers tend to be socially evaluated. There is disagreement about whether quantitative survey research should come before or after qualitative, critical studies of particular instances; each camp thinks its own research method should use the other as a background. My own view is that quantitative and qualitative research studies ask and hope to answer different but related research questions, and that they are therefore complementary to each other, in whatever sequence.

A style analysis, when written up, will necessarily be limited in the amount of data it can display and analyze closely. Sometimes a single episode of talk will suffice. More typically, an analysis will be built around a series of transcribed extracts from a much more extensive database – for example a collection of sociolinguistic interviews, several episodes of naturally occurring talk in one or more specific settings, a series of TV or radio shows, and so on. Not all the data will need to be closely analyzed, but it is crucial that the researcher should ultimately have a strong grasp of how speech styles and their specific linguistic/semiotic features are socially embedded in their particular context – both the “context of situation,” as J.R. Firth (1957) called it (the specific settings, scenes, and genres being studied) and what Firth called the “context of culture” (the wider cultural understandings and ideologies that are brought to bear). Are speakers using established indexical meanings to achieve their own objectives (e.g., a politician incorporating a few glottal stops into his speech in an effort to gain more “street cred”)? Are speakers creatively reworking familiar

style-meaning relations (e.g., a storyteller invoking different “characters” in recounting a past event by voicing their different speech styles)? Are advertisers celebrating sociolinguistic diversity or confirming pernicious social stereotypes when they associate products with regional accents?

In instances like these, we can see that stylistic analysis is partly objective and evidence based, and partly subjective and critical. In research, “critical” can mean different things. Sometimes it implies taking an overtly political line on the issues you are writing about, but it always means striving to show as much as possible the interpretation in the discursive details of data, while also making connections between evidenced and non-evidenced aspects of data. After all, indexical meaning is, in a theoretical sense, unlimited; the social implications of ways of speaking connect through to cultural ideologies (“the micro in the context of the macro,” again) and there is inevitably a need to make contextual inferences. Making clear our own inferencing processes as analysts – distinguishing what we can see in the data from what we are inferring from the data – is therefore a key requirement. But unless we are prepared to trust and to document our critical reasoning, and delve into indexical performance in all its potential complexity, we are left with sociolinguistic accounts that we know are too thin or insufficiently nuanced.

Data for stylistic analysis need to be recorded to allow for repeated listening/watching. What is called “analysis” is not clearly distinguished from “interpretation.” Interpretations need to be built up incrementally over time, often through critical, comparative reflection on how social meanings are occasioned in different episodes. Within any particular episode of talk, there is again likely to be progressive, incremental development of social meaning. Social identities are constructed and reshaped in real time, often interactively, and this is why it is often more productive to focus on interactional data, where a co-conversationalist might act as a sounding board for identity work and make it more visible to us as analysts. Remember that we do not only construct identities for ourselves; we often help to construct them for others, and for ourselves through the reciprocity of others. Thinking in terms of “relational selves” rather than self-identity is therefore sometimes helpful in directing us to how different voices play off against each other in interactional data.

It is conventional to display carefully chosen parts of our data in transcripts (see for example Jaffe, and Holmes, this volume). An orthographic transcription (using standard writing and spelling conventions) is generally adequate in style research, as long as we are clear about what it conceals as well as reveals, and if we are careful to annotate it by marking the range of linguistic features that we are analyzing within it. If the analysis focuses on pronunciation features, for example, it is usually sufficient to mark the occurrence of specific phonetic forms or variants above the line of transcript, where they occur. Many researchers use modified versions of the transcription conventions developed for conversation analysis (CA), originally by Gail Jefferson, although this general system can also be misleading. Conversation analysis transcripts commonly mark pronunciation features (features of social or regional accents, word stress, pausing, and intonation) very selectively and impressionistically using pseudo-phonetic notation (see Drew, this volume). This draws attention to some potentially important style features but disguises others. When using media-sourced data, it is important to allow readers of our work to access the source data wherever possible, and this might simply mean giving URL details in an endnote or details of commercially available recordings of performances we are

working on. Transcripts need to be developed as part of the interpretive cycle that I mentioned above. We need to be aware that the transcript itself does some interpretive work, and how we choose to represent spoken data in written form will to some extent reflect what we want to claim about the source data.

As in all types of research, researchers need to be accountable to their data. We need to avoid overgeneralization and overextrapolation. But having established (above) that “going beyond the data” – in a phrase that is usually used to describe bad research – is in some ways a necessary facet of critical research, the relevant principle is to only extrapolate, interpretively, when our ethnographic and contextual awareness has given us genuine confidence to do so.

Project Ideas

1 *Speech style and social discrimination*: This can be considered classical sociolinguistic territory. There have been large paradigms of sociolinguistic research based, for example, on the link between accent/dialect and education. Formal education has been thought of as a domain that privileges “standard” linguistic varieties, while in Britain, for example, fewer than 10 percent of the population are thought to use Received (or “standard”) Pronunciation. But there have been rather few detailed accounts of how speech styles are actually deployed in and around educational settings. When Rampton (1995, 1999) investigated the use of ethnically linked styles in school settings in the (British) Midlands and in the southeast of England, he found little evidence of “damage being done.” On the other hand, he found plenty of evidence of children crossing between different styles and using crossing to destabilize conventional social and ethnic relations. Following this line, we need to know much more about what ethnic and social class styling achieves in a wide range of social settings.

Social discrimination adapts and takes new forms; it sometimes focuses on social styles (including speech styles) held to be “common” or “unsophisticated” or “lacking in taste.” Currently, for example, there is a prevalent popular discourse in Britain around “chavs,” stereotyped urban groups whose dress-styles, lifestyles, and ways of speaking are held up for ridicule and censure. Sociolinguistic research has begun to address this social issue through critical analyses of texts in which “chav talk” is parodied and discredited. The speech of migrant populations is often discredited too, as in the documented case of Rinkeby Swedish (Quist, 2008). These examples make it clear that style research can and should be conducted at a “meta” level too, studying how talk about talk is contextually styled and with what social implications.

2 *Speech style and adjudged personal adequacy*: There are many social circumstances where we are required to present ourselves in accordance with specific normative expectations. Because so many jobs are nowadays in the service sector (as opposed to manufacturing and agriculture, which used to predominate in many countries), self-presentation through speech arguably carries a greater premium than previously – sometimes literally, when “communication skills” are a requirement for paid employment. Style research can get inside the (often opaque) concept of communication skills, analyzing what styles of self-presentation are associated with adjudged adequacy or skilled competence in particular work

roles. What styling processes are involved in presenting oneself as the “public face” of an organization, either face to face, the telephone, or, more and more, through technologically mediated video calling? Critical approaches to these issues would probably be able to establish that successful or unsuccessful public self-presentation does not depend in any simple way on “what accent you have” or “how well you have been trained,” but on a complex set of styling choices in different contexts.

- 3 *The scripting of speech*: One specific process found in service sector work is the partial or complete scripting of representatives’ talk, which raises a social issue complementary to the one in the previous paragraph. Deborah Cameron (2000) has explored this process in call centers, where employees are required to follow specific discursive templates in their dealings with customers. Many sociopolitical issues arise with the “de-skilling” of workers and the imposition of corporate identities. There is an even wider agenda here too, relating to what it means to be “an authentic speaker” and whether and how speakers in many professional roles can develop meaningful relations with others when their identities are being prescriptively shaped for them. What Norman Fairclough (1989) has called “synthetic personalization” – constructing false intimacy – would appear to be an increasingly common characteristic of identity styling in public.
- 4 *Stylized performance*: The concept of “key” that I mentioned in discussing Hymes’s list of contextual components arose in Erving Goffman’s (1959) critical writings on the presentation of self and relations in public. Goffman took the view that social interaction should be analyzed using an extended theatrical metaphor – social actors interacting as if on a stage and performing their identities. In fact, once we accept that style involves the creative, purposive projection of identity, it is appropriate to equate styling with “performance”; style research is very largely the study of how people perform identities. But there are different designs of performance to consider, and different outcomes or effects.

One particular design of mode or stylistic performance is called stylization. Drawing on Goffman, but also on the critical perspectives of Mikhail Bakhtin, I have described stylization as a “knowing” and reflexive way of performing an identity. Stylization (which also features strongly in Rampton’s research) is therefore a consciously ambiguous mode of performance. It invites us to ask, “Is the speaker really claiming or asserting this identity?” It creates complex footings for talk, which (as Bakhtin argued) partially expose the workings of linguistic style and invite new ways of interpreting the styles in question. Stylization is a highly contemporary mode of self-presentation, allowing people to display apparent allegiance to all manner of social formations, and yet hold back from endorsing them fully. It allows us to play creatively with social identification, and to create hybrid and conditional social identities which are very much in tune with the mobility and ephemerality of the late-modern world.

Stylization is the deployment of identities that are not to be taken at face value, when a speaker leaves clues that this is the case; a consciously ambiguous mode of performance.

Stylized performance seems to be encroaching on an ever-wider range of social contexts. Playful persona construction has mainly been a quality of the informal talk of young people in their recreational friendship networks, where “voicing” (the creative performance of diverse speech styles, sometimes as quoted sequences, into one’s talk) helps to animate social identities and relationships. But style research could explore other contexts where similar footings for talk are undoubtedly constructed, even in academic discussions, business meetings, and political speeches.

- 5 *The mass media and spectacular moments:* As I mentioned earlier, if we follow the “ordinariness” principle, we will concern ourselves with the mundane business of talk in everyday conversations, and of course we need to know the general lay of the land when it comes to language variation and change. Yet, as Judith Irvine points out (2001), style generally gets its value from some specific form of “difference” and from creativity. In fact it is possible to argue, from a Goffman-type perspective, that even “being ordinary” is a matter of performance, what we might refer to as “doing being ordinary.” But the most striking instances of social styling involve deviation from norms, or moments when sociolinguistic performance (as in stylization) makes itself evident as such.

Television is quite generally a stylizing medium, because it invests so heavily in the construction of typological personas. Most of the style prototypes that we recognize are mass media constructions – often constructed around particular celebrities – and it can be argued that most of our awareness of indexical relationships nowadays is media based. Sociolinguists often argue that language change is not influenced by broadcast media, but it seems to be true that our sociolinguistic sensibilities are sharpened, if not largely determined, by the mass media. Television and film in particular are remarkably vibrant sources of stylistic creativity. They are full of spectacular constructions where voices, visual images, and social values are worked into new alignments and refocused.

One important objective for the sociolinguistics of style is, I would therefore argue, to develop critical studies of high-profile mediated voice/persona constructions, with a view to reassessing the role of mass media in relation to language ideologies – conventionalized cultural understandings of the values of speech styles. There are already good reasons to believe that media are promoting forms of change; not “language change” in the narrow sense of how a group’s normative speech system changes, but sociolinguistic change, whereby language–society relations are progressively reconfigured. A good general research question is whether social identities in the late-modern world are tending to become more stylized, and whether the reach of social performativity is growing. Do we see evidence of social discourse becoming more deeply and more consequentially mediated?

Another good question is whether mass media are changing the indexical meaning of social class. TV advertising, for example, commonly invokes regional class stereotypes, but in so doing, some adverts play creatively with indexicalities of class. One long-running British series of TV adverts for Boddington’s beer combined fragments of resonantly Lancashire (northwest English) phonology with upper-class, high-culture personas. On one occasion, a glamorous young woman in evening dress uses the froth on a glass of beer as face-cream, hooking into the advert’s slogan: “Boddington’s – The cream of Manchester,” while her adored partner, in his dinner jacket (tuxedo), speaks to her in Lancashire

vernacular. The adverts left viewers with implied questions about whether beer-drinking was a lower-class or an upper-class practice, and about whether Lancashire (or perhaps northern English) speech should really be considered a low-prestige vernacular. The ads exposed the wider issue of how language relates to social class, and invited us to reconsider it.

Other media genres too lend themselves to stylistic analysis. TV has often been thought of as home ground for standard language ideology – the sociocultural stance, in Britain, that Received Pronunciation is “better” and socially preferred. The BBC’s first Director General, John Reith, wanted the Corporation to provide a model of educated speech for British people. Research in the sociolinguistics of style is often interested in the functioning of “standard and non-standard” varieties and in the identities constructed through their use. But rampant social change over the last 50 or so years allows us to ask whether we are seeing a media-led process of “destandardization” or of “vernacularization” (and the Boddington’s case, above, may constitute one small instance in the context of commercial television). But the BBC nowadays plays its part in reconfiguring social indexicalities of voice. Vernacular speakers are appearing in broadcasting roles and genres that were formerly associated with establishment “standard” speech, and “standard” speech is sometimes presented in parodic frames. Survey research might be able to establish that there is a trend of this sort. But we need stylistic analyses to explain how voices are contextualized and how their social indexicalities work through discourse.

Popular music has always been highly resistant to standard language ideologies, and it offers rich terrain for style research. Researchers have commented on British pop music performers’ history of using “Americanized voice,” and how this tradition was then punctuated by the use of London vernacular voice in the punk era. More recently, Afro-Caribbean and creole styles have dominated in hip-hop genres. Research by Samy Alim and others (2009) has documented how identities are styled and restyled as a fusion of local and global meanings in transnational hip-hop. Stand-up comedy and public participation in “reality” game shows are other popular culture genres where vernacular speech styles are given strong exposure.

Further Reading and Resources

- Agha, A. 2007. *Language and Social Relations*. Cambridge: Cambridge University Press.
- Alim, S., Ibrahim, A., and Pennycook, A. (eds) 2009. *Global Linguistic Flows: Hip Hop Cultures, Youth Identities and the Politics of Language*. London: Routledge.
- Auer, P. (ed.) 2007. *Style and Social Identities: Alternative Approaches to Linguistic Heterogeneity*. Berlin: De Gruyter.
- Bell, A. 2001. Back in style: reworking audience design. In *Style and Sociolinguistic Variation*, ed. P. Eckert and J. Rickford, 139–169. Cambridge: Cambridge University Press.
- Bucholtz, M. 1999. “You da man”: narrating the racial Other in the production of white masculinity. *Journal of Sociolinguistics* 3(4): 443–460.
- Bucholtz, M. 2011. *White Kids: Language, Race and Styles of Youth Identity*. Cambridge: Cambridge University Press.
- Coupland, N. 2007. *Style: Language Variation and Identity*. Cambridge: Cambridge University Press.

- Coupland, N. 2009a. Dialect style, social class and metacultural performance: the pantomime dame. In *The New Sociolinguistics Reader*, ed. N. Coupland and A. Jaworski, 311–325. Basingstoke: Palgrave Macmillan.
- Coupland, N. 2009b. The mediated performance of vernaculars. *Journal of English Linguistics* 37(3): 284–300.
- Eckert, P. and Rickford J. (eds) 2001. *Style and Sociolinguistic Variation*. Cambridge: Cambridge University Press.
- Giles, H., Coupland, J., and Coupland, N. (eds) 1991. *Contexts of Accommodation: Developments in Applied Sociolinguistics*. Cambridge: Cambridge University Press.
- Hymes, D. 1974. *Foundations in Sociolinguistics: An Ethnographic Approach*. Philadelphia: University of Pennsylvania Press.
- Labov, W. 1972. *Sociolinguistic Patterns*. Philadelphia: University of Pennsylvania Press.
- Rampton, B. (ed.) 1999. *Styling the Other*. Special issue of *Journal of Sociolinguistics* 3(4).

References

- Agha, A. 2007. *Language and Social Relations*. Cambridge: Cambridge University Press.
- Alim, S., Ibrahim, A., and Pennycook, A. (eds) 2009. *Global Linguistic Flows: Hip Hop Cultures, Youth Identities and the Politics of Language*. London: Routledge.
- Bucholtz, M. and Hall, K. 2004. Theorizing identity in language and sexuality research. *Language in Society* 33: 469–515.
- Cameron, D. 2000. Styling the worker: gender and the commodification of language in the globalized service economy. *Journal of Sociolinguistics* 4(3): 323–347.
- Fairclough, N. 1989. *Language and Power*. London: Longman.
- Firth, J.R. 1957. *Papers in Linguistics, 1934–1951*. Oxford: Oxford University Press.
- Goffman, E. 1959. *The Presentation of Self in Everyday Life*. New York: Double Day, Anchor.
- Halliday, M.A.K. 1978. *Language as Social Semiotic: The Social Interpretation of Language and Meaning*. London: Edward Arnold.
- Hymes, D. 1974. *Foundations in Sociolinguistics: An Ethnographic Approach*. Philadelphia: University of Pennsylvania Press.
- Irvine, J. 2001. “Style” as distinctiveness: the culture and ideology of linguistic differentiation. In *Stylistic Variation in Language*, ed. P. Eckert and J. Rickford, 21–43. Cambridge: Cambridge University Press.
- Johnstone, B. 2011. Dialect enregisterment in performance. *Journal of Sociolinguistics* 15(5): 657–679.
- Labov, W. 1972. *Sociolinguistic Patterns*. Philadelphia: University of Pennsylvania Press.
- Quist, P. 2008. Sociolinguistic approaches to multiethnolect: language variety and stylistic practice. *International Journal of Bilingualism* 12(1–2): 43–61.
- Rampton, B. 1995. *Crossing. Language and Ethnicity among Adolescents*. London: Longman.
- Rampton, B. (ed.) 1999. *Styling the Other*. Special issue of *Journal of Sociolinguistics* 3(4).
- Silverstein, M. 2003. Indexical order and the dialectics of sociolinguistic life. *Language and Communication* 23: 193–229.

20 Researching Children's Acquisition of Sociolinguistic Competence

Carmel O'Shannessy

Introduction	305
Background and Motivation for Research on Children's Sociolinguistic Development	305
Some Methods for Investigating Children's Sociolinguistic Competence	307
Conclusion	316

Summary

Children's development of sociolinguistic knowledge is integral to the question of how complex language skills develop in humans. Multiple research strategies are needed to build a comprehensive picture of children's speech environments and how children's competence develops within them. Qualitative and quantitative methods are used to gather information about the speech communities into which children are socialized as well as details of children's language development. In some cases, adult speech to children differs from that to other adults, so interactions with children, specifically, must be analyzed. Methods which work well with adults need to be adapted when working with children. Creating playful contexts is a useful way of eliciting naturalistic language from children. Play scenarios and attractive activities can be created

Research Methods in Sociolinguistics: A Practical Guide, First Edition.

Edited by Janet Holmes and Kirk Hazen.

© 2014 John Wiley & Sons, Inc. Published 2014 by John Wiley & Sons, Inc.

by researchers so that there are opportunities for children to produce the particular variables under study. Similarly, engaging activities can be created to tap into children's language ideologies and processing mechanisms.

Introduction

The question of how complex language skills develop is central to theories of linguistic knowledge and use, and children's sociolinguistic understandings are integral to their language learning. Children are social beings just as adults are, constantly interacting with both adults and other children. They are learning how to produce speech in line with community practices and how to interpret the speech behaviors of others. Understanding how they do this is part of understanding human language and development.

Children's development of sociolinguistic knowledge is a fascinating area and there is much yet to be explored. Most sociolinguistic work examines adult or adolescent and teenage speakers, who show mastery of a range of styles, registers, and varieties. Less is known about when and how speakers come to acquire their competence. We know that the ways in which adult speakers produce variants of a linguistic variable are conditioned by social and linguistic factors. Do children show the same kinds of sensitivity to social and linguistic constraints in their speech? What level of social awareness do young children have, and how does this develop? What roles do children play in language variation and change?

In the next section, I provide background and motivation for research on children's development of sociolinguistic competence. Then in the methods section I discuss issues such as choice and location of a group of children to study, informed consent, and types of data researchers might collect and analyze. The final section discusses some potential quagmires regarding data collection and how to avoid them.

Background and Motivation for Research on Children's Sociolinguistic Development

Children are socialized into different types of speech communities and cultures. Some grow up in contexts where several languages or varieties are spoken, or where local linguistic norms are changing; others are in contexts in which the variation is more stable. Additionally, children are socialized into their speech communities in different ways across cultures: for example, in some cultures adults speak for the children and the children imitate them (Schieffelin, 1985); in some cultures adults interact verbally with very young children much less than in Western middle-class English-speaking families (Ochs, 1992; Gaskins, 1999). Children may be socialized to use language strategies which promote harmony and cooperation over individual competence and assertiveness, or vice versa (Farver and Lee Shin, 1997).

A fully comprehensive picture of children's immediate speech environment, and of the culture of the speech community, is essential if we are to understand how children's language skills develop. One needs to know the properties of the varieties, registers, and styles that children are exposed to, how much variation they hear, and of what kind, in addition to the adult–adult speech conventions that will ultimately be the target for a growing child. Usually adult speech conventions are researched first, and they motivate research questions about children's development. But to a certain extent, both adult and child speech can be investigated together, and more can be learned about adult speech through focusing on different interactional contexts. Even when adult conventions in a community are known, researchers must not assume that adults speak to children in exactly the same ways that they speak to other adults, nor that speech to children is universal in style. There is a considerable body of work on child-directed speech (often called “motherese” or baby talk registers), in which adults in many cultures use a specific register when addressing children (Ferguson, 1964; Gleitman, Newport, and Gleitman, 1984; Fernald *et al.*, 1989). Even beyond use of that register, child-directed speech might differ from adult-to-adult speech. In some contexts, caregivers use standard variants more often in speech to their young children than to other adults (Foulkes, Docherty, and Watt, 2005; Smith, Durham, and Fortune, 2007). The behavior is explained in terms of caregivers' sensitivity to perceived stigmatization of the variants and a desire to teach their children the standard forms.

Understanding children's development of sociolinguistic competence is particularly important in contexts in which there is social and linguistic change – for instance, in endangered language settings where transmission of heritage languages is under threat and in complex multilingual contexts. Learning how children are socialized into using heritage and incoming languages, or developing new contact languages or varieties, may help us to understand processes of language maintenance, shift, and creation. By examining the social factors which influence children's language choices in particular situations, we will increase our understandings of language stability and change in complex scenarios.

Just as there is more than one method for investigating adult speech, children's speech production can be explored using qualitative and quantitative methods, and children's understandings and language processing development can be investigated using perception and comprehension studies. Some of the quantitative investigations into children's productive sociolinguistic competence have found that children learn to produce variable rules early (Roberts and Labov, 1995; Roberts, 1997a). When there is a phonological change in progress, 4–5-year-old children can be agents of linguistic change, producing an incoming pattern more often than their parents do (Roberts, 1997b). School-aged children can also be agents of change, in contexts in which adults speak several dialects or languages, by regularizing the variable input (Roberts, 1998; Kerswill and Williams, 2000) and producing variants from dialects spoken by their peers but not their parents (Kerswill and Williams, 2000). Whether children learn adult-like sociolinguistic constraints on variable patterns at the same time that they learn linguistic constraints differs according to several factors, including the variable in focus, how salient it is, and the extent to which each variant is produced in child-directed speech (Kovac and Adamson, 1981; Labov, 1989; Roberts, 1997a; Foulkes, Docherty, and Watt, 2005; Smith, Durham, and Fortune, 2007). Elementary school-aged girls' and boys' production of some variables may differ when the children spend their time most often in same-gender social groups (Cameron, 2010).

Qualitative approaches have been used to examine, for example, young children's differential production of speech styles along the lines of gender and power (Shatz and Gelman, 1973; Andersen, 1990; Cook-Gumperz and Scales, 1996; Clark, 2009; Hoff, 2009). By age 4–5, English-speaking children alter their pitch, word choices, clause structure, and level of indirectness depending on which gender and social role they are playing (Andersen, 1990). The reasons to study children's developing sociolinguistic competence are many. In addition to increasing our understanding of children's social and linguistic development, these studies can provide further insights into interactions between differing age groups.

Some Methods for Investigating Children's Sociolinguistic Competence

Methodologically, working with young children differs a little from working with adults or teenagers. Tasks which require reading are not appropriate, so if stimuli or prompts are needed, pictures, real objects, or movies need to be used. The focus of attention needs to be relatively short, around 15–20 minutes at the longest, with breaks for play activities between parts of longer tasks. The activities need to be as play-like or engaging as possible. The experience needs to be positive for the child, such that the child does not feel as if s/he is being negatively evaluated.

Which age group should be studied?

The researcher needs to find the age group where the phenomenon in focus is just emerging. Children who do not yet produce the variable are too young for a production study, but might have an awareness of the variable, which can be tapped through a perception study. Children who produce the variable regularly might still be developing their skills, and their developmental path is of interest. To find the relevant age group, one needs to search published studies and publically available transcripts – see, for example, the CHILDES database (MacWhinney, 2000) – listen to and observe children talking, and informally ask caregivers and older siblings about the children's language use. A researcher should not rely on caregivers' and others' judgments of children's language use alone, but should create opportunities for his/her own observations, possibly through ethnographic observations as part of a pilot study.

Where are the children?

Researchers might work with children in the children's homes, or in schools or childcare centers. Many universities have a childcare center with ethically appropriate procedures in place for students and faculty to undertake language acquisition research with children under approximately age 5. In any case, once the design is in place, the first step is to seek permission from the relevant ethics committee or institutional review board (names for these differ). Once approval is obtained, procedures followed by the childcare centers usually involve preparing a letter for caregivers with detailed information about the study, and forms for caregivers'

informed consent. The study might require background information about the family, which can often be obtained through a written questionnaire. A gift as a token of appreciation is common, and again universities often have procedures in place for this, such as posting gift cards to families after the children have participated in the study. Elementary/primary schools do not always have procedures for research in place, but the steps for the researcher are very similar, although there may be more levels of authority from which approval must be received. In either situation, an adequate amount of time should be allowed for each step of the process to proceed – probably more than you think! School principals and other administrators are busy and might not attend to the researcher's request immediately, as it is not a major priority, even when they are sympathetic to the research. Caregivers also have other priorities and may take time to return permission notes and questionnaires. Be aware that not every family will want to participate. A take-up rate of 60–70 percent would be good. After ethics approval is obtained, it may be necessary to allow at least two months for school or childcare center administrative processes to be completed.

Another option is to work with children in their homes, which necessarily involves working with the children's families. In addition to finding mutually convenient times, setting up an appropriate space and interaction type is important. Who will interact with the child? Does an adult caregiver usually play with the child? Does someone else? In what part of the house? Is it a place where a video camera will be able to capture the child's and interactant's actions? Will the researcher be there the whole time? When studying how children's production of a variable develops, longitudinal studies are ideal. In a longitudinal design, the same children are recorded at regular intervals for a considerable length of time, perhaps every week for several months or more. Recording the same child for several years is not usually feasible, so instead researchers often record several children, beginning the recordings at different ages. For example, several children can be recorded at ages 6 months apart – one child begins recordings at age 2;6, one begins recordings at age 3;0, one begins at 3;6, and so on. The standard way of including children's ages in child language acquisition work is to use the format x;x (e.g., 2;6 for 2 years, 6 months). Months are always included because young children's language skills develop quickly and a few months can make quite a difference. The data can be aggregated to provide information about children's development, as if the several children together represent the developmental path of a fictional child. It is common to give a small financial gift to the caregiver, as well as a small gift to the child – for example a toy at the end of the recording series, or fruit after each individual recording. When video recordings are taken, the families often enjoy receiving a gift of DVDs of the recordings. Families might also appreciate some still shots taken from the video recordings.

Informed consent

When obtaining informed consent, it is important to think of who else might be present during the recording. If another family member or a friend arrives at the house during the recording, what will need to happen? If the visitors are to become part of the recording, their informed consent is needed before they do so. The consent process should also include how the data will be saved and archived, who will have access to it in the future, and how family members can obtain access to the data if they wish to. What degree of anonymity will there be? In digital archives,

access rights can be set so that choices can be made for levels of data including transcripts, audio, and video. If naturalistic recordings on audio and video media are freely available, then there is not complete anonymity, whereas anonymity can be achieved easily in written transcripts by changing the names. Permission needs to be obtained for using audio and video clips in conference presentations or on a web site. Most grant agencies require that data be made available on an open archive.

Type of activity – naturalistic interactions

A great deal of linguistic research with children involves analysis of naturalistic interactions of children and others, most often caregivers, during daily routines. Video and audio recordings of monolingual and bilingual children, with written transcriptions, are freely available on CHILDES (MacWhinney, 2000). I say “naturalistic” rather than “natural” interactions because simply having an observer or recording equipment present makes a situation less natural than otherwise, a situation known as the observer’s paradox (Labov, 1963, 1972). But these interactions are as natural as possible given the circumstances, and often the children pay no attention to the recording equipment after a few minutes.

Choosing props and stimuli

- What is the target variable?
- In what kinds of talk does it usually occur?
 - which topics? in which contexts?
- When does the child usually speak that way?
 - in which contexts? with whom?
- Will the child have the opportunity to use the variable in a natural way?

What do young children spend their time doing? They play. Much of a child’s social and cognitive learning takes place through play, so a great deal can be learned about their development by observing them playing. When a child is involved in play, the observer’s paradox is probably reduced as much as it can be. It is necessary for a child to play with someone, an adult or another child, so that interactional speech takes place. It is well known that the attention span of young children is short, and children like to choose their own activities and change to another after a few minutes. How can a researcher ensure that the kind of talk and play targeted in the research will in fact take place? A researcher can manipulate the overall structure of the play activity while allowing the child to play freely within that structure. Researchers commonly provide props to be played with, depending on the research question. Props can help to provide a reason for a child to stay within one space, which is important for recording purposes, and also help to make data from several children more comparable, by providing the same props to each pair or group of children. Props may be chosen to represent items typically used by a social group, or to elicit certain kinds of talk. For example, providing a toy hospital kit (stethoscope, plastic syringe, etc.) may elicit speech in the variety or register that a child hears

when visiting health professionals, which might differ from the child's home variety or register, showing that the child has an understanding of, and can use appropriately, a code to which s/he is exposed only in certain contexts. Without that particular prop, this kind of sociolinguistic knowledge might not become known to the researcher. When children are given dolls or puppets representing differing ages, genders, and social roles, one might observe some of the kinds of social and linguistic behaviors a child associates with each.

One of the downsides of naturalistic interactions is that a certain type of talk – particular structures, words, or topics – might not be produced very often, or sometimes not at all in a single recording session. Yet most studies require a critical mass of observations of the focus elements in order to draw conclusions, especially if a statistical analysis will be undertaken. The next section deals with this problem.

Comparison of texts from bilingual children

These are samples from the beginning of “the monster story” (see Appendix A) in two codes, Warlpiri (1) and Light Warlpiri (2), told by 7-year-old children. Each child told stories from the same picture stimuli, with a two-week time lag between storytelling sessions. Half of the children told the stories first in Warlpiri, and two weeks later in Light Warlpiri; the other half of the children told them in the opposite order.

Warlpiri:

- a. Karnta ka-ø nyina-mi.
girl IMPF-3SGS SIT-NONPST
'There is a girl.'
- b. Jarntu ka-ø nyina-mi.
dog IMPF-3SGS SIT-NONPST
'There is a dog.'
- c. Kuuku! Wara!
monster DISCOURSE MARKER
'There's a monster! Oh no!'
- d. Ya-nta-rni pina kuuku-kujaku! Wara!
go-IMP-HITHER return monster-EVITATIVE DISCOURSE MARKER
'Come back here, or the monster will get you! Oh no!'

Light Warlpiri:

- a. Dei stop-ing jarntu an karnta-pawu
3PLS stop-PROG dog CONJ girl-DIMINUTIVE
'A dog and a little girl are staying there.'
- b. Kuuku i-m com-ing det jarntu-k
monster 3SGS-NFUT come-PROG DEM dog-DATIVE
'A monster is coming for the dog.'
- ...
- c. An i ged-im na det kuuku-ng
CONJ 3SGS get- TRANSITIVE NOW DEM monster-ERGATIVE
'And now, the monster has got the dog.'

Type of activity – Elicited production

To increase the chance of a target element being produced by a child, a researcher can prompt certain topics, or provide the opportunity for particular structures or words to occur, through elicited production techniques. In these techniques, much more targeted stimuli than props are provided for play, yet there is still room for a child to talk relatively freely. One very effective method is to have children tell stories from picture-book stimuli. The most well-known picture book used for this purpose is *Frog, Where Are You?* (Mayer, 1969). The book has been used by researchers examining many different types of linguistic structure with adults as well as children as the storytellers (e.g., Slobin, 2004). The story line is that a child's pet frog escapes from the child's bedroom and the child and his dog look for it, encountering many obstacles along the way.

When comparing dialects or languages:

- allow time between tasks in each code;
- counter-balance which code is used first.

But the research question might not be suited to that type of story, so something else would be needed, and researchers often develop their own target-specific stimuli. By way of illustration, one of my research questions was about Warlpiri children's production of ergative case marking and word order to indicate transitive subjects in transitive clauses. The following two sentences are from Warlpiri. Glosses of abbreviations are given in Appendix B.

- | | | | | |
|-----|------------------------------------|-----------------------------|------------------------------|------------------------------|
| (1) | Jarntu-ngku
dog-ERGATIVE | ka-ø-jana
IMPF-3SGS-3PLO | wajilypi-nyi
chase-NONPST | kurdu-kurdu.
child-REDUP |
| | 'The dog is chasing the children.' | | | |
| (2) | Kurdu-kurdu
child-REDUP | ka-ø-jana
IMPF-3SGS-3PLO | wajilypi-nyi
chase-NONPST | jarntu-ngku.
dog-ERGATIVE |
| | 'The dog is chasing the children.' | | | |

The two Warlpiri sentences above have the same meaning, even though the word order differs, because the suffix *-ngku* (the ergative case marker) shows that *jarntu* 'dog' is doing the action of chasing, not *kurdu-kurdu* 'the children'. The case marker occurs on overt transitive subjects, but in the two types of Warlpiri being examined in the study, subjects can be omitted, and when they are, there is no opportunity for the case marker to occur. Also, cross-linguistically, in naturally occurring discourse, speakers do not often use full lexical items for transitive subjects (Du Bois, 1987), so a great deal of recording of naturalistic talk would be needed to collect enough tokens for analysis. So I created a picture story that would elicit overt transitive subjects. This allowed the opportunity for the speaker to use the ergative case marker, but did not force the speaker to use it in an unnatural way – it could be used or not. In the picture books, such as "the monster story" book in Appendix A, there are

several characters who are present in the stories on different pages. The characters perform several transitive actions, so that to tell the stories a speaker has to use the full lexical item for the character – for example, “the girl,” “the mother,” “the monster.” The speakers can make a decision about word order and whether or not to use the ergative case marker, because there are many opportunities throughout the stories. For example, the transitive sentences in (3) and (4) refer to the fourth picture of the monster story, and were spoken by 7-year-old children. The two sentences have approximately the same referential meaning, of a person getting a dog (although they have different tenses).

- (3) Warayi! Yapa-ng ma-nu jarntu.
 DISCOURSE MARKER person-ERGATIVE get-PAST dog.
 ‘Oh no! The person got the dog.’
- (4) Nyampu ka-ø-ø get-i-ma-ni yapa.
 DEM IMPF-3SGS-3SGO get-EPENTHESIS-cause-NONPST person
 ‘The person is getting that one [the dog].’

In (3), the word for person, *yapa*, which is a transitive subject, receives an ergative suffix, *-ng*, but in (4) it does not. The stimuli were effective in that the children used overt transitive subjects when talking about the picture, allowing for an analysis of whether and when they produced the ergative suffix.

It is important when designing stimuli such as these that the task does not force the children to say something that they would not normally say. Rather, it must simply create the opportunity for them to use the target construction. With this method, a good number of tokens were obtained in a relatively short time from several children and adults.

An important factor is that the stimuli need to appeal to young children. Clear, colorful, cheerful pictures help, along with an engaging story. The “frog story” mentioned earlier is in black and white, but is often successful because of the story line. But cultural appropriateness also needs to be taken into account when choosing or designing a story. Some researchers have found that children in some cultures don’t show an interest in the frog story, so the researchers create something else. In my case, the children are from Indigenous Australian communities in which dogs are valued as pets, and in which mythical monsters are part of folklore. Some protagonists are female, as a counterbalance to considerable representation of males as main characters in children’s literature – the dog is rescued by a woman, not a man.

Other types of elicited production which have been very successful are role plays with puppets. Puppets can be created fairly easily, and the researcher can ensure the puppet has certain properties so as to influence, or remove bias from, a child’s responses in particular ways – for instance, making a puppet appear gender-specific or gender-neutral, younger or older, depending on the research question. Children can be the voices of the puppets, known as controlled improvisation (Andersen, 1990; Clark, 2009), or can listen to the puppets and make judgments about their speech. Using controlled improvisation, Andersen (1990) found that children aged 4;7 used different speech styles aligning with gender and social status – for example, a female doctor, or a male child patient.

Puppets have also been used successfully to elicit grammaticality judgments (Demuth, 2003) and ideological stances (Odato, 2010) from young children. Variations on a successful design are that the child is told that the puppet is learning to speak a language, and the child should help the puppet by choosing the “best” construction (Demuth, 2003), or by offering a correction. To elicit ideological stances, a child can listen to a segment of speech and be asked “Who speaks like that?” (Odato, 2010), choosing among puppets or pictures. In addition to puppets, animations and pictures can be used in perception studies, where children choose between available options after hearing or seeing stimulus items. To reduce the cognitive demand of the task, the children can simply point to their choice rather than give a verbal response.

In multilingual and multidialectal situations, issues of language and dialect choice need to be taken into account. Here I will use the term “code” to mean “language or dialect.” If the research design involves a comparison of elements in the two codes, then properties of the code which is used for the task first might prime, or influence, the same properties when the other code is being used. Priming effects in children can last up to a week. It is necessary, then, to take two precautions. One is to alter the order in which different children perform the task in each code: that is, code A first for one child, and code B first for another child. In addition, the children should perform the tasks with some time lag between them. The structure might be that each child completes the task in each code with a two-week break between tasks, and the order of code A and code B are counterbalanced between children.

This raises the question of how to ensure that bilingual or bidialectal children use a different code each time they perform the task. Bilingual children are often dominant in one language (Nicoladis and Genesee, 1997; de Houwer, 2009) and might prefer to use the same language each time. Or, children might be used to using one code for certain types of activity. For instance, if they generally use one code at school, they might choose that code for school-type activities, even if they are not at school at the time. Yet the children need to be in the language mode appropriate for the task, that is, to expect to hear and interact in the language of the task (Grosjean, 1982). So children might need a reason to use a specific code. Sometimes a research assistant or interlocutor with whom the child regularly interacts in one code only will be enough to prompt the child to use that code. But sometimes that will not work. One solution is to create short movies, 2–3 minutes long, one in each code. Before performing the task, the children watch one movie and are then asked to speak the way that the person in the movie did. In my studies, the movies were visually similar to the stimuli picture books. This was very successful for me, and the children did then speak in the target code of each task, ensuring that the codes were produced in counterbalanced order.

When working with young children:

- make the task into a game or puzzle;
- use engaging stimuli;
- keep it short – 15–20 minutes maximum;
- make the experience positive.

The logistics of recording

Recording on video is encouraged for child interactions because a considerable amount of non-verbal information might be important to a child in formulating his/her speech, and also important for the researcher in interpreting a child's speech. An analysis of argument realization – whether subjects and objects are overt or not – in Inuktitut (Allen, 2008) illustrates this point. For the children in the study, it mattered whether or not the argument referent was in the immediate physical context of the child, as this contributed to how often arguments were overtly produced. Much of the information that listeners needed in order to understand the children was non-verbal, and could be seen in the video recording. Information such as where children are looking, what they are pointing to, holding, moving toward, or how they are gesturing might be crucial to understanding the interaction. If possible, recording on video with a back-up on audio is recommended. Although good researchers always take great care to ensure that all of the equipment is working well, and they check the recording levels using head phones, sometimes things go wrong. Any particular interaction can never be captured again, so capturing it adequately is essential.

Children don't often stay in one place for long while playing, so the choice of microphone position is important. Wireless microphones are an excellent option for children moving around, and they can be used with video cameras. It is important to ensure that the batteries in the microphone will last for an entire recording session. A high-quality external microphone mounted on top of the camera also often works well. Both of these options are superior to an internal camera microphone. The position of the video camera matters too. The camera should always be on a tripod for stability, and the height should be such that the camera is approximately at the height of the children's upper bodies and heads, not at the height which would be appropriate for adults standing up. If the children are playing on the floor, then a tripod height of 18 to 24 inches (45 to 60cm) is good. When you watch the video, you should be looking straight on at the children, not looking down at them from a higher position. The camera might need to be moved if the children move out of camera range.

How can the effect of the observer's paradox be reduced? During my studies, I got the impression that my presence at the recording was more of a hindrance to naturalness than the video camera. So I showed the children's carers how to move and swivel the camera, and then left. I told the adults that it really didn't matter what happened on camera – if the children talked or not, it was OK; if they played or not, it was OK; if nothing happened, it was OK. This was to encourage the adults not to try to make the children talk or behave in any particular way. Then I would leave, and return an hour later (the mini-DV tapes were an hour long). It worked out that there was always a substantial amount of usable data recorded – maybe not a full hour, but usually at least 30 minutes. By using this method weekly, with each of five families, I was able to obtain a good corpus of very natural data, within the constraint of having a video camera present. Even if the children paid a lot of attention to the camera at the beginning of the recording, they soon tired of that and went back to their own activities after a few minutes.

When setting up a naturalistic interaction, consider:

- Where does the child usually play?
- Who usually interacts with the child?
- Which code do they usually use in this context?
- What do they usually play with?

Transcribing the recorded data

Young children's speech can be difficult for someone outside the children's immediate family to understand, and therefore for a researcher to transcribe, especially if the children speak a dialect or language which differs from that of the researcher. One solution is to transcribe with a family member, sitting together and watching video segments. After each utterance, the caregiver says exactly what s/he heard the child say, and the researcher types it in quickly. The method takes longer than some other types of transcribing, but achieves a good level of accuracy. The context provided in the video recording helps the caregiver to understand the children's speech. A potential problem is that sometimes a caregiver will at first retell the segment in a more standard dialect than that which the child produced, so the researcher has to reassure him/her that the change is not desirable. If caregivers perceive that their dialect is stigmatized, they might not at first realize that the child's dialect is valuable to the researcher. The researcher might need to model transcribing a child's exact speech to reassure an adult that the dialect or register used by the child in the recording is what is valued.

The CHILDES (MacWhinney, 2000) method of transcription is often used by child language researchers, and all of the necessary information is available on the website (<http://childes.psy.cmu.edu/>). The amount of transcription and detail needed depends on the research question and the kind of searching that will be required. Often researchers choose a section of each recording: for example, start transcribing 10 minutes after the beginning of the recording and transcribe the next 20 minutes. One advantage of the CHILDES program is that it has procedures for the types of text searches that child language researchers often need. The files created using the CHILDES-specific transcription program are plain text files, so they can be searched by any program that can search text files.

Coding the data

Coding means indicating in the transcription or in a database when the focus variable occurs. How the data should be coded, and how much data should be coded, varies according to each study. In general, researchers try to restrict the work to what is needed for their specific study, because transcribing and coding are very time consuming. For instance, if you are going to investigate a phonetic quality, then you need to code all of the information that affects that quality, but not necessarily all the parts of speech of other words in the clause. It is also important, though, to give a good picture of the type of discourse being used overall, so some information about elements not under study will also be needed. In my study of word order and ergative

case marking on overt transitive subjects, in addition to knowing how many occurrences of ergative case marking there were, and in which positions in clauses they occurred, it was also important to know how many occurrences there were of non-overt transitive subjects, of intransitive subjects, and their positions in clauses. In addition to the quantitative data, a qualitative analysis was needed to determine the function of the case marker in each language, requiring qualitative discourse analysis – including, for instance, whether the referent was new to the story, or in focus.

Conclusion

Working with children when they are developing their language skills and knowledge is fascinating and enjoyable, and is important to the field of sociolinguistics. There are many studies from which to draw ideas about research questions and methods. Attention needs to be given to properties of the speech that the children hear, and to how they are socialized into their communities. As more and more is known about adult-to-adult interactions and interpretations, we are in an increasingly better position to learn how children come to develop the same kinds of knowledge and skills. Greater understanding of children's development of sociolinguistic competence is essential if we are to gain a comprehensive picture of human language and cognition.

Quagmires and Troubleshooting

The major question concerns the validity of the study. In the case of children's sociolinguistic development, the question is whether methods provide a representative view of the children's sociolinguistic abilities. A researcher needs to gain an understanding of what a child's full speech repertoire is, even if only part of that repertoire is in focus in the study. But it is not usually possible to observe children in every part of their lives, or for very extended periods of time. Solutions include combinations of methods, and observing children in different contexts. As an example, the children in my studies speak a new mixed code, Light Warlpiri, most of the time, and they are also learning traditional Warlpiri, but there is no specific context in which they must use either language. Most of children's informal speech is in Light Warlpiri, but when they were asked to tell stories from picture stimuli, they told them in traditional Warlpiri as well. In this case, a combination of an elicited production task and ethnographic observation was needed to gain an accurate picture of the Warlpiri part of their linguistic repertoire (they also speak varieties of English and/or Kriol, which were not part of the study). Similarly, if a researcher provides props for children's play, s/he needs to be aware that the props themselves may influence how the children speak, as explained above.

While a researcher plans for and controls as much as possible, situations will arise which one cannot control. Maybe a child simply doesn't cooperate! It is fairly usual for about 40 percent of children under 5 to not cooperate, so the researcher should try to begin with permission for a higher number of children to be in the study than is needed. The children might not understand the task or feel comfortable

participating. Some childcare centers require that a researcher spend a few days prior to the beginning of the study in the center, interacting informally with the children, so that by the time of the study the children feel comfortable with the researcher. Even if this is not required, it is an excellent way to maximize children's participation and is well worth the investment of energy and time. In longitudinal studies, it sometimes happens that a family moves out of the area. It is a good idea to begin a longitudinal study with more families involved than is absolutely essential, so that if one family leaves, there are still enough children in the study.

Project Ideas

- 1 *When children are becoming bilingual or bidialectal*: Observe the language choices of a child. When does s/he use each language? With whom? In which contexts? About which topics? Which lexical items and grammatical structures occur in each language?
- 2 *Observe interactions with babies or young children*: Who initiates an interaction with the child? How? What are the features of the adult's speech – pitch, intonation, word choices, phrasing, gestures and body language, turn taking (does the person pause between utterances)? What is the content of the speech?
- 3 *When a family speaks a minority language/dialect*, or one that is locally distinctive in some way (e.g., based on region or ethnicity): Observe interactions between the children and their caregivers. What kinds of local versus non-local features are in the speech of each? Does this change? According to what context – topic, setting, persons present, with siblings, friends, parents? Does adult speech to children differ from adult speech to other adults?
- 4 *When there is a change in progress in a region*: What are the features of the input to the children? From parents? From teachers? From others with whom the children interact? What are the features of the children's speech to others – parents, siblings, other children, other adults?
- 5 *Create a structured play scenario* which allows manipulation of some social structure: for example, gender, age, or profession. Use toys or puppets to do so. Observe how elements of the children's speech change according to role, interactant, etc.

Further Reading and Resources

- Andersen, E. 1990. *Speaking with Style: The Sociolinguistic Skills of Children*. London: Routledge.
- Clark, E. 2009. *First Language Acquisition*. Cambridge: Cambridge University Press.
- de Houwer, A. 2009. *Bilingual First Language Acquisition*. Clevedon, UK: Multilingual Matters.
- Hoff, E. 2009. *Language Development*. Belmont, CA: Cengage Learning.

Web site: The CHILDES project: tools for analyzing talk: <http://childes.psy.cmu.edu/>.

Articles in the following journals: *Child Development*; *Language Variation and Change*; *Journal of Child Language*.

Appendix A: The monster story

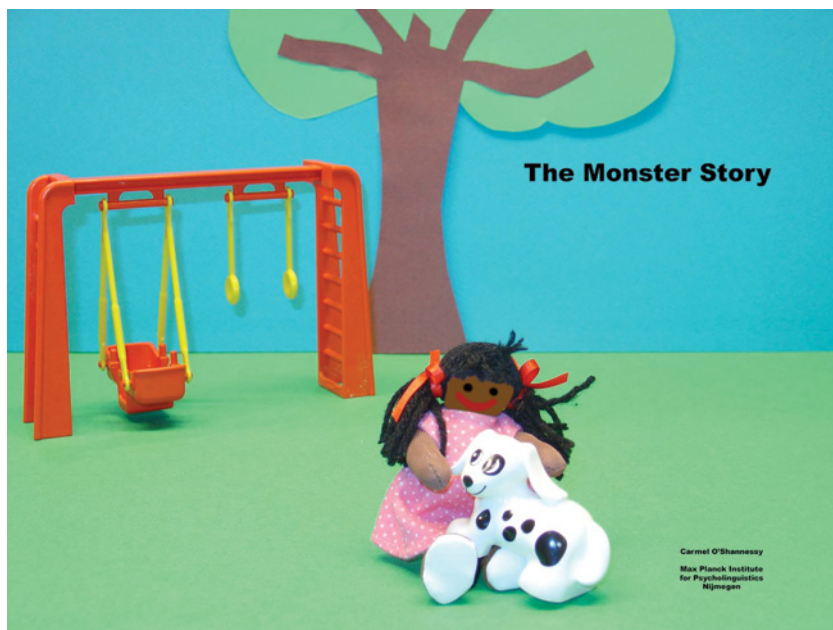


Figure 20.1–20.10 The monster story. By Carmel O'Shannessy (2004), used with permission of the Max Planck Institute for Psycholinguistics, Nijmegen, Netherlands. Available from: <http://www-personal.umich.edu/~carmelos/research.html>



Figure 20.1–20.10 (Continued)



Figure 20.1–20.10 (Continued)



Figure 20.1–20.10 (Continued)



Figure 20.1–20.10 (Continued)

Appendix B: Abbreviations used in examples

IMPF	imperfective aspect
3	third person
SG	singular
S	subject
O	object
NONPST	nonpast
REDUP	reduplication
IMP	imperative
PROG	progressive
CONJ	conjunction
DEM	demonstrative

References

- Allen, Shanley E.M. 2008. Interacting pragmatic influences on children's argument realization. In *Crosslinguistic Perspectives on Argument Structure: Implications for Learnability*, ed. M. Bowerman and P. Brown, 191–212. New York: Lawrence Erlbaum.
- Andersen, E. 1990. *Speaking with Style: The Sociolinguistic Skills of Children*. London: Routledge.
- Cameron, R. 2010. Growing up and apart: gender divergences in a Chicagoland elementary school. *Language Variation and Change* 22: 279–319.
- Clark, E. 2009. *First Language Acquisition*, 2nd edn. Cambridge: Cambridge University Press.
- Cook-Gumperz, J. and Scales, B. 1996. Girls, boys and just people: the interactional accomplishment of gender in the discourse of the nursery school. In *Social Interaction, Social Context, and Language: Essays in Honor of Susan Ervin-Tripp*, ed. D. Isaac Slobin, J. Gerhardt, A. Kyratzis, and J. Guo, 513–527. Mahwah, NJ: Lawrence Erlbaum.
- de Houwer, A. 2009. *Bilingual First Language Acquisition*. Clevedon, UK: Multilingual Matters.
- Demuth, K. 2003. Rules and construction effects in learning the argument structure of verbs. *Journal of Child Language* 30(4): 797–821.
- Du Bois, J.W. 1987. The discourse basis of ergativity. *Language* 63(4): 805–855.
- Farver, J.A.M. and Lee Shin, Y. 1997. Social pretend play in Korean and Anglo-American preschoolers. *Child Development* 68(3): 544–556.
- Ferguson, C.A. 1964. Baby talk in six languages. *American Anthropologist* 66(6): 103–114.
- Fernald, A., Taeschner, T., Dunn, J., Papousek, M., and de Boysson-Bardies, B. 1989. A cross-linguistic study of prosodic modifications in mothers' and fathers' speech to preverbal infants. *Journal of Child Language* 16: 477–501.
- Foulkes, P., Docherty, G., and Watt, D. 2005. Phonological variation in child-directed speech. *Language* 81: 77–206.
- Gaskins, S. 1999. Children's daily lives in a Mayan village: a case study of culturally constructed roles and activities. In *Children's Engagement in the World: Sociocultural Perspectives*, ed. A. Göncü, 25–61. Cambridge: Cambridge University Press.
- Gleitman, L.R., Newport, E.L., and Gleitman, H. 1984. The current state of the motherese hypothesis. *Journal of Child Language* 11: 43–79.
- Grosjean, F. 1982. *Life with Two Languages: An Introduction to Bilingualism*. Cambridge, MA: Harvard University Press.
- Hoff, E. 2009. *Language Development*. Belmont, CA: Cengage Learning.
- Kerswill, P. and Williams, A. 2000. Creating a new town koine: children and language change in Milton Keynes. *Language in Society* 29: 65–115.

- Kovac, C. and Adamson, H.D. 1981. Variation theory and first language acquisition. In *Variation Omnibus*, ed. D. Sankoff and H. Cedergren, 403–410. Edmonton, Alberta: Linguistic Research.
- Labov, W. 1963. The social motivation of a sound change. *Word* 19: 273–309.
- Labov, W. 1972. *Sociolinguistic Patterns*. Philadelphia: Pennsylvania University Press.
- Labov, W. 1989. The child as linguistic historian. *Language Variation and Change* 1: 85–97.
- MacWhinney, B. 2000. *The CHILDES Project: Tools for Analyzing Talk*, 3rd edn. Mahwah, NJ: Lawrence Erlbaum. <http://childes.psy.cmu.edu/> (last accessed April 19, 2013).
- Mayer, M. 1969. *Frog, Where are You?* New York: Dial Books for Young Readers.
- Nicoladis, E. and Genesee, F. 1997. The role of parental input and language dominance in bilingual children's code-mixing. *Proceedings of the Annual Boston University Conference on Language Development* 21(2): 422–432.
- Ochs, E. 1992. Indexing gender. In *Rethinking Context*, ed. A. Duranti and C. Goodwin, 335–358. Cambridge: Cambridge University Press.
- Odato, C. 2010. Children's development of knowledge and beliefs about English like(s). PhD dissertation, University of Michigan, Ann Arbor.
- Roberts, J. 1997a. Acquisition of variable rules: a study of (-t,d) deletion in preschool children. *Journal of Child Language* 24: 351–372.
- Roberts, J. 1997b. Hitting a moving target: acquisition of sound change in progress by Philadelphia children. *Language Variation and Change* 9: 249–266.
- Roberts, J. and Labov, W. 1995. Learning to talk Philadelphian. *Language Variation and Change* 7: 101–122.
- Roberts, S.J. 1998. The role of diffusion in the genesis of Hawaiian creole. *Language* 74: 1–39.
- Schieffelin, B. 1985. The acquisition of Kaluli. In *The Crosslinguistic Study of Language Acquisition. Vol. 1: The Data*, 525–593. Hillsdale, NJ: Lawrence Erlbaum.
- Shatz, M. and Gelman, R. 1973. The development of communication skills: modifications in the speech of young children as a function of listener. *Monographs of the Society for Research in Child Development* 38: 1–38.
- Slobin, D.I. 2004. The many ways to search for a frog: linguistic typology and the expression of motion events. In *Relating Events in Narrative. Vol. 2: Typological and Contextual Perspectives*, ed. S. Strömquist and L. Verhoeven, 219–257. Mahwah, NJ: Lawrence Erlbaum.
- Smith, J., Durham, M., and Fortune, L. 2007. “Mam, my trousers is fa’sn doon!”: community, caregiver, and child in the acquisition of variation in a Scottish Dialect. *Language Variation and Change* 19: 63–99.

Index

- IXam, 280
- accent, 44, 61, 63, 138–9, 143, 216, 252, 254, 281, 293, 294, 298–300
- acceptability judgments, 44
- access, 27, 32, 40, 43, 52, 63–4, 66, 75, 79, 81, 86, 88, 94, 97, 103, 105, 111, 154, 174, 190, 220, 227, 232, 236, 242, 263, 266, 273–4, 284, 298, 308–9
- accommodation theory, 296–7
- accountability, 226
- acoustic analyses, 12, 35, 119–21, 133–4, 139, 254
- acquisition, 15, 157, 199, 207, 217, 304, 307–8
- acrolectal, 157, 281
- across-subjects, 64
- adjacency pairs, 238
- administration, 43, 52, 55, 250, 256
- adolescent speakers, 264
- adverbs, 112, 152, 159–60
- African American (Vernacular) English (AAVE), 10, 129, 291
- Afrikaans, 279, 280, 284–5, 287
- age, 13, 28, 30–1, 48–50, 52, 56, 61, 97, 103, 107, 110–11, 113, 115–18, 179, 199–205, 207–9, 249, 252, 255–6, 263–4, 269, 271, 274, 295, 307–8, 317
- differences, 107
- aggregate data, 262
- agreement (grammatical), 198–9
- Algonquian, 15
- allophone(s), 138, 142–3
- American English, 31
- American Speech*, 170
- analytical process, 213–14, 216–17
- analytical programs, 38
- anonymity, 29, 50–1, 88, 115, 308–9
- antecedents, 196–7
- anthropological analysis, 213–14, 227
- anthropological linguistics, 164, 277
- anthropological sociolinguistics, 151
- anthropology or anthropological, 8, 16, 18, 227, 167
- apology, 13, 234
- apparent time, 203, 252
- approximants, 123
- Arabic, 278
- ARCHER (A Representative Corpus of Historical English Registers), 97
- articulation rate, 128
- assertive, 235–6
- Atlas of North American English, The*, 31, 253
- attitudes, 30, 33, 37, 43–6, 54, 56, 80, 155, 165, 168–71, 278, 298
- audience design, 297
- auditory analysis, 12, 120, 133
- Australian English, 196
- authentic speaker, 226, 256, 300
- autocorrelation pitch tracks, 132

Research Methods in Sociolinguistics: A Practical Guide, First Edition.

Edited by Janet Holmes and Kirk Hazen.

© 2014 John Wiley & Sons, Inc. Published 2014 by John Wiley & Sons, Inc.

- backing of /a/, 267
 balanced sample, 265
 Bantu language, 280
 basilectal, 156
be like, 12, 155–6, 158, 274
 Belfast, 16, 267–8
 Bhojpuri, 286–7
 bidialectal, 313, 317
 bilingual, 44, 48–9, 217, 220–1, 225, 278–9, 309–10, 313, 317
 black, 14, 280, 282
 Black English, 281
 Black South African English, 282–3
 borrowings, 279, 286
 Brazilian Portuguese, 198
 British colonialism, 281
 British English, 111, 138, 142, 156–7
 British Isles, 248
 British National Corpus (BNC), 111, 115–18
 burnouts, 271
- calculating frequencies, 103
 Canadian English, 200
 Canadian Vowel Shift, 26
 careful style, 231, 291
 Caribbean creoles, 267
 cartographical investigations, 250
 cartography, 252
 case marking, 197, 311, 316
 casual style, 291
 categorical association, 203–4
 causal relationship, 19, 198
 central tendencies, 194, 196, 200
 change from below, 267
 change in progress, 95, 98, 207, 306, 317
 chat room, 107
 checklist, 45, 293
 Chichewa, 277
 child language, 98, 308, 315
 child-directed speech, 306
 CHILDES, 307, 309, 315
 children's language development, 304
 chi-square, 202–6, 208
 choosing informants, 251
 circumscribing the variable context, 139, 160
 citations, 168–70, 172
 classical form, 278
 classroom data, 217
 classroom observations, 225
- clear /l/ 142–3
see also light /l/
 closed questions, 43, 45, 49, 54
 closed syllable, 140, 142
 close-knit networks, 267
 closing the set, 149, 159
 coach task, 68
 coarticulation, 123, 139
 coarticulatory effects, 123
 processes, 139
 Cockney, 291
 coda, 126, 140, 142–3, 209
 code, 285, 310–31, 313, 315–16
 mixing, 285
 switching, 48, 76, 276, 278, 283–6, 88
 coefficient of correlation, 207–8
 coefficients, 53, 130, 133
 cognition, 120–1, 316
 cognitive meaning, 151, 160
 collocation, 109
 colloquial, 278–9, 281–2
 colonization, 277–8, 282
 colored, 280–1, 284
 common ground, 95
 community, 29, 32, 37, 79, 81, 99, 101, 250, 253, 255–6, 259–60, 276, 278–81, 285, 287, 295–6
see also speech community
 community of practice (CofP), 19, 226, 262–3, 270–4, 296
 commutation task, 68
 comparable sample, 256
 complaints, 178, 180
 compliments, 178
 comprehension studies, 306
 computer-mediated communication (CMC), 74–5
 concordance, 79, 99, 109, 111, 113–14, 116–17
 concordance programs, 96, 159
 conditional, 235–7
 confidentiality, 29, 48, 50–1
 consent form, 29, 67
 consonantal variation, 133
 consonants, 119–21, 123, 126, 130, 133, 138–40, 142, 144, 179
 constraints or constrained, 20, 39, 76, 109, 140, 153, 200, 209, 238, 243, 255, 257–8, 283–4, 305–6
 constructionist approach, 292
 contestive humor, 186

- context(s), 9–11, 17, 30, 32–4, 36, 38, 43–4, 48, 54, 68, 75, 77–80, 94, 109–11, 113–14, 116, 130–1, 134, 137–40, 146, 152, 154, 156, 159–60, 164, 168–70, 174, 178, 180, 182–5, 188, 190, 192, 196–7, 202, 209, 214–17, 220–3, 226–8, 238, 254, 258, 264, 272, 277–8, 280, 282, 284, 291, 293, 298–302, 305–6, 309–10, 314–17
- interactional, 221–3, 227
- institutional, 220, 278
- multilingual, 286–7
- postcolonial, 277
- semantic-pragmatic, 157
- social, 8, 14, 26–8, 37, 75, 83, 157, 178–9, 192, 209, 227, 277, 294, 296–7, 301
- sociohistorical, 250
- sociolinguistics, 220
- variable context, 40, 139–40, 145–6, 151–2, 160
- contextual factors, 34, 293
- frames, 215
- information, 94, 179, 220, 227–8
- contingencies, 203, 235
- contingency table, 202–3, 205
- continuous variables, 199–200, 206
- contrastive analysis, 158
- convergence, 276, 286, 288
- conversation analysis (CA), 164, 177, 179, 230–1, 233, 235, 237, 239, 241, 243, 298
- conversational data, 255, 257
- corpus-based method or research, 98, 111
- corpus-driven approach or research, 99, 111
- Corpus of Contemporary American English (COCA), 116, 118
- Corpus of Early English Correspondence (CEEC), 97, 99–100, 102, 104–5
- Corpus of Historical American English (COHA), 97, 103–4
- correlation coefficients, 53
- correlation(s), 56, 96, 120, 153, 207–8, 266, 268–9
- Corsican, 217–18, 220–1, 223–6, 228
- counterurbanization, 254
- critical discourse analysis (CDA), 178, 190
- cross-cultural, 179
- crossing, 296–7, 299
- danger of death, 279
- dark //, 123, 125, 143
- declarative, 235–6
- defining value, 169–73, 173
- demographic, 14, 16, 27, 29, 31–2, 36–7, 39, 50, 67, 117, 254, 256, 259, 262, 265, 272–3
- dense networks, 267
- dependent variable(s), 111, 198, 202, 209, 231
- descriptive, 12–13, 111, 201, 256, 259, 266
- diachronic, 153–4, 160, 164
- diachronic corpora, 97
- see also* historical corpora
- diachronic variation, 10–11, 13, 149
- dialect, 12–15, 17, 26, 44–5, 56, 60–3, 68, 73, 128, 135, 163, 165–7, 176, 199, 231, 246–55, 259–60, 264, 291, 296, 299, 313, 315, 317
- contact, 255
- variation, 44, 260, 294
- dialectologists, 12, 26, 179, 247, 250–2, 256, 259–60
- dialectology, 12, 16, 151, 246–7, 251–2, 255–60
- contemporary, 255
- Dictionary of American Regional English (DARE)*, 165, 167–8, 174
- diffusion, 252, 254–5, 259
- digital media, 74–6
- diglossia, 276, 278
- diphthongs, 123
- directive, 180, 182–3, 189, 192
- discourse(s), 13, 18, 28, 36, 44, 74–6, 79, 98, 152, 169, 174, 178–80, 182–3, 185–92, 195, 209, 214, 216–17, 223–5, 227–8, 231–2, 237, 271, 280, 291–2, 294, 301–2, 311, 315
- analysis, 13, 17, 164, 177–80, 183–5, 190–2, 231, 274, 316
- features, 179, 185, 187
- marker(s), 112, 114, 189, 254, 310, 312
- practices, 15, 82
- variables, 36
- discrimination task, 60, 68
- discussion forums, 74, 77, 79–80
- dispersion, 108, 117, 206
- see also* distribution
- distribution, 77, 116, 131, 157, 185, 194, 201–6, 209, 225, 247, 252, 257, 263, 267, 270–4, 283, 297
- see also* dispersion

- doctor (medical), 180, 232–3, 238–40, 242
 dominance configuration, 278
 dominant language, 277, 287
 duration, 123, 126, 128–9, 139
 Dutch, 120–1

 Early Modern English, 97–160
 East Anglian Counterurbanization project, 254
 Eckert, Penelope, 16–18, 28, 251, 270–1
 ecological validity, 295–6
 education, 8, 10, 30, 48–9, 52, 56, 61, 64, 86, 156, 198, 223, 271, 277, 281–2, 285, 287, 299
 educational linguistic research, 223
 eighteenth century, 96–7
 elicitation tasks, 140–1
 elicited production techniques, 311
 eliciting tokens, 141
 Ellis, Alexander, 247–50, 256, 258
 emic, 28, 37, 77
 empirical, 9, 11–12, 20, 82–3, 153–4, 158, 231, 273, 295
 empiricist, 295
 endangered languages, 276, 287–8, 306
 enregisterment, 168–9, 292
 entering the community, 25, 32
 envelope of variation, 139, 146
 ethics, 29, 59, 65–6, 69, 71, 87–8, 236, 307–8
 ethnic
 groups, 14–16, 179–80, 280
 ethnicity, 14–16, 28, 30, 37, 52, 59, 72, 137, 179, 200, 231, 264, 266, 269, 273, 280, 295, 317
 ethnography, 28, 75, 164, 296
 ethnography of communication, 277
 ethnolinguistic, 44, 83
 vitality, 44
 etic, 28, 37, 77
 etymology, 172
 European American English, 129
 external factors, 137, 145

 F₀ (pitch), 119–20, 127–9, 132–3, 199, 217, 244, 307, 317
 factor analysis, 53
 falsifiable, 20
 fieldwork, 25–33, 36, 38–9, 40, 77, 83–4, 87–8, 157, 165, 214, 251, 259–60, 266, 272, 284–5, 287
 fifteenth century, 104
 filming, 216, 233

 first language, 86, 220, 283
 see also L1
 forced-choice task, 64, 69
 formal (style), 32, 34, 39, 100, 147, 154, 215, 279
 formants, 17, 119–23, 125, 130, 133, 139, 140
 form(s) of address, 98–9
 Fourier analysis, 121
 frames, 294, 302
 French, 150–1, 202–3, 205, 217–18, 220–1, 225, 278
 frequencies, 101, 103–4, 121, 125–6, 199
 see also sound waves
 frequency (of features) 108, 110–12, 114, 116–17, 283
 frequency list, 108
 fricatives, 125–6, 133, 141
 friend of a friend, 31
 fronting of vowels, 138–9, 145, 272, 280–1
 functional equivalence, 151, 158
 fundamental frequency, 119–20

 gender, 9, 10, 14–17, 19–20, 33, 56, 72, 81–2, 95, 97, 100, 104, 111, 137, 153, 155, 179–80, 198–200, 209, 231, 255–6, 264, 280, 283, 293, 295, 307, 312, 317
 paradox, 95, 101
 general extenders, 152
 generalizations, 95, 116, 195–7, 265, 284
 genre, 52, 79, 81–2, 86, 97, 104, 209, 215–17, 220–1, 223, 226, 228, 282, 291, 294, 297, 302
 geography, 176, 259
 dialect, 26, 247, 253, 255
 linguistic, 165
 sociolinguistic, 251
 German, 80–1, 84, 121, 129, 150–1, 254
 globalization, 76, 277
 gloss, 172, 174, 285, 311
 glossary, 163, 165–76
 glottal stop, 126, 138
 glottalization, 254
 Goldvarb, 38, 206, 209
 GOOSE vowel, 138, 280–1
 grammatical category or categories, 13, 112, 154, 199
 variation, 248, 257
 grammaticality judgments, 313
 Griqua, 280
 Guaraní, 13

- Hamburg Corpus of Non-native Varieties of English (HCNVE), 157–8
- Hawai'i Creole, 61–4
- headword, 171
- hedges, 178, 183
- Helsinki Corpus of English texts (HC), 97, 104
- hierarchy
 - grammatical, 172, 200, 224, 283
 - social, 96, 98
- hip-hop, 80–1, 302
- historical
 - corpora, 103
 - see also* diachronic corpora
 - data, 93, 104, 169
 - linguistics, 95, 164
- Horvath, Barbara and Ron, 257–8
- humor, 178, 180, 182–90, 192
- hypothesis or hypotheses, 20, 30, 39, 62, 67, 84, 97, 145–6, 153–4, 156, 160, 185, 202–6, 226, 228–9
- identification task, 60, 67–9, 72
- identity or identities, 14–19, 37, 64, 76, 80, 82, 88–9, 98, 116, 133, 137, 167, 169, 174, 179, 186, 188–90, 198, 209, 214, 216–17, 220, 223–6, 231, 266–7, 269–71, 273, 281, 287, 290–6, 297–8, 300–1
- ethnic, 15, 37, 198, 273
- female, 293
- linguistic, 214, 223
- local, 64
- social, 18, 82, 137, 179, 198, 209, 217, 225, 231, 267, 270, 293–4, 297–8, 300–1
- speaker, 231
- workplace, 186, 188
- ideology/ideologies/ideological, 15, 44, 64, 213, 216, 220, 223–4, 226, 228–9, 231, 270, 291–2, 297, 301–2, 313
- independent variable, 62, 79, 81, 98, 111, 202–3, 231
- indexes, 83, 226
- indexical, 15, 82, 216–17, 223, 226, 228, 292–4, 296–8, 301
 - signs, 216
 - value, 292
- indexicality, 216, 293–4
- Indian English, 157–9, 280–1
- indigenous Australian communities, 312
- indigenous languages, 158
- individual variation, 95, 101
- inferential statistics, 56, 201
- informal (style), 56, 81, 160, 215, 251, 257–8, 282, 285, 301, 316
- informant(s), 46, 80, 87–8, 157, 165, 168, 174, 250–1, 253, 257, 291
- informed consent, 305, 308
- ing or -ing variation, 11, 20, 153–4, 269
- innovation, 10, 17, 26, 85, 98, 120, 207, 252, 255, 267–9, 274, 288
 - diffusion, 255
- innovative form or variants, 265, 272
- insider fieldworkers, 284
- institutional
 - identities, 294
 - settings, 234
 - talk, 180
- instructional discourses, 223, 225, 227
- instrumentalities, 294
- intensifiers, 151–2, 159, 161
- interactional
 - consequences, 235, 241
 - practice, 232
 - sociolinguistics (IS), 179, 215
- intercultural communication, 180
- internal factors, 27, 137–8, 145–6
 - see also* linguistic factors
- International Corpus of English (ICE), 281–2
- international orientation, 279
- Internet, 52, 76–7, 79–81, 85, 180, 221
- interrogative, 236
- interview(s), 27, 32–9, 44, 51, 54, 80–1, 87, 113, 154, 168–9, 174, 241, 254, 279–80, 282–4, 287
- interviewer, 34, 154, 158, 250, 258, 283, 287
- interviewing, 32–3, 94, 266
- sociolinguistic interview, 26, 33–5, 279, 281–2
- intervocalic /t/, 138
- intonation, 40, 120, 128, 134, 182, 184, 217, 224, 233, 244, 257, 298
- Inuktitut, 314
- IPA, 248, 250
- isoglosses, 252
- jargon, 165, 167–70, 172, 174–5, 270
- Jefferson, Gail, 233, 298
- jocks, 271
- judgment sampling, 31

- keys, 294
 Khoesan language, 280
 Kiswahili, 277–8, 285, 288
- L1, 13, 153, 156, 199, 282–3, 286–7
 L2, 61, 199, 281, 282
- Labov, William, 12, 14, 26–7, 33, 95, 101,
 120, 137–8, 140, 151, 164, 199,
 209, 231, 249, 254, 260, 264,
 267–9, 279, 290–1, 295
 Labovian, 151, 251, 277, 279–80
- language acquisition, 217, 307–8
 language attitudes, 46, 54, 171, 297
 language contact, 133–4, 158, 277
 language and gender, 14, 16–17
 language ideology or ideologies, 216, 220,
 228, 302
- language or linguistic change(s), 14, 17, 95,
 97–8, 100, 154, 160, 199, 204, 207,
 254, 260, 267–8, 280, 301, 306
- language or linguistic norms, 18, 263–4,
 270, 305
- language or linguistic practice(s), 76–7, 80,
 100, 198, 215–17, 225–7, 228, 263,
 272, 274, 294
- language or linguistic variation, 8, 10–15,
 17–19, 37, 61, 77, 82, 120–1, 134,
 138–9, 150, 157, 247, 251, 258,
 263, 271, 273, 291
- Language and Linguistics Behavioral
 Abstracts (LLBA), 27
- language maintenance, 306
- language policy or policies, 47, 86, 220,
 225
- language processing, 11, 306
- language revitalization, 220
- language shift, 287
- language socialization, 225
- language structure, 17, 150, 152–3, 160
- language variation and change, 14, 76, 97,
 137, 160, 251, 266, 270, 277, 301,
 305
 see also linguistic change
- laterals, 36, 123
- laughter, 183–4, 186, 189, 233–4, 238, 244
- leaders, 32, 182, 188, 268
- leadership, 179–80, 182, 188–9
- legacy data, 140, 144
- lexical
 bundles, 108
 category, 171–2
 variable, 11
 variation, 249, 251, 257
- lexicographical study, 174
- lexicography, 165, 167, 169, 174
- lexis, 94, 164–5, 167, 169–70, 257
- light /l/, 123
 see also clear /l/
- like* or (quotative) *be like*, 12, 155–6, 158,
 274
- likelihood, 31, 59, 141, 201–2, 204
- Likert scales, 46
- linear function, 207
- Linear Predictive Coding (LPC), 120, 122,
 130, 132–3
 LPC settings, 130
- lingua franca, 277, 282, 285–6, 288
- linguistic anthropology, 18, 225, 228
- Linguistic Atlas of England* (LAE), 44,
 249–50, 252, 257
- Linguistic Atlas of the United States and
 Canada*, 165
- linguistic change, 94, 199, 204, 251–2, 254,
 260, 264, 266–8, 306
- linguistic choices, 198, 214
- linguistic data, 26, 35, 38, 75, 264–6, 271
- linguistic factors, 12, 137, 153, 263, 274,
 305
- linguistic individual, 215, 228
- linguistic innovations, 85, 252, 267, 269,
 274
- linguistic insecurity, 197
- linguistic landscapes (LL), 75, 82–8
- linguistic patterns, 154, 267
- linguistic structure, 19, 138, 154, 209, 251,
 311
- linguistic theory, 12, 195
- linguistic variables or features, 11, 12–14,
 16, 20, 27, 59–61, 64, 88, 138,
 151–2, 154, 160, 198–200, 204,
 207, 209, 251–2, 254–5, 257–8,
 263–4, 266, 268–74, 305
- local, 13, 17, 18–19, 28, 32, 40, 45, 56, 80,
 87–8, 137–8, 141, 168, 170, 176,
 190, 224, 248, 251, 253, 258–60,
 264, 266, 268–9, 271, 274, 278–9,
 284–5, 291, 293–7, 302, 305, 317
 orientation, 279
 practices, 285
- locality, 249, 252, 258
- logistics of recording, 314
- London, 15, 30, 97, 104, 138, 143, 254,
 259, 263, 302
- longitudinal studies, 50, 308, 317
- lower-class (LC), 96, 302
- /l/ vocalization 143, 258

- macro, 294–6, 298
 male speech, 154
 markedness scale, 285
 matched guise 46, 59–61, 63–4, 72
 materiality, 83, 85, 216
 mean, 47, 123–4, 128, 200–1, 206–7
 meaning-making, 292
 measurement, 120, 122–3, 125, 132
 median, 201
 merger, 68–70
 vowel merger, 11, 68–9, 123, 130, 147, 206
 mesolectal, 156
 metalinguistic, 15, 279, 287
 metalinguistic data, 225
 methodological, 16–17, 19, 26, 31, 60, 75, 94, 108, 152, 165, 214, 247–8, 250–1, 255, 258, 278
 methodological approaches, 94, 278
 problems, 248, 250
 tools, 19, 251
 methodologies, 10, 27, 59, 140–1, 247, 277
 methodology, 10, 13, 61, 75, 103, 152, 179, 232, 279, 284
 Mexican American English, 128
 micro, 294–5, 298
 micro-
 analytic, 232, 295
 analytical approach, 224
 micro-level (linguistic) features, 179, 217
 middle class (MC), 138, 161, 196, 265, 271, 273, 279–80, 305
 Middle English, 8, 160
 Milroy, 16, 30, 266–9
 minimal pairs, 69–70, 253
 minority language(s), 29, 83, 85, 220, 228, 317
 mobility, 76, 277, 300
 mode, 15, 80–2, 88, 200–1, 283, 300
 Montreal French, 202–3, 205
 morpheme, 60, 153–4, 285–6
 morphological change, 101
 variation, 150
 morphosyntactic
 analysis, 156, 158–9
 paradigm, 159
 variable, 11, 159–60
 variation, 150–2, 115, 157, 158–9
 morphosyntax, 150, 152, 156–7, 159–60
 motherese, 306
 multidialectal situations, 313
 multi-ethnic dialects, 15
 multi-item scales, 47, 55
 multilingual communities, 279
 multilingual practices, 284–5
 multilingualism, 76, 85, 277–8, 283
 multi-locality research, 247, 257
 multimodal, 76
 multiple approaches, 286
 multiple negation, 8, 9, 263
 multiplex networks, 267, 269
 multivariate analyses, 36
 Myers-Scotton, 285
 narrative(s), 15, 34, 68, 80, 240, 279, 282, 291
 natural data, 44, 284, 314
 naturalistic speech (data), 33–4, 35
 naturally occurring speech, 141
 negation, 151, 263
 negative correlation, 207
 neogrammarians, 195
 nerd girls, 271–2
 network strength scale, 268–9
 New Englishes, 158, 281
 New Zealand English, 143–4, 291
 N-grams, 108
 nineteenth century, 26, 103, 160, 247, 258–9, 279–80
 nominal variable, 199–200, 206
 non-linguistic practices, 270
 non-native, 157
 non-standard, 48, 79, 94–5, 151, 153, 302
 dialects, 151
 varieties, 94
 NORM (computer package), 38, 123, 249–50, 256–7
 normal distribution, 52, 77, 116, 131, 157, 185, 194, 201–6, 209, 225, 247, 252, 257, 263, 267, 270–4, 283, 297
 normalization, 38, 123
 norms, 18–19, 27, 32, 95, 181–2, 258, 263–4, 267, 270, 279–83, 285, 287, 294, 296, 301, 305
 NORMs (non-mobile, old, rural men), 249, 251, 256
 North American English, 138, 140, 142
 Northern Cities Chain Shift (NCCS), 140, 270
 Northern Subject Rule, 153
 nPVI method, 128
 nucleus, 131, 142, 265
 null hypothesis, 202–6
 observed distribution, 204–5
 observer's paradox, 33, 181, 249, 309, 314

- Old English, 8
 onset, 123, 127, 129, 133, 142–3
 open questions, 43
 open syllable, 140, 142
 opening inquiry, 238–40
 Optimality Theory, 12, 200
 orderly heterogeneity, 152, 251, 257, 263
 ordinal variables, 199
 Origins of New Zealand
 English (ONZE), 144
 orthography, 224, 248–9
 outlier(s), 101, 103, 133, 200–1
 overgeneralization, 103, 299
Oxford English Dictionary (OED), 165, 169–70

 paraphrase, 186
 part of speech, 171
 partial repeat, 231–2
 participant, 27, 29–35, 37–9, 43, 50–1, 62–7, 69–71, 74–7, 79, 80–4, 87–8, 167, 179, 183, 186–7, 191–2, 214–15, 221, 223, 227, 233, 235, 237, 242–4, 256, 284, 293–4
 see also subjects
 participant information sheet, 50
 participant observation, 80, 87, 214–15
 observer, 32, 284
 patterns of variation, 28
 peak delay, 129, 134
 pedagogical practice, 222
 percentage(s), 16, 128, 139, 196–7, 200–2, 205, 283
 perception, 59–65, 67–70, 87, 170, 188
 perception experiments, 61, 121
 perception studies, 44, 307, 313
 performance(s), 188, 198, 221, 226, 228, 294, 296, 298, 300–1
 performance theory, 226, 228
 permission, 29, 33, 79, 81, 88, 227, 307–9, 316
 Philippine English, 158
 philologists, 164
 phonemes, 123, 207
 phonetic(s), 63, 120, 134, 199, 228, 231, 238, 274, 280–1, 298, 315
 changes, 281
 cue, 63
 realizations, 67–8
 variable(s), 36, 121
 variation, 134, 280, 288
 phonological
 analysis, 224
 change(s), 143, 306
 environments, 138, 140–1, 144, 146–7, 257–8
 factors, 137, 146
 innovation, 252
 restructuring effects, 143
 system, 143
 variables or variants, 36, 44, 146, 224, 272
 variation, 94, 141–2, 145
 phonology, 12–13, 94, 137–9, 253, 286, 301
 pidgin, 61, 64–7, 277
 pilot study, 66–7, 70–1, 145, 307
 pitch accents, 128–9
 pitch track, 129, 132
 Pittsburghese, 30, 291
 place of articulation, 125, 141
 plosive lenition, 141
 plotting (of vowels), 123
 poetry, 218, 221–3, 225–6
 popular music, 302
 Portuguese, 198, 278
 positive correlation, 207
 potential variants, 159–60
 power, 79, 83, 178, 180, 190, 214, 231, 307
 Praat, 64–5, 67, 280
 pragmatics, 13
 pre fortis clipping, 139
 present perfect, 152, 157
 prestige, 195, 198, 277–8, 280–1
 priming, 142
 priming effects, 313
 principle of accountability, 151–2, 160
 principle of multiple causes, 12
 principle of quantitative modeling, 12
 probability, 153, 202, 204
 pronouns, 104, 112, 153, 190, 196, 200, 286
 proportional frequencies, 117
 proportions, 46, 252, 265, 281
 proposals, 223, 244
 prosody, 127, 134, 233
 prosodic analysis, 226
 prosodic factors, 257
 pseudonym, 38
 psycholinguistic studies, 9
 Publication of the American Dialect Society (PADS), 165
 push chains, 143

- qualitative, 9, 37, 39, 77, 87, 117, 152, 174, 185, 199, 232, 264, 297, 307, 316
 analysis, 77, 79, 109, 183, 185, 190, 316
 methods, 6, 76, 306
 quality (of data), 35, 52, 55, 130, 132, 182, 190–1, 250, 254, 256, 292, 314
 quantitative, 9–10, 12, 36, 54, 63, 117, 133, 160, 164–5, 174, 195, 200, 207, 209, 255, 264, 268, 270–1, 273, 281, 286, 297, 316
 analysis, 36, 38–9, 77, 82, 152, 161, 183, 185, 190, 195–6, 209, 269, 274
 measure, 139, 152, 207–8, 306
 methods, 9, 76, 266
 questionnaire, 37, 43–56, 165, 168, 170, 174, 249–50, 253–4, 256–8, 260, 268, 287, 308
 quotation paragraphs, 169
 quotations, 88, 169–75
 quotatives, 155, 157–9, 179

 racial discourse, 15
 random sample or sampling, 31, 78, 254, 266
 randomization, 66
 randomness, 35
 rankings, 45, 79
 rating scales, 46, 50, 52
 rating task, 63–65
 ratio, 196
 raw frequencies, 104, 117
 Rbrul, 38, 209
 reading passages, 36, 248, 251, 258, 279
 reading task, 140, 248
 real time, 100, 298
 Received Pronunciation (RP), 143–4
 recipient design, 238
 recording (video/audio/data), 10, 27, 33, 35–6, 65, 94, 110, 130, 132, 181–183, 190–1, 217, 221, 233, 242, 248, 250–1, 254, 256–8, 260, 272, 308–11, 314–15
 region, 14, 61, 67, 69–70, 72, 83, 86, 111, 121, 133, 156, 166–7, 199, 231, 252, 255–2, 264, 266, 270, 272–3, 317
 regional accents, 138, 298
 regional linguistic identities, 223
 regional variation, 26, 44
 regional vocabulary, 167, 253
 register(s), 97, 104, 291, 306, 309–10, 315

 relative clauses, 196–7, 201, 283
 relativizers, 196–9, 201
 reliable research, 295
 repertoire(s), 76, 89, 94–5, 97, 164, 215, 224, 226, 270–1, 277–8, 296, 316
 representative sample, 265–6
 request forms, 235, 237
 requests, 36, 235, 237, 243
 research goals, 9, 55, 263, 268, 272
 research proposal, 29
 research question(s), 8–10, 12–14, 17, 20, 27, 33, 43, 54–5, 59–60, 63–5, 69, 78–9, 110–12, 177, 180
 resonances, 120–1
 respondents, 43–56, 87, 256
 rhyme, 142, 221
 rhythm, 128, 134, 225, 257
 rights and obligations, 278, 285
 Russian, 150–1, 155–6
 R-values, 207

 saliency, 121
 Samaná English, 153
 sample, 26, 30–3, 37–40, 46, 52, 55, 64–7, 69–70, 79, 85, 87–8, 104, 109–10, 133, 156, 168, 172–3, 200–2, 204–5, 208, 224–5, 227–8, 233, 236, 240, 243, 248–51, 253–7, 265–6, 269, 273
 sample size, 30, 67, 70, 208, 233, 256
 sampling, 31, 43, 78–9, 110, 121, 202, 250–2, 256, 263, 265
 scattergram, 208
 scope (of research), 20, 26, 30, 49, 83, 150, 165–71, 175, 215, 217, 273, 277
 Scottish English, 129
 screen data, 76–80
 second language, 156–7, 214, 281–2
 see also L2
 second-language acquisition, 15
 semantic
 approach, 152
 differential questions, 46, 253
 function, 152
 semantics, 170
 sequence, 51, 55, 83, 186, 189, 223, 227, 231, 238–40, 297
 sequential consequences, 238–9
 setting, 12, 156, 168–70, 181, 232–3, 235–7, 240, 242, 244, 247, 292–3, 308, 317

- seventeenth century, 95, 98, 101, 103–4
 sex differences, 110, 117
 sexual orientation, 14–15, 17
 Sheng, 288
 Shona, 277
 short front vowel shift, 143–4
 sibilants, 126
 sign language, 13
 signal processing, 120
 Singapore English, 158
 sixteenth century, 97–100, 104
 snowball method, 31
 social actors, 77, 215, 295–6, 300
 social categories, 10, 15, 16, 31, 152–3, 179, 216
 social characteristics, 26, 56, 61, 67, 70, 72, 195, 198, 288, 292
 social class, 13, 15, 20, 49, 52, 72, 82, 110–11, 116–17, 197–9, 202, 207, 249, 266, 291, 299, 301–2
 socioeconomic class, 12, 199, 267
 socioeconomic groups, 264, 267
 socioeconomic status, 30
 social constructions, 14
 social dialectologists, 179
 social discrimination, 299
 social evaluation, 226
 social factor(s), 11–15, 16, 27–8, 30–1, 60, 63, 100, 137, 141, 160, 192, 263, 306
 social group(s) or groupings, 10, 16–18, 30, 94, 100, 108, 111, 116, 142, 156, 161, 179, 252, 292–3, 297, 306, 309
 social information, 26, 37, 58–61, 67
 social interaction, 178, 231–2, 236–7, 243, 292, 294, 296–7, 300
 social meaning(s), 14–15, 16–19, 44, 67, 77, 133, 169, 179, 182–3, 191–2, 270–1, 273, 292–5, 298
 sociolinguistic meaning, 28
 social network(s), 16, 30–2, 38, 49, 81, 103, 161, 176, 179, 258, 263, 266–70, 272–4, 281
 social norms, 18, 267
 sociolinguistic norms, 95, 283
 social practices, 32, 273
 social psychology, 16, 164
 social research, 10, 14
 social status, 99, 103–4, 202, 312
 social stratification, 154, 207
 social structures, 120
 social styles, 291, 299
 social variables, 10, 49, 77, 199, 266, 269
 socially stigmatized variants, 265
 sociocultural roles, 216
 sociolinguistic
 competence, 305–7, 316
 data, 75, 255
 diversity, 298
 interview, 26, 33–4, 36, 279, 281–2
 methods, 76, 95, 97
 research, 9, 10, 14, 16–18, 26, 28–9, 31, 75–6, 94, 103, 108, 171, 207, 209, 263, 277, 281, 295, 299
 variation, 13–14, 82, 139, 272
 variationists, 10–11
 sociolinguistics, 9, 12–14, 17–20, 33–4, 43–4, 61, 65, 71, 77, 82, 94, 100, 103, 119–21, 137, 151–2, 164, 171, 195, 206, 215, 231–2, 251, 253, 266–8, 277, 279–80, 282, 291–2, 295–6, 301–2, 316
 sociology, 8, 12, 16, 152, 179, 231, 277
 sociological, 16, 151, 167, 169, 231
 sociology of language, 152, 164, 277
 sociophonetic(s), 17, 120–1, 137, 139, 142, 280
 solidarity, 79, 188, 285
 sound change, 120, 137, 253
 sound waves, 121
 South African English, 138, 279, 282–3
 South African Vernacular English, 279
 Southern Vowel Shift, 263, 272
 space, 15, 20, 27, 49, 51, 75, 82–5, 87–8, 97, 114, 120, 130, 133, 143–4, 216, 226, 233, 247, 256, 258–9, 296, 308–9
 Spanish, 13, 30, 31, 33, 87, 128–9
 spatial dialectology, 251
 speaking rate, 128
 spectrogram(s), 17, 120–3, 125–6, 129–30, 133
 spectrographs, 120
 speech, 110, 156
 speech acts, 180, 183, 237
 speech community, 11, 13, 16–18, 25, 27, 29–34, 39, 80, 82–3, 88, 95, 121, 133, 139–40, 145–7, 157, 195, 203–5, 209, 217, 226, 228, 231, 250–1, 257, 262–7, 269–74, 278–9, 283–4, 305–6
 speech genres, 223, 291, 294
 speech perception, 59, 62, 121
 speech processing, 67
 speech production, 59, 63, 69, 121, 306
 spelling, 80–1, 98–9, 104, 171, 224, 298

- stance(s), 50, 88, 179, 216, 224, 226–7, 299, 302, 313
- standard, 44, 48, 94–5, 138, 151, 248, 291, 299, 302, 306
- standard English, 94, 157, 197
- standardization, 94–5
- standardized, 224
- statistical
- analysis, 55, 63, 266
 - methods, 200, 266
 - modeling, 208
 - significance, 201–2
 - significant, 71, 109, 112, 202, 267
 - techniques, 53
 - tests, 10, 202
- statistics, 56, 71, 78, 195, 199, 201, 209
- status (i.e., social status), 30, 96, 99, 103–4, 202, 220, 224, 269, 283, 285, 291, 312
- stereotypes, 40, 61, 85, 298, 301
- stops, 104, 125–6, 133–4, 139, 141, 218, 259, 297
- stratified sample, 31, 255
- /str/ clusters, 126
- stress-timed or stress timing, 128
- strict comparability, 257–8
- style(s), 14, 16–18, 20, 28, 32, 34, 36, 50, 79–80, 88, 154, 175, 186–9, 216, 231, 279, 282, 290–302, 306
- style shifting, 264, 277, 265–96
- stylistic variation, 291, 303
- subject pool, 62
- subject pro-drop, 158, 161
- subjects
- grammatical, 158, 198, 311–12, 314, 316
 - participants, 61–2, 64, 66–7, 69–71, 157, 201, 295
 - see also* participant
- substrate influence, 126
- supra-local, 271
- Survey of English Dialects (SED), 249–50, 256–7
- survey(s), 9–10, 18, 27, 31, 43–4, 51–2, 54, 83–4, 165, 170, 248–9, 250, 252, 254–5, 259–60, 297, 302
- syllable boundary, 142
- syllable coda, 143
- syllable structure effects, 139, 142
- syllable-initial, 138, 145
- syllable-timed, 128
- synchronic, 10–11, 153–4, 160
- syntactic variation, 150–1
- tag questions, 120, 179, 293
- tagging, 108, 110, 117
- talk-in-interaction, 179, 232
- target population, 43, 52, 55
- target-specific stimuli, 311
- teacher evaluation, 225
- teamwork, 185
- telephone study or survey, 254
- tensing, 140–1
- texting, 38, 75, 216
- theoretical approaches, 227, 297
- theoretical models, 228
- theories of interaction, 285
- theory, 12, 15, 27, 111, 195, 198, 200, 226, 228, 296, 297
- th-fronting, 141–2
- third-wave sociolinguistics, 16–18
- tokens, 36–7, 62–3, 65–70, 123–4, 130–3, 139–41, 146, 159–60, 196, 199–200, 203–6, 257–8, 281, 311–12
- tone, 120, 128–9, 182–3, 187, 189–90, 281
- Tone and Break Index (ToBI), 128
- topicalization, 283
- transcribe, 31, 35, 38, 84, 110, 115, 117, 128, 175, 181–2, 190–2, 233–4, 236, 243, 250, 282, 315
- transcription, 84, 180, 182–4, 191, 227, 233, 244, 248, 250, 298, 309, 315
- translation(s), 8, 248, 285, 287–8
- triangulate or triangulation, 62, 191, 217
- Trudgill, Peter, 56, 249, 252, 255, 258, 267
- Tsonga, 282
- Tswana, 282–3, 285–6
- t-test, 206
- turn(s), 75, 178, 184, 232–8, 243, 317
- turn design, 237–8, 240
- turn taking, 76, 228, 238, 317
- twentieth century, 16, 26, 143, 160, 247, 250, 252, 257, 263–4
- upper-class, 161, 195, 265, 301–2
- urbanization, 255, 282
- variability, 12–13, 48, 54, 68, 143, 152, 255
- variable rule(s), 12, 15, 153, 209, 306
- variable(s), 10–12, 14–18, 20, 27–8, 35–6, 40, 44–6, 49, 53, 56, 59–64, 70, 77, 82, 86, 88, 97, 101, 111, 120–1, 125–7, 133, 137–47, 151–6, 159–60, 196–200, 202–9, 251–2, 254–5, 257–8, 263–4, 266, 268–74, 279, 281, 305–9, 315

- variant(s), 61, 64, 80, 98–9, 101, 134,
138–40, 145, 147, 151, 154–5, 160,
171, 203–4, 217, 224, 252, 267–8,
270, 306
- variation
 see language or linguistic variation;
 sociolinguistic variation
- variational pragmatics, 13
- variationist(s), 10–14, 16, 26, 28, 76, 95,
120, 139, 150–1, 154, 231, 179,
252, 255, 257, 268, 287
- variationist analysis, 76, 257
- variationist dialectology, 256
- variationist methodology, 13
- variationist sociolinguistics, 100, 151, 253,
277, 279, 282
- varieties of English, 128, 137–8, 142–3,
158–60, 316
- velar pinch, 139
- velarized, 123, 125, 143
- Venda, 282
- vernacular, 8, 12, 26, 33, 153, 156, 198,
249–50, 254, 268, 277–9, 281–2,
284, 291, 293, 297, 302
 speech, 279, 302
- vocal fold(s), 120, 121, 125
- vocal tract, 63, 120, 121
- voice, 46, 52, 59, 61, 64–7, 70, 110, 133,
178, 182–3, 190, 199, 217, 224,
226, 247–8, 250, 294, 298, 301–2,
312
- voiced or voicing, 126, 138–41, 144, 146
- voiceless, 126, 138–9, 141, 144
- vowel(s), 11–12, 16–17, 20, 36, 63, 68–70,
120–6, 128–33, 137–45, 147, 179,
199–200, 206–7, 253–4, 257, 263–4,
270–2, 280–1
 analysis, 120, 123
- Warlpiri, 310–11, 316
- web-based surveys, 10, 170
- Welsh English, 291, 296
- wb-* forms, 196–7
- within-subjects design, 64, 67
- word frequency, 101, 115
- word list(s), 27, 36, 99, 167–8, 170, 174,
248, 251, 255, 258, 287
- working class (WC), 84, 141, 154,
195–8, 202–3, 205, 267, 271,
273, 284
- workplace(s), 180, 183, 185
 culture, 185–7
 humor, 182
 settings, 235, 237, 243
 talk, 180–1
 teams, 185–7
- written evidence, 94
- written language, 75–8, 82, 94, 155, 216
- x-axis, 121, 127
- Xhosa, 280
- y-axis, 121, 127
- YouTube, 88, 170
- Zulu, 277–82