

# John Benjamins Publishing Company



This is a contribution from Sign Language & Linguistics 22:1  
© 2019. John Benjamins Publishing Company

This electronic file may not be altered in any way.

The author(s) of this article is/are permitted to use this PDF file to generate printed copies to be used by way of offprints, for their personal use only.

Permission is granted by the publishers to post this file on a closed server which is accessible only to members (students and faculty) of the author's/s' institute. It is not permitted to post this PDF on the internet, or to share it on sites such as Mendeley, ResearchGate, Academia.edu.

Please see our rights policy on <https://benjamins.com/content/customers/rights>

For any other use of this material prior written permission should be obtained from the publishers or through the Copyright Clearance Center (for USA: [www.copyright.com](http://www.copyright.com)).

Please contact [rights@benjamins.nl](mailto:rights@benjamins.nl) or consult our website: [www.benjamins.com](http://www.benjamins.com)

**Eleni Orfanidou, Bencie Woll & Gary Morgan, eds.** *Research methods in sign language studies: A practical guide*. Hoboken: Wiley-Blackwell, 2015. xii + 372 pp. € 81.30 ISBN 978-1-118-27141-4 hardbound € 35.00/ 978-1-118-27142-1 paperback € 31.99/ 978-1-118-34596-2 e-book.

**Reviewed by Corrine Occhino and Lynn Hou**  
(Rochester Institute of Technology | University of California,  
Santa Barbara)

Sign language research began in earnest in the 1970s, with individual treatises describing formal properties of sign languages for the first time. In subsequent decades, the field has diversified, with a remarkable number of scholars working across an array of methodologies, from typological language documentation to neurolinguistics. Yet, until now, there has been no attempt to assemble these methodologies into a single textbook, offering guidelines for conducting research on sign languages. With this edited volume, Orfanidou, Woll, and Morgan have thankfully filled this gap. The editors have invited deaf and hearing researchers from a range of disciplines to write on topics related to methodologies within their areas of specialization. With 19 chapters, each dedicated to a different methodology, this book is a much-needed addition to the fields of sign language studies, deaf studies, and linguistics, psychology, and neuroscience more generally.

Researchers interested in conducting studies on sign languages or in learning more about the range of methods used to study sign languages, will be pleased to find an easy to use, well organized guide. The book is divided into five content sections: *Part I – Collecting data WITH the Deaf community*, *Part II – Different ways of collecting sign language data*, *Part III – Collecting linguistic data on sign languages*, *Part IV – Collecting cognitive data on sign languages*, and *Part V – Collecting brain data on sign languages*. Each section is comprised of three to six aptly named chapters, which makes identifying relevant topics easy for the reader. Each chapter opens with a short overview of the text, helping to situate the reader, followed by a treatise on the relevant methodological overview, and concludes with a helpful list of suggested readings and references.

## Part I. Collecting data WITH the Deaf community (3 chapters)

The first three chapters of the book provide an excellent model for working in and, as highlighted by the capitalization in the title, *with* the Deaf community. Part I begins with a chapter by Jenny L. Singleton, Amber J. Martin, and Gary Morgan, emphasizing “Deaf-friendly” approaches to research with the Deaf community. Thomas E. Allen then discusses appropriate frameworks in Chapter 2, putting the focus on linguistic and cultural aspects of sign language and Deaf signers. The last chapter of Part I, by Robert Adam, addresses the importance of the inclusion of the Deaf community in ongoing scientific discussions through public engagement.

### Chapter 1. Ethics, Deaf-friendly research, and good practice when studying sign languages

Jenny L. Singleton, Amber J. Martin and Gary Morgan

It is only fitting that a guide on research methods in sign language studies starts with a chapter about doing community-engaged research *with* deaf people as the most ethical approach to researching them, their bodies, languages, and communities. Singleton, Martin, and Morgan’s chapter points out that the traditional model of sign language research has been largely based on theoretical and discipline-specific goals related to Deaf education reform, sign language linguistics, or psycholinguistics. These goals do not necessarily represent the best interests of Deaf communities nor do they benefit these communities. The authors delve into what would constitute Deaf-friendly research methods, exploring ethical considerations for research in developing countries and establishing good practices in field research (some of these guidelines are echoed in Chapter 3). Although these guidelines run counter to traditional models of research, they have tremendous potential to promote better science and more sustainable research programs as well as create space for future Deaf scholars. The push to conduct community-engaged research which respects and includes the needs and interests of the community is an important evolution within the greater scientific community. This chapter is a must-read for anyone working within deaf communities.

### Chapter 2. The Deaf community as a “special linguistic demographic”: Diversity rather than disability as a framework for conducting research with individuals who are Deaf

Thomas E. Allen

Traditionally, population studies of deaf people have been framed from medical, rehabilitation, and normative-based models, and these models have led to some

uninformed assumptions and overgeneralizations in research. Allen lays out a compelling argument for reframing deaf people as a “special linguistic demographic” group in which their differences represent multiple facets of cultural, linguistic, and biological diversity. Focusing on the linguistic and cultural factors can inform a knowledgeable base for forming meaningful groups (or even subgroups) and developing empirically grounded research questions. The chapter is balanced, with a concise literature review, and offers several helpful suggestions for conducting more informed research with Deaf communities. Allen suggests, for example, to carefully define meaningful subgroups within the population, focusing on relevant background characteristics of individuals within the groups. The suggestions found in this chapter can be extended to other academic disciplines such as psychology, education, and neuroscience and are recommended as a must-read for those who are unfamiliar with applying a linguistic or culture frame to their work with Deaf populations.

### Chapter 3. Dissemination and transfer of knowledge to the Deaf community

Robert Adam

This chapter is an extension of the discussion in Chapter 1 about researchers giving back to Deaf communities and disseminating their research findings to them. Adam introduces the public engagement process to talk about the many ways researchers and Deaf communities could engage with one another. Adam uses the Deafness Cognition and Language Research Centre (DCAL), based at the University College of London in the UK, as a model of good practice for knowledge transfer. The center hosts open houses and road show events to bring knowledge into various Deaf communities in the U.K. One such example is “The Deaf Open Day” hosted by DCAL, which included presentations in BSL and hands-on interactive sessions where researchers described neuroscientific, psycholinguistic, sociolinguistic, and interpreting research to the Deaf community. The big turnouts and positive reactions from the community have enabled Deaf and hearing researchers from DCAL and other research groups to collaborate, hosting additional events, which have led to empowering collaborations between researchers and Deaf communities.

## Part II. Different ways of collecting sign language data (3 chapters)

The second section of this book illuminates the technical logistics of documenting and describing sign languages. Chapters by Pamela Perniss, Onno Crasborn, and Martha Tyrone cover the technical details needed for producing video recordings,

using annotation software, and instrumented techniques, as well as annotating and analyzing of the data collected using these methods. The authors in this section condense technical topics into easily digestible chunks that any novice will be able to navigate, while still including best practices and state-of-the-art methodologies for more seasoned researchers.

#### Chapter 4. Collecting and analyzing sign language data: Video requirements and use of annotation software

Pamela Perniss

When it comes to the nuts and bolts of collecting and analyzing sign language data with the goal of analyzing linguistic structure, one needs to know how to obtain good quality video data that can be analyzed and what to annotate. This can be a daunting process for first-timers, but Perniss lays out an accessible guide for making and managing video recordings and creating linguistic annotations with available software. Covered in this chapter are the more general technical logistics of video recording, such as setting up video cameras and using them properly, identifying optimal settings and techniques for filming, and maintaining and managing video data as accessible archives. Also covered are annotation basics for ELAN (<https://tla.mpi.nl/tools/tltools/elan>), a popular software for sign language data annotation developed by the Max Planck Institute for Psycholinguistics, The Language Archive, Nijmegen, The Netherlands. Perniss also offers a helpful comparison between ELAN and two other commercially available software programs, Anvil (<http://www.anvil-software.org>) and iLex (<https://www.sign-lang.uni-hamburg.de/iLex>). Novice researchers will find this chapter useful for planning out their data collection and analysis in laboratory settings and other indoor environments, while more experienced researchers will find it to be an excellent refresher for best practices.

#### Chapter 5. Transcription and notation methods

Onno A. Crasborn

Proper transcription and notation methods for sign language research may be one of the largest stumbling blocks new researchers face when trying to begin research programs with sign languages. In Chapter 5, Crasborn discusses the ways in which multimodal annotation tools can help researchers with time-linked video to text transcriptions. Like the chapter before by Perniss, Crasborn uses ELAN, a freely available annotation software, for his tutorial. Phonetic transcription of sign languages requires complicated orthographies developed to capture phonetic properties of sign languages. Despite many attempts at orthographies, Crasborn points out that the majority of annotation occurs at the lexical level

by way of “glossing.” Standardization of annotations, Crasborn suggests, is paramount if we intend to be able to compare data across languages, and perhaps more importantly, if we intend to use computational software to “read” the data, especially for larger corpora. Crasborn closes the chapter looking ahead to the future of computer-assisted annotation, which will likely include computer vision developments allowing computers to “parse” signs in a manner similar to automatic speech recognition.

## Chapter 6. Instrumented measures of sign production and perception

Martha E. Tyrone

In Chapter 6, Tyrone outlines the reasons why producing detailed and objective phonetic descriptions of sign languages has proven to be illusive. A basic entry into the world of instrumented techniques, including motion capture, data gloves, and eye-tracking, shows readers how these methods allow for precise measurements of the body in 3-dimensional space. Tyrone demonstrates how these methods provide quantitative measurements that can be used for detailed phonetic descriptions and can be used as the substrate for programming of automated sign recognition systems. Normalized data from these methods are scarce, and making comparisons across signers and sign languages is difficult. Tyrone, therefore, builds a convincing case for the use of instrumented methods in sign language research, arguing that these methods allow for more accurate measures of production and perception, more meaningful cross-linguistic comparisons, and the development of phonetic descriptions of sign languages akin to the acoustic phonetic descriptions of spoken languages.

## Part III. Collecting linguistic data on sign languages (6 chapters)

Section three of this book is the most extensive, with six chapters, each concerned with different methodology used for collecting linguistic data for sign languages. In Chapter 7, Victoria Nyst outlines best practices for conducting linguistic field work on sign languages. In Chapter 8, Rachel Channon unpacks the minimum considerations a researcher must consider for studying the formal properties of signs. Chapter 9, by Carol A. Padden, discusses effective use of materials and methods for data elicitation across diverse groups of speakers, hearing gesturers, and signers across different languages. Chapters 10 and 11 focus on documentary and corpus approaches, and typological sign language research, respectively. In Chapter 10, Jordan Fenlon, Adam Schembri, Trevor Johnston, and Kearsy Cormier describe the efficacy and importance of corpus research in sign lan-

guages, while in Chapter 11, Nick Palfreyman, Keiko Sagara, and Ulrike Zeshan invite researchers to extend their research across languages to make meaningful connections both cross-modally and cross-linguistically. This excellent section concludes with a worthwhile chapter by Joseph C. Hill on the challenges associated with sociolinguistic research in Deaf communities. Hill explains the social characteristics of Deaf communities, offering helpful strategies for addressing methodological challenges, as well as considerations for future studies.

## Chapter 7. Sign language fieldwork

Victoria Nyst

Doing linguistic fieldwork on lesser-studied sign language varieties used in rural, small-scale signing communities presents unique challenges that do not generally arise for national, Deaf community-based sign languages and many spoken languages. Nyst catalogues many practical, interpersonal, ethical, and technical issues based on her many years of fieldwork on urban and rural African sign languages and on extensive experience collaborating with local deaf and hearing community members. While there is some overlap between Chapters 1, 3, 4, and 5 with respect to the logistics of collecting and analyzing elicited and naturalistic data, and appropriate research practices for working with Deaf communities, Chapter 7 focuses on the adaptations necessary for translating these guidelines into practice in rural signing communities. One example is the absence of an educational institution for the deaf in these signing communities where deaf signers in these contexts are likely to be non-literate, requiring the researcher to take a predominantly monolingual approach to data collection. Although space concerns prevent Nyst from delving into many of these issues in depth, this chapter is an excellent starting point for those who are planning to do sign language fieldwork.

## Chapter 8. Research methods for studying the form of signs

Rachel Channon

In Chapter 8, Channon walks the researcher through a step-by-step process, providing a checklist of sorts, for setting up a research project to investigate formal properties of signs, specifically targeting phonetics, iconicity, prosody and phonology. Channon begins with theoretical considerations that may motivate or constrain the research question, including features, hierarchical structure and feature dependencies, temporal sequences and over- and undergeneralization. She discusses the differences between elicited and natural data and offers considerations for recruiting signing participants for collecting both types of data. Channon walks the researcher through determining necessary equipment, and describes the utility of using preconstructed elicitation materials such as those used with

SignTyp2 (<https://signtyp.uconn.edu/>), a multi-language data collection project which includes 1,000 concepts, available for use from the University of Connecticut. Channon differentiates between transcription, which should be bundled and memorable, and coding, which should be unbundled and understandable. For example, Channon points out that while “F” is used in transcription to represent any handshape with the same general hand configuration, but that in a coding system, “F” would be differentiated into individual symbols delineating extended fingers, thumb contact, etc. This chapter may be of interest to anyone interested in collecting data to investigate formal properties of signs.

## Chapter 9. Methods of research on sign language grammars

Carol Padden

Investigating the grammar of a sign language can be tricky, and reliance on deaf signers from varied cultural backgrounds and experiences with literacy can complicate the matter. Padden, drawing on her experience of working in different parts of the world, from metropolitan U.S. to rural Israel, offers some tried-and-true visual elicitation methods and communicative tasks that can be used with deaf signers in rural signing communities and large Deaf communities. She focuses on four linguistic phenomena: (i) basic vocabulary, (ii) lexicon studies, (iii) verb classification and grammatical roles, and (iv) sentence types and discourse structure. Pictures of culturally appropriate objects and videos of intransitive and transitive actions are the most common elicitation stimuli for lexical comparison within and across different signer groups. A classic example is the investigation of basic word order and grammatical roles in Al-Sayyid Bedouin Sign Language using video clips featuring intransitive and transitive actions. Signers are instructed to describe an action seen in a video clip to their interlocutors, who in turn are instructed to choose the photo that best matches the description from a set of photos. This chapter complements Chapter 7 nicely, as it adds the discussion on methods of elicited data collection.

## Chapter 10. Documentary and corpus approaches to sign language research

Jordan Fenlon, Adam Schembri, Trevor Johnston and Kearsy Cormier

Corpus-based approaches to sign language research are relatively new but rapidly developing. Drawing from their extensive experience developing Australian Sign Language (Auslan) and British Sign Language (BSL) corpora, Fenlon, Schembri, Johnston, and Cormier offer a concise discussion of key aspects of the methodology for developing a sign language corpus. They point out how the design of sign language corpora differs from that of spoken language corpora. One difference is the labor-intensive stage of linguistic annotation of signs, which is fur-



ther compounded by the lack of a widely accepted and shared writing system for sign languages. Another difference is the visual-spatial modality of sign languages; it is not possible to record signs without videotaping the participants' faces and bodies. The authors also write about the logistics of data collection with respect to identifying and recruiting different social groups of native and near-native deaf signing participants in concentrated regions, and obtaining different genres types. One suggestion concerns the practice of hiring local members, representatives of regional Deaf communities in concentrated urban areas, for assisting with the process of participant recruitment, filming and dissemination of research findings. The close liaison with Deaf communities is a good example of the community-engaged research, described in Chapters 1, 3, and 12.

### Chapter 11. Methods in carrying out language typological research

Nick Palfreyman, Keiko Sagara and Ulrike Zeshan

Cross-linguistic or typological studies of sign languages – sign language typology – is another underdeveloped area of sign language research, and the inaccessibility of sign language data to spoken language linguists and the lack of knowledge of appropriate methodologies for investigating sign language typology are legitimate obstacles. Palfreyman, Sagara, and Zeshan use their past research projects to tackle such methodological challenges by explaining how to choose an appropriate domain of study and identify parameters of variation within that domain and creative ways of collecting data such as questionnaires and elicitation materials in absence of published reference grammars and fully annotated sign language corpora. They suggest that reviewing published studies on both signed and spoken languages is a good starting point for identifying domains as well as for choosing a domain that has been already described and documented in spoken languages. A classic domain is negation and the parameters of variation within the domain: one examines negation from a spoken language typological perspective, collects systematic sign language data, and revises the initial parameters. This leads the authors to discuss the development of two typological frameworks: sign linguistic typology and cross-modal typology, of which the latter aims to uncover universal tendencies in both spoken and signed languages.

### Chapter 12. Data collection in sociolinguistics

Joseph C. Hill

Working with sign languages has its share of challenges related to participant recruitment, data collection, and data presentation when investigating topics such as variation, multilingualism, and language contact; these challenges are echoed in several other chapters. Hill's chapter closes out Part III by outlining the common

social, demographic, and linguistic characteristics representative of Deaf communities in metropolitan areas. Hill illuminates how these characteristics function as external constraints that may be correlated with linguistic variation (internal constraint) in language communities. Locating a targeted group of signers can be difficult, but Hill recommends hiring local deaf community members who serve as gatekeepers to their community to assist with recruitment. This method has been used in sign language projects such as the Black American Sign Language (BASL) Project. Another challenge is sensitivity to the social characteristics of interviewers and their interlocutors. There is a known tendency for interviewees to switch sign language varieties (e.g., Black ASL to “standard” ASL) or even modalities (e.g., from signing to speaking) to accommodate interviewers. Hill recommends assigning an interviewer who shares similar social characteristics with the interviewees to minimize external influence for appropriate sociolinguistic interviews. The evidence-based recommendations for collecting appropriate sociolinguistic data are not to be underestimated.

#### **Part IV. Collecting cognitive data on sign languages (4 chapters)**

Section four introduces different methodologies used in language acquisition, psycholinguistics, and deaf education. The section opens with a chapter by Jill P. Morford, Brenda Nicodemus, and Erin Wilkinson on research methods in psycholinguistic investigations of sign language processing. Next, the chapter on bimodal bilingualism, written by Ronice Müller de Quadros, Deborah Chen Pichler, Diane Lillo-Martin, Carina Rebgello Cruz, Viola Kozak, Jeffrey Levi Palmer, Aline Lemos Pizzio, and Wanette Reynolds, discusses the challenges and solutions they have encountered in their Bibibi (Binational Bimodal Bilingual) project. The second half of Part IV focuses on acquisition and literacy as they relate to deaf children. In Chapter 15, Amy M. Lieberman and Rachel I. Mayberry review the field of sign language acquisition, including cross-sectional and longitudinal studies, while in Chapter 16, Fiona E. Kyle highlights reading and literacy development, mirroring some of the issues raised in the previous chapter.

#### **Chapter 13. Research methods in psycholinguistic investigations of sign language processing**

Jill P. Morford, Brenda Nicodemus and Erin Wilkinson

Morford, Nicodemus, and Wilkinson provide a thorough review of 61 psycholinguistic studies which cover a range of methods used to investigate sign language comprehension and production. Their review is sure to benefit both new and sea-

soned researchers looking to expand their understanding of sign language processing. The authors provide suggestions for participant and material selection before delving into topics of perception, lexical access, grammatical processing, and production. Each of these subsections provides a brief history of the methodology and traces the developments and innovations to experimental paradigms. Tables at the end of this chapter are an invaluable resource; presented in an easy to read, easy to use format, they outline the research questions, participant pools, methodologies, and important findings for each of the 61 studies reviewed. The authors also reveal some gaps in the literature, including the dominance of ASL, BSL and other European sign languages in psycholinguistic studies, signaling a lack of attention to sign languages with roots outside of European contexts, and a lack of studies on grammatical processing, noting the need for more studies above the level of the word. The authors close the chapter with a look toward innovative new paradigms which capitalize on the unique properties of visual languages.

#### Chapter 14. Methods in bimodal bilingualism research

Ronice Müller de Quadros, Deborah Chen Pichler, Diane Lillo-Martin, Carina Rebello Cruz, L. Viola Kozak, Jeffrey Levi Palmer, Aline Lemos Pizzio and Wanette Reynolds

The chapter by Müller de Quadros and colleagues provides innovative methods to studying the population referred to as CODAs (children of Deaf adults). The authors report on their ongoing Binational Bimodal Bilingual (Bibibi) project, which tracks CODAs learning English and ASL in the U.S., and Brazilian Portuguese and Libras (Brazilian Sign Language) in Brazil. Several currently available tests suitable for this population are discussed, including directions for test administration, technical considerations for camera use, as well as appropriate statistical analyses. The authors note unique challenges associated with the bimodal bilingual population, including their scattered geographical distribution. The “data collection fair” is a novel solution for efficient data collection, proposed and pioneered by the Bibibi project. These fairs consist of weekend data collection events, held in locations with known high density of individuals meeting the participation inclusion criteria. Data collection fairs allow for many children to be tested without the disruption of the school day. The authors close with a caveat that “data collection fairs” require extensive planning and can be expensive, but that the method will become more streamlined with future use.

#### Chapter 15. Studying sign language acquisition

Amy M. Lieberman and Rachel I. Mayberry

Studying child language acquisition of sign languages in the deaf population can shed light on the similarities and differences of the processes of signed and spoken acquisition with respect to language, modality, and acquisition. Yet, as Lieberman and Mayberry explain, the low incidence of early childhood deafness and the demographic heterogeneity of deaf children render the study of sign language acquisition uniquely challenging. The majority of deaf children are not exposed to a sign language from birth but anytime later in their lives, if ever. They may develop “home signs”, experience delayed language acquisition, acquire a sign language from non-native signing models, and/or acquire some spoken language through cochlear implants. Thus, their language development trajectories differ from those deaf children with deaf signing caregivers. The authors discuss various approaches to studying comprehension and production of sign languages, such as cross-sectional, longitudinal, and experimental, and also other approaches for measuring language acquisition through assessment instruments (e.g., an adaptation of the MacArthur-Bates Communicative Development Inventory for American Sign Language), naturalistic and elicited child language samples, and briefly, computerized texting, neuroimaging and eye-tracking techniques. In listing most of the approaches, the authors offer some advice for working around certain disadvantages that could allow researchers to succeed in their studies.

## Chapter 16. Research methods in studying reading and literacy development in Deaf children who sign

Fiona E. Kyle

Studying deaf children’s language acquisition of sign languages is difficult but studying acquisition of literacy skills of the orthographic system in the surrounding spoken language may be even a more thorny and complex inquiry. Kyle explains that the complexity surrounding literacy acquisition relates to the heterogeneity of deaf children’s linguistic backgrounds. The ideology of what is required to become a skilled reader and speller – namely, whether phonological coding, or mapping the orthography onto the sounds of the written system, is required is also involved. Kyle gives an overview of literacy acquisition studies, pointing out different methodologies and what exactly they test. Most studies have focused on alphabetic orthographies – English being the most extensively studied; studies involving logographic or syllabic orthographies are not mentioned. Kyle catalogues various methods used to investigate the development of reading ability: large-scale nationwide surveys of reading achievements, longitudinal studies of reading ability, and selected reading assessments, as well as various methodologies for investigating spelling ability, phonological coding, and other linguistic and cognitive skills used for reading. The chapter concludes with a summary of key

issues to consider when conducting literacy acquisition studies and offers some useful advice for working around these issues.

## **Part V. Collecting brain data on sign languages (3 chapters)**

The last section explores methodologies used in neuroscience and neuropsychological research. While arguably the most technical chapters in the guide, Cheryl M. Capek and Helen J. Neville (Chapter 17), Peter C. Hauser, David Quinto-Pozos, and Jenny L. Singleton (Chapter 18), and Tanja Denmark and Joanna Atkinson (Chapter 19), do a remarkable job of making the technical content of the final three chapters accessible for a general audience. Those who stand to gain the most from these final three chapters, however, may be individuals working in professional settings who need to complete diagnostic language testing, or general language assessments, of deaf children (or adults).

### **Chapter 17. Studying sign language processing using neuro-imaging**

Cheryl M. Capek and Helen J. Neville

Capek and Neville give an overview in Chapter 17 of four popular neuro-imaging techniques and their usefulness in investigating sign language processing. The authors describe the mechanisms underlying functional magnetic resonance imaging (fMRI), event-related potential (ERP), magnetoencephalography (MEG), and transcranial magnetic stimulation (TMS), in succession. What may be especially helpful to readers is that each technique is discussed in terms of possible types of experimental manipulations, appropriate participant groups, and communication considerations for testing with Deaf participants. Potential complications and limitations are also noted; for example, that fMRI, ERP, and MEG are better suited for perception tasks due to the necessary motor movement restriction during testing. TMS is discussed as a possible method for testing sign production, but this chapter does not discuss functional near-infrared spectroscopy (fNIRS), which, like fMRI, records hemodynamic responses, but which allows movement, making it useful for measuring sign production. The authors give helpful tips for participant inclusion criteria that will ensure as much homogeneity as possible, thereby providing less contamination due to variation, when running sensitive studies. Their chapter concludes with a reminder that investigations of sign language processing using a neuro-imaging lens have the potential to shed light on many outstanding topics in neuroscience.

## Chapter 18. Studying sign language disorders: Considering neuropsychological data

Peter C. Hauser, David Quinto-Pozos and Jenny L. Singleton

While the second to final chapter may be targeted toward clinical practitioners, who have a role in administering diagnostic language assessments, the chapter will also benefit researchers interested in typical and atypical language processing. Hauser, Quinto-Pozos, and Singleton walk readers through the necessary tools and tests for diagnosing a child with a suspected sign language disorder. They stress the importance of a process approach, including tests which separate general cognitive abilities and executive function from receptive and expressive language skills, as well as tests for attention to facial cue processing, visual-spatial processing, spatial memory, visual working memory, and physical and psychomotor skills. The problems associated with testing expressive and receptive language skills in this population are many, primarily due to the general lack of commercially available sign language assessment tools. Other important points of concern in the diagnosis of language disorders in Deaf population are the need for an interdisciplinary research team which includes fluent signers, preferably Deaf signers, or in cases where the research team is lacking signing skills, the inclusion of a Certified Deaf Interpreter (CDI). The chapter closes with a reminder that collaborations between sign language linguists and neuropsychologists are needed to enhance our understanding of sign language disorders in both native and non-native Deaf populations.

## Chapter 19. Using and developing language and cognitive assessments with Deaf signers

Tanya Denmark and Joanna Atkinson

In the final chapter, Denmark and Atkinson confront the need for more assessment tools designed for testing sign languages and deaf signers, a problem echoed from the previous chapter. Deaf signers are an extremely heterogeneous population but for many, English (in the American and British contexts) is often a second language. Denmark and Atkinson suggest special attention must be paid to the heterogeneity of the deaf population, noting that written language should not be used during the assessment of deaf signers. The authors review several sign language assessments, both translated or adapted from spoken languages, and specifically designed for sign languages. Each test is discussed in turn, including the intended constructs tested, the normative samples, and the tests' validity. While the authors note a steady increase in the development of assessments for sign languages and deaf signers, many of these tests still suffer from small sample sizes

and lack normative data. Recommendations for future directions include that test developers should be fluent in the sign language in which they are working, and understand Deaf culture, Deaf history, and Deaf education; and that research teams should be led by signers, to achieve the highest degree of linguistic and cultural validity.

### **A final note**

The book provides a comprehensive introduction to the ever-growing field of sign language research. As we read through the individual chapters, we were struck by the breadth and depth of topics covered by the book's authors. While the book covers a lot of methodological ground, it is of course impossible to include every method within a restricted set of pages. One shortcoming of the book is the exclusion of ethnographic methods for investigations of signers and sign languages. This exclusion leaves out the possibility of ethnographic research complementing educational, linguistic, psycholinguistic, and neuroscientific research. Scholars who plan to conduct ethnographic research on different deaf populations may be able to adopt and adapt some of the guidelines outlined for certain logistics of sign language data collection, but they will be left wanting more comprehensive resources. However, one of the major benefits of this collection is that the chapters are relatively theory neutral, tackling issues related to methodological concerns without couching them in terms of theory. This makes the book useful to formally, functionally, and cognitively oriented language researchers, alike. While not written like a textbook, this collection would make an excellent guide for a methods course focusing on sign language research. We also recommend this book for PhD or advanced undergraduate/master's level students who are interested in becoming sign language researchers. For sign language scholars, chapters written on topics related to one's own specialties may be too basic, though it may be worth refreshing your best practices guidelines. But for chapters on topics outside of one's own area of expertise, we found this book to offer a wonderful window into our colleagues' methodologies. It is hard to imagine the person who is interested in sign language research who would not benefit from this book.

### **Address for correspondence**

Corrine Occhino  
Assistant Research Professor  
NTID Center on Cognition and Language  
Rochester Institute of Technology  
Sebastian and Lenore Rosica Hall, 52 Lomb Memorial Drive  
Rochester, NY 14623-5604  
USA  
cokccl@rit.edu

### **Co-author information**

Lynn Hou  
Assistant Professor  
Department of Linguistics  
University of California, Santa Barbara  
lhou@linguistics.ucsb.edu