

*** pre-print**.

Whynot, L. (in press). Signed language interpreting and translation: Implications of modality, In Aline Ferreira and John W. Schwieter (Eds.), *Introduction to Translation and Interpreting Studies*. John Wiley & Sons.

Chapter 8

Signed language interpreting and translation: Implications of Modality

Lori Whynot

Objectives

- To understand how the visual modality and the unique nature of signed languages shapes the professional practice of signed language interpreting and translation.
- To learn about socio-cultural factors implicated in signed language interpreting and translation.
- To understand how signed language interpreting emerged and developed as a profession.
- To identify factors that create variation in signed language use and the impact on interpreting and translation.
- To recognize the importance of consumer/stakeholder involvement in signed language interpreting and translation.

8.1 Introduction

Interpreting and **translation** involves accurate and effective transfer of messages across two languages, between people who do not share a language. It is commonly thought that interpreters and translators work between written and **spoken languages**, which are produced using the vocal tract and perceived using the auditory system, and that interpreters and translators produce spoken messages and related written documents. However, in myriad locations around the world there are identified languages that function vibrantly in the visual mode –meaning they are produced using fine and gross movements of the fingers, hands, face, and body and are perceived through the eyes. It has only been since the mid-1950s or so that **signed languages** have been studied and described by linguists with evidence that they are bona fide languages; the field is evolving and advancing. Since that time, a deepening understanding of signed languages, along with the parallel emergence of professional **signed language interpreting** globally has continued to contribute to the way we think about languages and the about the professional task of effective message transfer.

Events in recent history and social life have drawn attention to signed languages, **Deaf**¹ people, and signed language interpreting. Deaf people are increasingly spotlighted in popular culture media such as movies and advertisements (Schmitt, 2017). During the fifteen months between March 2020 and June 2021, barely a day or a week passed without a regularly televised COVID pandemic update, broadcasting government leaders' press conferences across local television airwaves and internet streaming sites around the globe. Standing a socially distanced, six feet to the side of Governors, Mayors, Prime Ministers, and Presidents, or pictured in a small, embedded video box, television cameras captured a signed language interpreter working diligently to convey important information being shared regarding the coronavirus pandemic and response effort. Before the COVID pandemic, city, state, and national governments intermittently provided signed language interpreting services for televised emergency updates regarding natural disasters like hurricanes, floods, and fires. The controversy at Nelson Mandela's 2013 funeral, where a 'fake' unqualified interpreter was hired to interpret the internationally broadcasted ceremony, elevated into mainstream discourse across the globe an awareness of issues pertaining to demands for qualified signed language interpreters.

Signed language interpreting by nature is very much "on display", more so than its spoken language counterpart, and the visibility of **signed language interpreting** has dramatically risen in recent years— particularly during the global COVID crisis. Laws exist in many countries that mandate signed language access, which leads to increased societal inclusion and prominence of deaf individuals in entertainment, academia, business and government. Thus, there is a demand for effective, professional signed language interpreting. While it has been practiced in less noticed contexts for decades and centuries, a steady evolution of professional signed language interpreting expands and challenges traditional notions of interpreting and translation. Language in the visual mode brings complex socio-cultural implications that impact the practice and signed language interpreting presents unique factors that are distinct from the practice of spoken language interpreting and translation.

Reflection 1: Recall the first time you saw someone using a signed language. What was your initial reaction, your thoughts and feelings? How did you respond?

8.2 Signed language interpreting as highly visible practice

Signed languages incorporate movements of the body, hands, and face making it easily visible to interlocutors. Where spoken language interpreting can occur over a telephone line or through a closed loop microphone and headset, signed languages need to be visible for participants to understand the interaction. Spoken language interpreters typically render a whispered interpretation, or **chuchotage**, unobtrusively next to the consumer or through a headset. However, to be seen, signed language interpreters situate themselves in the middle of the action, typically across from the deaf participant(s) and next to a key speaker or near the main speaking attendees to remain in visual view of the signer in the setting (see Figure 8.1). It is therefore difficult to

¹ The use of lowercase *deaf* is a general reference to persons who are deaf or **hard of hearing**, whether they consider themselves culturally Deaf or not. In some literature, the capitalized term *Deaf* is used to denote individuals who primarily use a signed language as their first or preferred language and identify as members of a linguistic and cultural minority group of signers— a Deaf Community. When intending to refer to the linguistic-cultural group, I use *Deaf*, and *Deaf Community*, and use *deaf* to inclusively refer to the group in general terms.

ignore the interpreter's hand movements and accompanying range of dynamic facial expressions. Signed languages incorporate not only the hands, but also integrate a range of head, and facial movements that modify the language and message. Although they may appear to a naïve observer to express emotional information, eyebrow movements and head tilts provide information about sentence types – questions, statements, and conditionals (Baker, 1978; Baker-Shenk, 1983) Many movements of the lips and cheeks and eyes provide adjective or adverbial information, subject and object reference, as well as verb agreement –who is doing what (Reilly et al., 1990).

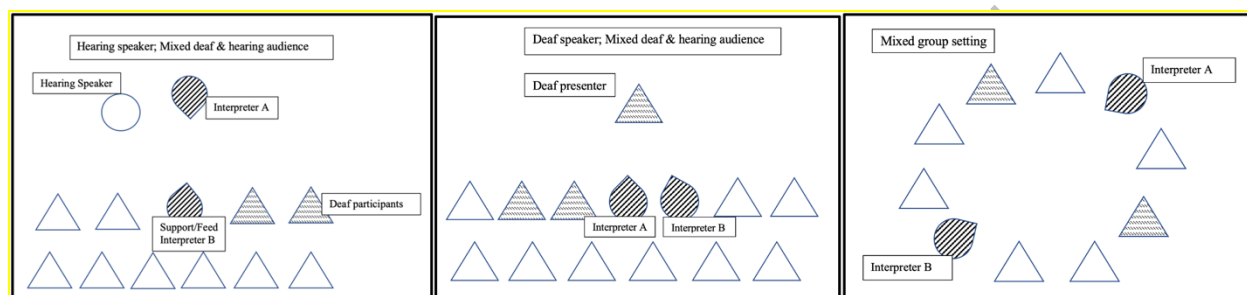


Figure 8.1. Positioning for optimal sight line of signed language interpreters in different settings.

The highly visible practice thus propels individual signed language interpreters into the spotlight. Venuti writes about the invisibility of the translator and the professional stance that translators maintain (Venuti, 2017). Working with a visual language poses the added complication of managing interpreter presence of self, or ones ‘role-space’ (Llewellyn-Jones & Lee, 2014). Too often, uninitiated **hearing**² people devote their curious attention to signed language interpreters, yet the important person in the interaction is a deaf individual trying to accomplish a crucial communicative task. Professional codes of ethics guide spoken and signed language interpreters in performing with impartiality, upholding confidential the contents of interpreted communications, and other ethical values (see Mellinger in this volume). Signed language interpreters will perform appropriately unobtrusively in their work. The professional manner that signed language interpreters display while managing their unavoidable visibility is tied closely to the ethical tenets that guide signed language interpreters and translators’ professional practice (Registry of Interpreters for the Deaf, 2005). Although the bulk of signed language interpreting is not widely broadcast on television, even in private settings signed language interpreters are more visible due to **language modality**.

8.3 Language in the visual mode: societal implications

Language in the visual mode implies sensory loss and leads to broad societal misconceptions about signed languages and about the individuals who use them. Social structures and cultural norms designed for auditory language create circumstances and demands surrounding the provision of signed language interpreting and translation. Signed language interpreting has evolved in social contexts where signed languages have not always been recognized or valued. The modality difference has profound implications that arise from the fact that we live in a world defined by and standardized around the ability to hear. Societally constructed concepts of normalcy and

² The term *hearing* is a common word/sign used in Deaf culture to refer to people who are not deaf.

desirability –referred to as **ableism** – is a hardship in deaf people’s lives, as well as in the lives of individuals who are **deafblind**– that is, they are both deaf and blind to varying degrees and may use a **tactile** form of a **signed language** (see section below on language variation). **Audism** is “the context of overt, covert, and aversive practices of discrimination” that operates “as a stratifying system of oppression” based on hearing ability or inability (Eckert & Rowley, 2013). Primacy of auditory language in society provides an undercurrent of factors that has implications for the signed language interpreting field and differentiates it from spoken language interpreting.

In a world where hearing is normalized and auditory spoken language is the standard, deafness is viewed as a disability. Nonetheless, it has been shown in many nations that Deaf Communities are organized around common values, norms, traditions, as well as a unifying multigenerational language, establishing them as cultural-linguistic minority communities. There is a shared, lived experience that all deaf individuals can relate to and which transcends national borders, although identifying as a Deaf person or coming to understand one’s “Deafhood” varies with individuals (Ladd, 2003). Making sense of one’s life through the eyes, rather than the ears, brings with it numerous benefits that have been described as ‘Deaf Gain’ (Bauman & Murray, 2009). Deaf Gain reframes ‘deaf’ as “a form of sensory and cognitive diversity that has the potential to contribute to the greater good of humanity” (p. 3.) and provides opportunities to explore human character (Bauman & Murray, 2010). However, at every turn, societal attempts to fix or ‘solve the problem’ of deafness abound. Inventions like cochlear implants, educational language policies that prioritize spoken language and lipreading over visual signed language, and gloves used to “automatically” render signed language into text– among many other efforts, create a context that marginalizes deaf, hard of hearing, and deafblind individuals and shapes the professional practice of interpreters who work with signed languages. These realities bring to bear a heavier responsibility to Deaf community members. Signed language interpreting upholds the civic rights of deaf persons to participate equally in society.

8.3.1 Deaf stakeholder involvement in signed language interpreting

Increased awareness of signed languages and deaf individuals in communities is due to popular culture television shows, movies, and even commercials that feature deaf people and others using signed language. The high visibility of signed language interpreters however creates a tension point that juxtaposes an historically invisible and marginalized status of deaf people in societies.

Interpreters and translators are ethically bound to perform impartially, yet there are factors that lead signed language interpreters to appear to be more closely aligned with deaf consumers than hearing consumers in the interactions we work. Deaf people are members of a protected class of disabled people - and viewed as such in many societies. Signed language interpreters are thus uniquely perceived, and it puts practitioners in a precarious position requiring fiduciary responsibility, performing impartially, and being trusted and trustworthy by deaf consumers. This “fractious interdependence” (Napier, 2001) poses complex ethical decision dilemmas that can be more complex than for spoken language interpreters and their consumers.

The discipline of Deaf Studies is distinct in many ways from disability studies, yet the value of ‘nothing about us, without us’ underpins the Deaf cultural view that deaf people (and disabled people) know what is best for themselves (Charlton, 1998). Hence, effective signed language

interpreting fosters positive Deaf Community stakeholder relations which in turn, builds consumer trustworthiness of signed language interpreters and translators. We will see later that signed language interpreting is interdependently connected to the Deaf community and involvement can be seen in historical evidence of bilingual deaf individuals who also perform interpreting service-see Section 8.6.2 regarding professional contribution of interpreters who are deaf.

8.4. Signed languages and interpreting: myths and attitudes

Myths that prevail about signed languages often influence perception of signed language interpreting in ways that spoken language interpreters do not experience. A key difference originates from widespread misconceptions about signed languages and attitudinal assumptions about the individuals who use them: deaf, deafblind and hard of hearing people. Noted above, users of signed languages are viewed by society as disabled or more pejoratively, they may be perceived as less intelligent. This incorrect assumption contributes to several misunderstandings that prevail about signed languages.

8.4.1. There are multiple signed languages

The term **signed language** calls attention to the fact that there are multiple world languages that are *signed* rather than *spoken*. It is estimated that 128 different signed languages are observed across numerous world communities (Eberhard, 2021). While not all have been verified, many naturally occurring and distinctly different signed languages are linguistically explored and described in the literature³ (Brentari, 2010).

Circumstances that are cultural, social, historical, political, and economic create separate, somewhat isolated populations of Deaf people who form community networks and distinct natural signed languages. Signed languages used by deaf people in their local communities are therefore rich, varied, and are mutually unintelligible from one another. This is true even when countries or regions share a national written and spoken language. Deaf people in the United States use American Sign Language (ASL) and in the United Kingdom they use British Sign Language (BSL), and although they may be able to understand written English they will not understand one another's signed language (Deuchar, 1984; Kyle et al., 1988). Further, many signed languages are related to one another through historical contact and branching, as exemplified by the broad influence of French Sign Language, (LSF) on ASL, Russian Sign Language (RSL), Dutch Sign Language (NGT), and others (Wittmann, 1991). As a result of natural language evolution and change, these historically related signed languages are not understood across their users. Even if they share some similarities due to the visual-spatial modality and shared articulators of fingers, hands, arms, face, and torso, they are separate languages that have their own rules for how the articulators put together the parts of signs- their phonology and morphology- to construct messages.

³ Signed languages increasingly have been linguistically documented and include, among many, Taiwan Sign Language (TSL), British Sign language (BSL), Chinese Sign language (CSL), Australian Sign language (Auslan), Sign Language of the Netherlands (NGT), Indo-Pakistani Sign Language (IPSL), American Sign language (ASL).

Established, national signed languages are referred to by name, such as American Sign language (ASL), which is used in North America, or Brazilian Sign language (LIBRAS), used in Brazil, or Sign Language of the Netherlands (NGT), used in the Netherlands. Interpreters and translators who work with signed languages are most often referenced in the literature generally as **signed language interpreters (SLIs)**. The nomenclature, ‘signed language interpreter’ can unwittingly contribute to the common misperception that there is one universal signed language. In the section above, we debunked that myth. SLIs may specify their two working languages between which they regularly interpret. In the United States, SLIs increasingly identify themselves as ‘ASL interpreters’ or ‘ASL-English interpreters’. Explicitly naming the signed and spoken languages we work between expresses the fact that at minimum SLIs work with *one* of the world's signed languages and *one* of the world’s spoken languages (and there are multilingual practitioners who have more than one signed or spoken language in their repertoire). It also conveys a message that we provide services not just for the deaf person in the interaction but also for the hearing person who does not know the signed language being used – that *both* interlocutors need the services of the interpreter to understand the important information being exchanged in the interaction.

SLIs work in both language directions – from a **source language** message by a **hearing** spoken language speaker into the **target language** message rendered into a signed language, or in the other direction – from a source message by a deaf signer into the target message rendered into a spoken language.

Contexts of signed language interpreting often involve 1:1 or small group interaction with turn-taking between interlocutors (Cokely, 2005a). Deaf individuals are often the receivers of interpreter-mediated information as a matter of accessibility and they may hold lesser positions of power in society (yet this is changing), therefore a large percentage of signed language interpreting work occurs in the direction from a source spoken language to target signed language. Deaf people do not passively participate in society, they make important contributions in many fields, thus SLIs must work effectively from a signed language into a spoken language.

As we embark on this topic, reflect on your own experience with signed languages and deaf people, and when you have seen SLIs at work.

Reflection 2: Do an online search for signed language videos from your country, where the content is interpreted into your spoken language. What impressions about the deaf signer(s) did you make based on what you heard? Consider the quality of interpretations and the impact they have on the listener’s view of the source speaker/signer. Write down some implications that come to mind.

8.4.2 Language status and signed language interpreting

People hold a variety of attitudes and beliefs about different languages. Some languages are held at a higher regard than others and may be considered more prestigious or less so, which relates to the social status and assumptions about the people who speak them.

Many of the world’s spoken languages have been recognized for hundreds if not thousands of years in some cases. However, it has been a mere 60 or so years since linguists first empirically studied and confirmed that signed languages are bona fide languages and demonstrate all features

of Hockett's criteria for language (Stokoe, 1960; 2005; Stokoe, 1960/2005; Tervoort, 1954). Signed language users are still struggling to advance recognition in many of the world's countries, some of which are highly developed nations.

Interpreters and translators who work between spoken languages do not have the added burden of responding to naïve questions to explain the language being translated. SLIs and Deaf people are often asked common questions that reflect myths about signed languages, most often surprised to learn that signed language is not universal. Furthermore, societal view of deafness as disability leads to the unique phenomenon of what Robinson terms, 'benevolence porn' (Robinson, 2021) that prompts the gushing reaction by hearing people when they are 'moved' by the benevolence or 'help' that SLIs provide by interpreting 'for the deaf' person. Spoken language interpreters are less likely to receive such a reaction. They can get right to the point of communicating ideas without any doubts about whether the language being used is valid, that they are not mere pantomime or simplistic "English on the hands" which brings us to another misconception.

8.4.3. Signed languages are not related to spoken languages

A widely held myth about signed languages is that they are related to spoken language of the broader community. However, signed languages are distinctly different from spoken languages on all linguistic levels— in their phonology, morphology, syntax, and semantics (Stokoe, 1960; 2005). In English, phonemes correspond to distinct sounds which can be written. For example, the word 'child'. it incorporates the following **phonemes** [tʃaɪld]. In ASL, the sign for the concept, *child*, has a corresponding sign (See 8.2). The phonemes that make up the ASL sign, CHILD, are spatial, not linear and are not written – except for a few sign transcription systems used by linguists (Crasborn, 2015). The **phonological parameters in signed languages** are 1) **handshape** 2) **palm orientation** 3) **location** 4) **movement** and 5) **non-manual features**. For the ASL sign meaning CHILD, the handshape is a flat palm with the 2) orientation facing downwards, articulated generally in the space in front of the signer at the middle of the torso, in a movement that bounces once or twice, moving slightly sideways. You see here the challenge of simply attempting to describe one singular sign using written English, and we haven't yet begun to describe how sentence structure or grammar works.

Figure 8.2
The ASL sign CHILD



(Hochgesang et al., 2017-2021)

Languages use single words or signs - lexical items - and they can function as nouns, verbs, prepositions, adjectives etc. However, the way that languages structure clauses and sentences vary. The way to convey the example English sentence given below will involve one or two signs, and **three-dimensional and simultaneous elements of a signed language** like ASL incorporate use of space and eye gaze, meaningful movements, which are expressed differently than how they are constructed in English. The building blocks or parameters in a signed language follow specific rules and maximize visual space in front of the signer to create clauses and prepositional phrases, such as to convey the idea of “walking over a hill” or a “child and dog searching for a ball”, and even adhere to constraints for which handshapes are permitted to depict the child or the dog walking.

To demonstrate the structural unrelatedness of ASL and English, the following two sentences have been transcribed below and a video clip is provided showing this utterance in ASL. [URL: <https://youtu.be/guFA2vkXqzw>]

1) *English:* The child and their dog walked over the hill to search for the ball.

ASL: **CHILD DOG LOOK-FOR BALL, SHAPE-OF-HILL, TWO-OF-THEM WALK-UP-OVER-DOWN.**

2) *English:* The teacher gave the student a book.

ASL: **BOOK, TEACHER GIVE-TO (point left) STUDENT**
Or **STUDENT (Point- left), TEACHER GIVE-TO (left side space)**

The examples provided here demonstrate structural differences between English and ASL – languages used widely in North America. It is important to note that for any community signed language and its co-existing spoken language, there is comparable structural unrelatedness.

Signed language communities thrive within broader, mainstream spoken language communities so it is languages are distinct in many ways. so it is inevitable that language contact occurs between signed and spoken languages (Lucas & Valli, 1989, 1992). However, this is true for many languages of the world, where contact effects occur when users of two different languages interact with some regularity. The fact that all studied signed languages co-exist within a broader spoken language results in unique patterns of language contact and variation and it impacts the work of signed language interpreters that differ from the work of spoken language interpreters. This will be elaborated upon in section

8.5 Language in the visual mode: language processing in the brain

Language can take varied forms- written, auditory and visual. Research on multi-modal communication and gesture provides fascinating insights into the way people communicate with not only their voices but with co-speech gestures that supplement the meaning intended by speakers. Speakers use words and phrases as linguistic information to communicate, and they use their hands, bodies, and facial expressions to modify and add additional meaning to their utterances. Signed languages also incorporate linguistic elements - lexical signs, phrases, and use of space to show reference- and they also incorporate a degree of gestural material such as pointing, depictive hand shapes and movements, and enactments that work in collaboration with linguistic signs. The visual modality provides a rich channel for conveying information, whether visible

language forms accompany spoken language, or they act in coordination with conventional signs as accompanying gestures and enactments. Visual languages operate in the brain in surprisingly similar ways to how spoken languages operate in the brain, with some unique characteristics.

Signed languages are processed in the same area of the brain as spoken languages, and because the input is visual – perception of complex movements of the eyes, face, hands, fingers, arms, head, and torso – this also engages the visual cortex. Brain studies offer insight into how Deaf signed language users and hearing spoken language users process language (Emmorey, 2002; Hickock et al., 1996; Poizner et al., 1987). Neuro-linguistic studies of language acquisition and processing show evidence with functional magnetic resonant imaging (fMRI) that signed languages activate parts of the brain responsible for vision- the visual cortex – and they activate the left hemispheric parts of the brain where language processing occurs. The key differences in brain activation reflect the modality-specific requirements of perceiving the message; auditory input activates auditory parts of the brain and visual input activates visual cortex. The linguistic aspects of both signed and spoken languages have been shown to operate in the same language processing part of the brain. The linguistic aspects of signed language and spoken language are perceived and processed in language - specific, posterior part of Wernicke's region (left hemisphere), with some activation in part of the right hemisphere. There is strong neuroimaging evidence that language production and planning for both signed language and spoken language typically involves Broca's area (front left) with observed left-hemisphere dominance (Campbell et al., 2008)

8.5.1 Cross-modal processing challenges: Cognition and interpreting

As demonstrated above, words and phrases used in a spoken language are more linear in a succession of verbalized utterances than the forms used in a signed language. Signed languages incorporate movements of the hands, the torso, the head, the face, the eyes and the fingers in a 3-dimensional way. The articulators are different between the source language in the target language; thus, efforts that SLIs make to render an interpretation demand visual acuity skills and thinking in visual, spatial ways transfer meaningful messages from a spoken, linear, and written language into a 3-dimensional visual gestural language, and vice versa.

It is widely known that there are complex processes that occur in the brain when people communicate. Theories about interpreting describe it as highly complex cognitive process involving multiple efforts and managing simultaneous tasks in the brain (Gile, 1995). It can also be more taxing to process visual languages for long periods of time than for spoken languages. One of the first studies in 1970s identified that SLIs reach a point of fatigue and begin to make impactful errors and omissions after roughly 25 minutes of interpreting signed language (Brasel, 1976), which can be impacted by the density of the source text. The literature is still emerging in signed language interpretation on the topic of cognitive fatigue in SLIs.

Any form of translation or interpretation presents situations when words, concepts, or signs do not have equivalents in the target language. This is often more pronounced in message transfer between spoken and signed languages because the vocabulary inventory for all signed languages studied so far are much smaller than in many of the world's commonly spoken languages. Spoken languages have a longer history of conventional use in social, political, and education systems.

Signed languages are relatively young languages, having developed since the establishment of formalized schools for deaf children during the 18th century. The number of shared, conventional sign forms vary in different national signed languages and wide variation of forms is a characteristic of signed languages (see section Sec 8.10).

8.5.2 Logistical impacts of modality- working with a visual language

There are unique decision points that SLIs manage regarding logistical placement. Spoken language interpreters position themselves either physically or via headset technology close to both interlocutors. SLIs position themselves near the speaking party yet at an optimal distance from the deaf participant to maximize the ability of the language to be clearly seen. The consumer must be able to see the interpreter rendering the target message as well as observe the spoken language user to assess the tone, bodily expressions, and communicative style used by the hearing person. SLIs therefore situate themselves close to or within visual sight line of the primary person who was talking.

In group settings, identifying speakers in fast-paced interactions creates additional demands. Hearing participants can identify who is speaking however, in order that the deaf or hard of hearing participant will effectively track the conversation or speakers, SLIs provide visual clues or signification about who is speaking. Additional information must be conveyed along with the message about *who* is speaking— either through pointing or by using eye gaze. In small group meetings it can be a useful strategy for the interpreter to move around a meeting table to better hear the speaker as well as position themselves close to and within the sightline of the speaker to enable the deaf participant more effective way to follow along the conversation.

8.6 The emergence of professional signed language interpreting: Community footings

Professional spoken language interpreting emerged and formalized through social, geopolitical relations and activities within and between powerful nations and less powerful nations via trade, courts, diplomatic efforts, colonizing strategies, and religious missionary teaching (Baigorri-Jalón, 2015; Gaiba, 1999). Signed language interpreting emerged primarily from within Deaf communities and between deaf people in interaction with their surrounding majority spoken language societies (Ball, 2007; Cokely, 2005b; Fant, 1990). Evidence of historical reference to ad hoc and formalized signed language interpreting is noted as early as 1324 in a British guardianship agreement (Leahy, 2016), in 1612 in the Ottoman Empire (Miles, 2000), in the 17th century in the US early colonies (Carty et al., 2009), and in the London courts in the 18th century (Stone & Woll, 2008).

Before signed language interpreting became a modern-day paid, professional practice it was a voluntary activity informally regulated by Deaf Community members themselves. Most interpreting was provided by hearing family members, friends, or other hearing people in helping or supportive roles in Deaf people's lives, such as clergy, teachers, social workers and the like (Cokely, 2005b; Fant, 1990), who were 'accepted' and trusted by Deaf people. Many of these individuals had other full-time jobs in the helping professions, and therefore maintained a social welfare lens in their interpreting. The common pathway for the emergence of professional signed

language interpreting in many countries, stems from an historical and cultural view of interpreting as “a way of contributing to the general welfare of deaf people” (Fant, 1990). The young trajectory of the professionalization of signed language interpreting began in the 1960s in the US when the US Vocational Rehabilitation Administration sponsored a meeting in Muncie Indiana of a group of concerned educators, deaf people and other advocates who were seeking to address the need for high-quality interpreting and **transliteration** (a literal style of interpreting- see below).

8.6.1 Trusted, lay practice undergoes professionalization

In the second half of the 20th century signed language interpreting shifted from being a volunteer activity into a systematized profession that requires training and credentials. The establishment of a code of professional ethics shifted the ‘helping’ framework towards a distanced, neutral, and cold and disengaged ‘professional conduit’ view of the work. Professional organizations were formed, and training programs were established beginning in the 1960s in the US and later in other countries, although deaf people had previously held a gatekeeping role determining who was best suited for interpreting; there has always been some form of brokering of signed language communications in community settings. Community trust of interpreters still plays a crucial part today and is seen in the critique of professionalization, because in recent years the work draws many interpreters who are unknown outsiders to the community. The advancement of professionalism brings improvements in the consistency, availability, and quality of interpreting services overall (but not always), but the resulting cost is that it has created more distance and disconnectedness between deaf individuals and interpreters. In current times, deaf individuals have broader civic access and contribute regularly to disciplines like law, government, medicine, science, business, and varied fields in academia. Nonetheless, there exists a complex tension between community trust, cultural views of interpreting quality, and the concept of professionalism which is a distinct thread that runs through signed language interpreting practice. This stems from its roots in ad hoc, Deaf community-sanctioned **lay interpreting**.

For both spoken language and signed language communities, community interpreting originates from the practice of **lay interpreting** (or natural interpreting), which is often undertaken by trusted bilingual children who interpret for family members. In Deaf Communities, interpreting has been practiced by hearing bilingual children, family friends and allies, Language brokering features predominantly in signed language traditions however with evolved professionalization, native or non-professional interpreting became discouraged and devalued, despite that it has been practiced for many years (Adam et al., 2011; Napier, 2017, 2021). Recently, non-professional, native interpreting has received increased research interest (Antonini et al., 2017). One rapidly evolving area of SLI with a strong native interpreting grounding is the work of **Deaf interpreters**, whose skills are highly valued for specific purposes and elaborated upon later in this chapter.

8.6.2 The role and professional contribution of interpreters who are Deaf

With the shifting positionality of SLIs has also come the advancement of SLIs who are deaf. Deaf individuals bring years of ad hoc language brokering and the much-needed skill ability to adapt to a wide a range of language variation and use that is seen typically across Deaf community members (Adam et al., 2011; Boudreault, 2005; Forestal, 2011). Deaf people have historically utilized their skills to assist other deaf individuals who may not have bilingual literacy. and some have also

made important literary contributions as ghost writers (Adam et al., 2011). Deaf people have served as **lay interpreters** for hundreds of years informally in schools for the deaf and elsewhere. A certain “Deaf translation norm” (Stone, 2009) emphasizes the reality that many deaf individuals have degrees of proficiency in written language and some have residual hearing that enable them to speak English or the local spoken language.

In the United States and in other countries in the UK and Australia, the national credentialing mechanism for interpreters includes tests and certifications for SLIs who are deaf. The Registry of Interpreters for the Deaf (RID) in the United States has been certifying Deaf interpreters since the 1980s (although the testing is undergoing revisions currently). Australia, on the other hand, began to recognize and certify Deaf interpreters as recently as 2013.

The types of work that **Deaf interpreters** (DIs) perform is similar yet different to their colleagues who are hearing. It is said that DIs and deaf people in general have unique extralinguistic knowledge – referred to as Deaf extralinguistic knowledge (DELK) (Beldon et al., 2009). A deaf way of knowing and experience of the world enables interpreters who are deaf to bring a richer understanding of deaf consumers’ experiences and an understanding of topic areas where there are gaps in mainstream societal funds of knowledge. Fund of knowledge is the historically and culturally developed knowledge that empower individuals to function in a specific culture (Vélez-Ibáñez & Greenberg, 1992). Lack of accessibility and missed incidental learning in an auditory-defined society can create knowledge gaps that must be bridged through expansion techniques. Related closely to the practice of traditional lay community interpreting, trusted DIs are those “who have experienced relaying or communicating for other Deaf people during their formative and adult years” (Forestal, 2011).

Deaf interpreters typically transfer messages between written forms of a spoken language and a signed language, or between two different signed languages. DIs perform both intra-lingual and inter-lingual work (Adam et al., 2014), within variations of a single language or across two different languages and/or modalities. Some practitioners become **tactile signed language** specialists and interpret with deafblind individuals. Unique interpreting needs arise due to widespread variation in the use of a national signed language, including some deaf individuals who have experienced language deprivation, and deaf immigrants or refugees who are learning a national signed language. Qualified Deaf interpreters bring unique skills to their training such as the lived experience of making sense of the world visually, which positions them perfectly for interpreting between a conventionalized national signed language and widely varied, less conventional, or even atypical forms of signed language used in Deaf communities. Qualified Deaf interpreters also provide translations from a written language or written documents into translated, recorded, and produced signed language videos that follow translation standards and are made available on government or organizational websites (Hodge et al., 2015)

8.6.3 A global view of signed language interpreting development

The emergence, development, and provision of professional signed language interpreting varies across different countries. The table in Figure 8.3 below provides a sampling of country information, including the number of signed language interpreters, the year that a professional organization was established, the number of interpreters who are working or certified, numbers of

practitioners who are Deaf, as well as the types of training programs that are available within the country. From a global perspective the relative youth of the profession is evident, where many countries' national interpreter organizations were established only in the recent few decades. Indicators of progress are the existence of signed language recognition and deaf and disability access laws, a registry of professional interpreters, professional training, and regulation to ensure quality in signed language interpreting services, and procedures for consumers to file complaints or resolve disputes related to ethical conduct by interpreters. It is also evident is that resource-rich countries have made more progress with the development of signed language interpreting and formalized interpreting services than those with less resources. The World Association of Signed language Interpreters (WASLI) was established in 2005 and since then, the organization has had a positive impact on the advancement of signed language interpreting in additional countries. WASLI, in partnership with the longer established World Federation of the Deaf (WFD) has enabled expansion and development of interpreter training and professionalization which is often related to the recognition of national signed languages. Although signed languages are not formally recognized in every country around the globe, numerous local and national governments have incorporated social and economic policies and educational programming to serve deaf, deafblind, and hard of hearing people to improve and support their inclusion in society.

Figure 8.3

Signed language interpreters by country¹

Country	Interpreters (hearing)	Interpreters (deaf)	Training programs	Year established interpreter organization	Year national signed language nationally recognized ⁴
Canada	796	123	2-yr, BA	1980	2019
Australia ²	543		2-yr, post-grad	1991	-
England, Wales, NI	1000	25	MA, BA, post-grad	1987	-
Serbia	30	-	-	2010	-
Italy	600	-	-	1987	2021
Albania	4	-	-	-	2014
Ukraine	350	10	Certificate	-	2004/2017/2019
Belgium-Wallonia	37	1	MA	1986	2003/2006/2019
Turkey	110	5	BA	-	2005
US ³	10354	253	2-yr, BA, MA, PhD	1964	-
Greece	60	-	-	1991	2017
Sweden	600	-	2-yr, BA	1969	1981/2006/2009
Germany	900	24	BA, MA	2011	2002
France	450	3	MA	1978	-

¹ select data from (de Wit, 2020)

² from NAATI website, <https://www.naati.com.au/online-directory/>

³ from RID annual report 2019: <https://rid.org/2019-annual-report/>

⁴ from World Federation of the Deaf website, <https://wfdeaf.org/news/the-legal-recognition-of-national-sign-languages/>

8.6.4 Professional training and qualifications

Signed language interpreting and spoken language interpreting and translation are typically taught in separate training programs. Recently, programs that combine training of interpreters in both modalities show mutual benefits to interpreting and translation students; no matter if the working languages are signed or spoken, students can benefit from learning together (Major & Crezee, 2018).

The pathways to becoming a professional signed language interpreter also varies across countries. In the early stages of signed language interpreting education, programs were quite short term, running over a period of a week, several weeks, or several months. Signed language interpreter training methods were influenced by spoken language conference interpreter training models, driving signed language interpreting education towards university diplomas and bachelor or graduate degrees. Educational requirements vary by country. Since the establishment of WASLI in 2005 there have been increased opportunities for SLIs and interpreter educators to collaborate and share training approaches and practices across national borders. There are broad competencies required to effectively do signed language interpreting work, firstly the need for bilingual ability in a spoken language and a signed language (Witter-Merithew, 2005).

Noted earlier, many SLIs enter the profession not having any relationship or connection to deaf community in their local region (Cokely, 2005b). A student will likely study a signed language for a period and then begin taking courses on the technique of text and language message analysis, transfer of meaning, and production of messaging in the target language. Several countries have established accreditation systems to formally certify SLIs who are ready and possess entry level skills to begin working in community settings (Bogaerde, 2007; Heßmann & Hillert, 2001; Napier, 2004). Some of the accreditation systems require that a student undergo a multi-year training program and upon passing the exit exam they are granted certification and can begin work as a professional at that time. Other countries require a training program and then may offer an apprenticeship or mentorship phase where practical skills continue to grow and develop before a candidate is ready to pass a formal accreditation test.

Interpreting and translation places practitioners in the middle of individuals public and private lives in many domains. Interpreters have a fiduciary responsibility to protect the privacy as well as respect individual autonomy of the consumers they interpret between in the wide variety of settings and interactions where they work. As with other practice professions, SLIs adhere to codes of professional conduct that guide their decisions with the intention to uphold consumers rights. These codes of conduct primarily are founded on values in the profession to “do no harm”, and respect individual autonomy and free will, as well as ensure that individuals’ personal information and circumstances are held in strict confidentiality.

Several national qualifying bodies such as the U.S. Registry of Interpreters for the Deaf (RID), the Australian National Accreditations Association of Translators and Interpreters (NAATI), and others regulate the professional credentialing of signed language interpreters. In many places standards have been established that require specialized tertiary education as well as assessment by the qualifying national interpreter organization. The ad hoc gatekeeping that Deaf community members historically performed in handpicking and grooming hearing family members and friends

is no longer the predominant mechanism for SLIs entering the field. This creates tensions around the question of who decides the most suited hearing candidates that should be trained and trusted with the fiduciary responsibility that interpreters hold to their consumers. With professionalization came the establishment of two-year, four-year, and in recent years a handful of master or doctoral level degree programs in signed language interpreting. Selection of viable candidates has been usurped by educational institutions and their admission boards, which typically do not include signing members of local Deaf communities.

Reflection 3: How might trust be different for interpreters who are insiders versus outsiders to a cultural-linguistic minority group? What are ways that interpreters who are not from within the language and cultural community gain entrée and trust?

8.7 The impact of education policy and law on signed language interpreting

One of the consistent settings where SLIs work is in educational settings. Primary education and secondary education in many countries is a right, but the circumstances and legal framework for educational interpreting with spoken languages differ from those requiring signed language interpreting. The Bilingual Education Act of 1968 (reauthorized in 1974, 1978, 1984, and 1988) recognizes the needs of students with limited English proficiency (LEP). For children who come from homes where the spoken language is different from the school and community, such as a Spanish speaking family with a child who attends school in an English-speaking country, the child primarily receives their education in English, perhaps also in Spanish, and interpreters might be provided for meetings between LEP family members and the child's educators at the school who do not speak the family's home language.

For more than 250 years, deaf children were mostly educated at specialized residential institutions alongside their signing peers and Deaf teachers. National laws guarantee access to education in public schools, such as the U.S Public Law 94-142, The Individuals with Disabilities Education Act (IDEA)— originally called the Education for All Handicapped Children Act – and other state and local laws prompted a fundamental change in how governments provided education of deaf children, desegregating the system of residential schools for the deaf.

There exist complex issues and debates around education of deaf children that has a distinct influence on signed language interpreting not observed in spoken language interpreting. In many countries, policies for language planning and acquisition shape and impact signed language learning, use, and variation of forms. Where some countries' governments adopt educational language policies that promote signed language/national-language bilingualism, other countries' policies endorse language assimilation to the hearing world (Hult & Compton, 2012). Assimilation policies create increased contact forms between a community signed language and the community spoken language. For example, English influence on ASL may result in signing in English word order and borrowing excessively from written words through fingerspelling—spelling out the word using the manual alphabet. Educational approaches that foreground lipreading and speech training also create additional variability in language use that interpreter encounter in the communities they serve. Language contact is the norm, which has implications for the training and provision of signed language interpreting and deaf children's language acquisition.

Residential schools for deaf children began to close due to the push for **mainstream education** prompted by federal laws like the IDEA. **Mainstream education** promotes integration and places a deaf child often alone in a school district with hearing peers and the services of a signed language interpreter or a signing aide. The push to remove deaf and disabled children from institutions and place them in what the law described ‘least restrictive environments’ created a surge in the need for SLIs in many school districts where deaf children started to be placed. Yet training and education of interpreters was still a developing discipline and the lack of understanding about signed languages and interpreting enabled a situation in the United States where many SLIs or ‘communication aides’ were hired to work in elementary and secondary school settings. Some, but not all, have proper interpreting training and professional qualifications. Each state establishes a local educational policy regarding SLIs and their qualifications, in many education jurisdictions these jobs are low-paying, para-professional communication aides, and not subject to the higher standards expected of professional SLIs.

A key mandate in the IDEA is the right to an individual education plan (IEP) for children whose languages are other than English (LOTE) or for children with disabilities. IEP meetings are just one setting where SLIs and spoken language interpreters provide their services, although the circumstances of educational interpreting differ for consumers of spoken than for signed language interpreting in these settings (for further elaboration see (Mellinger, in press).

The shift in educational policies in the United States created the current situation where many deaf children are not educated in settings with other deaf or hard of hearing peers or with deaf adult teachers who use signed language. Young deaf people risk being isolated, resulting in a pervasive problem where young deaf children may not have access to a visual, natural signed language until well past the critical period of language acquisition. The result contributes to young deaf people with language deficits or deprivation. Lack of robust language input not only harms children’s cognitive functioning and educational and societal advancement, but it also creates idiosyncratic language use interpreters are not equipped to mediate.

These circumstances that prompted the proliferation of mainstream educational interpreting services are controversial. Deaf community leaders and scholars have both criticized and supported the demand (Caselli et al., 2020), noting the practice favors “giving access to services through signed language interpreters instead of via language-concordant services, where the [deaf child] and [educational] service provider use the same language”(Caselli et al., 2020; De Meulder & Haualand, 2021). In many countries there are increasing efforts to counteract well-meaning educational policies that unwittingly harm Deaf communities, but signed language interpreting is still very much embroiled in and impacted by these complex factors.

8.8 Signed language Interpreting techniques and styles

Signed language interpreting practice took a divergent evolutionary path and only in recent years has there been increased alignment and cross-fertilization between spoken and signed language interpreting and translation (Gile & Napier, 2015). Many of the same techniques and cognitive processes of translation and interpreting are similar for spoken language interpreters and SLIs. SLIs, however, utilize additional unique strategies as a due to the nature of visual language, which is silent. Spoken language interpreters may choose to listen and process small chunks of source

information (phrase and sentence-level) and render the target consecutively, or they may whisper or speak in low tones into the ear of the receiving client simultaneously while listening to the source message. Because the source and target messages occur in different language modalities, SLIs frequently work in **simultaneous** mode, however **consecutive** strategies are also utilized in consultative settings and in court testimony by Deaf witnesses. During the Nuremberg trials after World War II, spoken language interpreters for the first time provided simultaneous interpreting by leveraging technology using audio headsets and recording devices. Simultaneous interpreting is an advanced level skill that demands more complex cognitive tasks, and simultaneously managing time pressures (Gile, 1995; Moser-Mercer, 1978).

Technology shapes the work of SLIs especially with advancement in video technology in recent decades. Since the early 2000s signed language interpreting has been provided via **video relay service** (VRS) call centers and government regulations, thus enabling deaf and hearing people to communicate via the telephone. VRS interpreting differs from telephone interpreting because internet services are not always reliable, and managing message transfer between audio language and visual language using technology involves a variety of complex sociological factors in order to be effective (Brunson, 2011). Video relay interpreting services are more than a conduit between parties; interpreters working in these settings actively manage turn-taking and are actively coordinating interpreted interaction (Marks, 2018).

During the COVID pandemic in 2020 through 2021 the bulk of face-to-face conference interpreting transitioned to virtual web-based platforms. The pandemic shifted the way signed language interpreters have traditionally worked. The provision of **video remote interpretation** (VRI) and prerecorded, translated conference presentations via live, web streamed conferences have offered SLIs expanding opportunities to work not just in their local community, but across different regions or nations, such as in international meetings in conference settings. The COVID pandemic prompted a spike in the reliance on VRI services and it is likely that signed language interpreting practice has been forever changed as a result.

8.8.1 Signed language interpretation, translation, and transliteration

Interpreting has been called a special form of translational activity, an ancient human practice that came long before written translation, falling under the broad umbrella of Translation (Pöchhacker, 2003). With interpretation, the source language is presented one time and the target message is produced immediately under time pressure, which limits the ability to review the source message or make corrections or repairs in the target rendition (Kade, 1968). Translation, however, enables one to review the source text message several times as well as to check for meaning, adjust and repair, using varied strategies and multiple attempts to create a maximally equivalent and effective message in the target language. SLIs also work doing interpretation as well as translation. The further description of **signed language interpretation** follows here and is important to first distinguish what **signed language translation** involves and how that is different due to the modality.

Interpretation involves the immediate transfer of a source message into target message between two spoken languages, between a spoken language and a signed language, or between two signed languages. The interpreter is tasked with processing and producing the target message rendition

within seconds, if simultaneous, or within minutes, if using the consecutive mode. Translation involves delayed, reviewed, and revised process of message transfer from a ‘fixed’ written source text to a ‘fixed’ written target text, rather than managing live discourse. Sometimes a **sight translation** is required – a spoken interpretation of a written source text (Newmark, 1991).

Translations that involve signed languages are a relatively recent professional development and they challenged the boundaries of traditional translation practices (Wurm (2014). The prototypical modality pair of translation involves the written source text in one language translated into written text in another language. The transmodal process of translating a signed language message from or into a written language message is possible with advances and video technology, and the practice of signed language translation has become increasingly commonplace in the 21st century. There are many government, business, and arts organizations that increasingly turned to the provision of audiovisual translations that also include recorded video translations that are created from written texts. In modern times, it is commonplace on Internet media outlets such as YouTube and varied industry and social websites where one easily finds any number of signed language recordings and media productions that include written language captioning in the spoken language of the producer’s country. Written captions are usually signed language to spoken language translations.

One of the challenges in signed language translation for public entities is determining who the target audience is, given the wide variation of language use in many Deaf communities (Hodge & Goswell, 2021) (see section 8.10). Provision of signed language translations are used increasingly in interpreter-mediated public information, for conference papers, and to disseminate business or government services information, which is made available on an industry, state, or national website (Hodge et al., 2015).

In the early formational days of the US Registry of Interpreters for the Deaf (RID), one year after the first meeting in 1964, a manual on interpreting for Deaf people offered definitions and guidelines for interpreting and for a curriculum for interpreter training (Quigley & Youngs, 1965). At that time the concept of signed language translation was associated with forms of signing called ‘**Signed English**’, which show contact influence from spoken language. Signed English and other contact language forms and communication codes were created, used and promoted for the purpose of educating deaf children, particularly in the 1970s and 1980s. In the manual, two tasks described the skills interpreters would need to know depending on the type of deaf individual they were working with– translating and interpreting the authors note: “

In translating, the thoughts and words of the speaker are presented verbatim. In interpreting, the interpreter may depart from the exact words of the speaker to paraphrase, define, and explain what the speaker is saying. An interpreter must know when to interpret and when to translate and he can only know this when he has learned to recognize the type of deaf person or persons with whom he is dealing.

Evident in these early documents is a naive understanding of translation as verbatim rendering. However, a term later used to denote the strategy of literal translation with a signed language is called **transliteration**, which was taken from the definition of representing written words or letters from one alphabet or script in the characters of a different written alphabet. The manual and

gestural forms of ASL produced in a literal manner that includes signs and fingerspelled words in an English-like word/sign order became a formalized practice by SLIs uniquely in the United States. The practice was endorsed in 1972 by the U.S. national Registry of Interpreters for the Deaf (RID) whereby interpreters were tested and awarded a Certificate of Interpretation (CI), for work between ASL and English, and/or a Certificate of Transliteration (CT), for work between English and English-influenced ASL signing. While both certifications are still valid, testing transliteration was discontinued upon the deployment of a new ASL–English interpreting test, the National Interpreting Certification (NIC) in 2005. Currently, there is no formal certification to assess the ability to perform a literal interpretation style. Nonetheless, transliteration is still requested by deaf people in settings where they prefer the interpreter to ‘show them the English’ source structure transparently (Kelly, 2001), such as in higher education (Pollitt, 2000). Transliteration requests still occur because some signers are familiar with forms of ‘signed English’, which has contact effects from spoken English (Winston, 1989) signers are bilingual and prefer to receive a literal versus ‘free’ interpretation (Napier, 2002). Educational policies and deaf consumer requests created the continued phenomena of English- like signing and transliteration practice, which adds to the variation in language use that is seen in Deaf communities.

Reflection 4: Do you know of a community where more than one language is used in daily life? Is there evidence of contact or mixing between the languages? Do the languages hold the same status in the community? Which language(s) are officially used in education, or in government documents and courts in that community?

8.9 Contexts of signed language interpreting

Signed language and spoken language interpreters work in a broad range of settings, although we have seen that primary and secondary educational settings have played a part in the discipline. SLIs are also found working in every day civic activities such as workplace meetings, medical appointments, courtroom hearings, community arts venues, professional conference sessions, and family holiday celebrations. As deaf people interact with hearing people in their environments, one might find a signed language interpreter whose services are often legally mandated by local, state, and federal disability laws.

In the U.S., the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 further require barrier-free environments for Deaf and disabled people in various civic domains. Signed language interpreting services are considered a reasonable accommodation in a variety of community environments, such as for public services, the workplace, and primary, secondary, and higher education. University education is also made accessible through signed language interpreting along with other technological supports offered to deaf, hard of hearing, and deafblind students. Closed captioning, notetaking services, and additional accommodations for completing tests and assignments are just a few examples of legally mandated supports that increasingly enable deaf individuals to right to educational and career advancement. In European countries, the European Union of the Deaf provides updated publications about the legislation upholding the right to signed language access and interpreting in varied EU member states. The WFD provides information about varied countries in the global south as well as the north that have instituted laws mandating signed language access and interpreting services (*World Federation of the Deaf*).

At the international level, the UN Convention on the Rights of People with Disabilities (CRPD) is a powerful human rights instrument that drives the rights of Deaf people to have signed languages and access to education in their natural signed language. To date, 182 countries have ratified the UN CRPD and continued advocacy in many countries is a catalyst for the recognition of national signed languages, and the development of signed language interpreting education and service provision.

Described earlier, signed language interpreting emerged from community contexts and conference interpreting is a developing specialty area for SLIs. This is a stark difference from the traditions of professional spoken language interpreting, which are firmly rooted in conference and diplomatic settings. As deaf individuals gain access to higher education, contributions to academia and government leadership by deaf scholars and leaders demands high quality conference-level SLIs. Since the establishment of the International Association of Conference Interpreters (AIIC) in 1953, the progression of spoken language conference interpreting has marched forward. The professional organization of conference interpreters consists of many spoken language interpreters, yet only recently, in 2014, the first signed language interpreter gained membership in AIIC.

The contexts where SLIs practice include a myriad of community and conference settings. The U.S. Registry of Interpreters for the Deaf (RID) has created a series of 19 standard practice papers on varied interpreting settings, each with descriptions of factors and skills needed to navigate one's work in the setting and adhere to standards of practice established by the professional community. Standard practice papers cover topics in mental health interpreting, medical interpreting, legal interpreting, and other types of settings. These papers provide guidance for end users of interpreting services to ensure appropriate and quality provision of interpreting services.

Reflection 5: Consider some reasons for having laws and standards related to the provision of interpreting or translation services. In your country or region, what laws or standards exist? How well are they known by stakeholders? How are they enforced?

8.10 Language variation and implications for signed language interpreting

Effective transfer of messages takes into consideration the cultural and historical worldviews of the interlocutors, as well as implicitly embedded values. In essence the interpreter or translator creates a bridge between two different cultures and 'thought worlds' (Namy, 1978). Interpreting and translation involve message transfer, and adaptation to the cultural and linguistic frame of reference of the audience. SLIs apply understanding of Deaf cultural values and norms to their ethical decision-making and uphold consumer preferences. These preferences can be quite disparate due to the wide variability seen in Deaf lived experiences and the influence on how they use their language. A distinct characteristic of signed language interpreting is the wide variation of language use within even one national signed language.

Deaf individuals vary in their signed language style due to several factors. The nature of deaf people's experience, the etiology of their deafness, whether and when they were first exposed to the local community signed language, degrees of bilingualism (sign, spoken, and written language proficiency), as well as their audiological status will influence the way they use signed language, and this poses unique challenges for SLIs to serve such a heterogeneous population. Wide variation

due to sociolinguistic factors (observed in all languages) is also manifest in signed language variation resulting from gender (Leeson & Grehan, 2004) the effect of segregation in schools based on race (McCaskill et al., 2011), as well as region, age, and school location (Kyle & Allsop, 1982; Lucas et al., 2001).

8.10.1 Language variation due to spoken language contact

All languages exhibit socio-linguistic variation based on differences in education, age, regional upbringing, gender identification, and other social factors, however the variation in usage of any national signed language is even more pronounced because of their coexistence within majority spoken languages. Signed language communities thrive within broader, mainstream hearing communities so it is inevitable that language contact occurs between signed and spoken languages (Lucas & Valli, 1989, 1992). Borrowings from written words occur through fingerspelling – spelling out the word using the manual alphabet – but this is cumbersome and used minimally and strategically in signed languages. Spoken language influence on a signed language may appear in the form of signing in linear written word order, which is not the natural 3-dimensional spatial way of signing; spoken language influenced signed language appears to be a varied style of language use observed in many documented national signed languages.

The development of varieties of contact signing in Deaf communities is a result of several factors (Malcolm, 2005). Most deaf people are born to hearing families who may or may not be encouraged or able to learn the local signed language, and families may utilize idiosyncratic ways of communicating in gestures and speech with their deaf child. If a child is educated in a **mainstream education program**, the language policy may endorse the use of manual codes of the spoken language rather than the community's natural signed language, or the family may be advised to use lipreading and speechreading instead of a signed language. Deaf people have varied paths to acquisition to a signed language and may learn it after starting school or during young adulthood, or later in life, depending on age of hearing loss and family decisions and attitudes about signed and spoken language.

Speakers of auditory languages begin to acquire their native language at birth, and for a child born in the United States to a Spanish speaking family they have full first language input from birth. Secondary bilingual exposure to English occurs in daily interaction with local ambient language. Bilingualism in deaf individuals is not necessarily guaranteed because of the risk of impoverished language input during the first 5 critical years of development (Hall, 2017).

Many deaf individuals acquire signed language in a non-typical way, and they have varying experiences in education and acquisition of the written form of their national spoken language. This results in wide variation in the way signed languages are used and understood, which also has implications for provision of interpreting. Many signers learn their first signed language after the critical period (up to age 3- 5 years old). Less than 5% of deaf children are born into families where one or both parents are Deaf and use the local community signed language (Mitchell & Karchmer, 2004). This means that more than 95% of deaf children are raised in hearing families where caregivers do not usually know or learn how to communicate in the national signed language of that community. Often it takes years before those parents or that child has first exposure to a signed language and to deaf adult role models who are fluent signed language users. The widespread

experience of language deprivation at worst, or impoverished acquisition and language input at the very least shapes the communication styles of deaf, deafblind, and hard of hearing individuals. This reality therefore presents additional complexities for SLIs to navigate. Interpreting education programs primarily instruct students in more conventionalized forms of a signed language modeled by native, multi-generational signed language users- the richest form of a signed language but used by only some of the members of the Deaf community. Interpreter education programs can prepare practitioners more effectively by providing sufficient instruction and practice with consumers who may use less conventional forms or even wildly atypical signed language forms.

8.10.2 Language variation due to signed language contact

In a world where international travel is common, and video technologies expand and enable cross-linguistic interaction, Deaf signers encounter others who do not share the same signed language. It was noted earlier that there are more than 120 observed distinct signed languages around the world and there is no mutually intelligible universal signed language. Nonetheless, when Deaf people encounter other signers, there is an ease of accommodating to each other's signed language that is not seen in contact between divergent spoken language users. A cross-linguistic signed language phenomena known as **International Sign** has gained increased attention in recent years, as a result of growing international contact between deaf people who do not share a language (Hiddinga & Crasborn, 2011; Kusters, 2021; McKee & Napier, 2002; Rosenstock & Napier, 2016; Whynot, 2015). The term “**translanguaging**” has also been used to refer to the multimodal and multilingual ways that deaf signers communicate in plurilingual situations using a mix of diverse linguistic resources (De Meulder et al., 2019; García & Wei, 2014). It is described as a translanguaging strategy involving a calibration of one's signed language and relying on semiotic repertoire— use of signs, spoken language mouthings, writing, and fingerspelling in different languages; speech; and drawing (Moriarty & Kusters, 2021)

Whether through immigration patterns, international conferences, or educational and business activities, signed language interpreters may be required to interpret in situations where the consumers do not know a signed language, the interlocutors do not share the same signed language, the deaf individual uses an unknown signed language, and/or they use International Sign (IS). IS is a semiotic, language-mixing strategy that has limited conventionalized forms and is used in international conferences by multilingual Deaf academics and leaders in the international Deaf community (Whynot, 2016). Although it is not a language, IS is increasingly recruited as a lingua franca and an official conference language in some international conferences where deaf people from different countries convene to exchange ideas. Since 2013, increased formal trainings and the establishment of an accreditation of interpreters who work between International Sign and a spoken or signed language has presented yet another form of language variation seen in signed language interpreting.

8.10.3 Language variation due to (other) disability

There are different ways in which a person may become deaf or realizes their Deaf identity. Some people who identify as ‘Deaf’ may technically be hard of hearing according to their audiogram but communicate primarily with a signed language and identify culturally as a Deaf person. Cultural identification can relate to onset and age of deafness, one's understanding of and

experience with the national signed language, or interactions with other Deaf adults. Just as we see in the broader population, Deaf community members can experience other disabilities such as cognitive deficits, mental illness, cerebral palsy, and physically disabling conditions. Community diversity can also be impacted by certain medical conditions that can cause deafness as well as blindness. deafblind individuals constitute a special group of signers who use tactile signed language to communicate and some also utilize a system of tactile backchannelling or feedback called haptics or **protactile communication**. Protactile communication is a series of different physical touch signals that a specialized, tactile signed language interpreter uses to communicate between a deafblind individual and their interactions with hearing people. Deafblind interpreting skills are taught in some university training programs, but there is also a tradition of providing this form of interpreting via community-based, professional development workshops.

Tactile signed language follows similar linguistic signed language forms as the local, sighted Deaf community's signed language, although when interpreting with deafblind individuals, interpreters must also provide additional environmental information since the consumer cannot access the same way that a sighted deaf person can. Even within the population of deafblind individuals, language and communication can be varied because of the varying degrees of blindness and deafness and the combination of the two. Some deafblind individuals have limited types of vision loss or residual vision such as tunnel vision, partial vision, central field (at the middle or focal point of vision), or full blindness. Tactile, deafblind specialist interpreters work from an English source message (spoken or written format), or a signed language into a slightly adapted signed language message that accommodates the specific signing space between themselves and the consumer to optimize the deafblind person's accessible visual field.

8.11 Summary

Previously described, Deaf communities constitute a linguistic and cultural minority group in each of the nations where they exist. The Deaf cultural–linguistic frame of reference does *not* view deafness from a disability lens, rather it celebrates what is shown in documented signed languages and cultural traditions, lived experiences, and values held by generations of Deaf people, families, and their civic organizations. Although these values transcend national borders and create a shared visual frame of reference, the Deaf Culture idea does not imply that ‘Deaf’ is a monolithic identity or experience. Deaf people are born into any number of ethnic and spoken language groups, and this has particular significance in countries with broad, multicultural, and multilingual populations. Global mobility and migration trends have shaped the communities of signed language users and the already varied language forms that are inherent in Deaf communities, for reasons described above, signed language interpreters must be able to adapt and adjust for sociolinguistic variation that is characteristic of Deaf communities in the 21st century.

We have seen in this chapter that the implications of modality are more complicated than the simple fact that SLIs work with visual languages rather than between spoken languages. Clearly, the status and historical understanding and societal viewpoint of signed languages brings several interconnected circumstances. The multiple factors involved with signed language interpreting are indeed complex and the socio-cultural and political contexts as well as the cognitive and technical demands make the work uniquely challenging.

Questions

- 1) You learned that signed languages are not related to the written and spoken languages of the broader community— in fact they are different languages. How would you explain this to a friend? Create a short script that you could use to describe the unique facts about signed languages and signed language interpreters.
- 2) Accessible media online and in public places may include a signed language interpretation and spoken language captions. Often these are translations and not interpretations. Watch a captioned signed language video and see if you can tell if the spoken target language and/or the captions are based on an immediate one-time interpretation or a translation. How would you identify if it were a translation versus an interpretation?
- 3) Do you know the name of your local or national Deaf organizations? Do an internet search to locate your regional or national Deaf organizations and find out more about their work.
- 4) Locate your national or regional signed language interpreting association and find practitioners in your area. Interview them to learn about their pathway to becoming a signed language interpreter (SLI).
- 5) Investigate the required qualifications and training offered in your region or country for becoming a signed language interpreter and the qualifications and training for becoming a spoken language interpreter. Describe any similarities or differences.
- 6) This chapter described complex reasons for language variation and language deprivation experienced by deaf people. How can interpreters provide appropriate service to such a wide range of language use seen in Deaf Communities?

Suggested Readings

- Adam, R., Carty, B., & Stone, C. (2011). Ghostwriting: Deaf translators within the Deaf community. *Babel*, 57(4), 375-393.
- Ball, C. (2007). *The history of American Sign language interpreting education*. Capella University
- Caselli, N. K., Hall, W. C., & Henner, J. (2020). American Sign language Interpreters in Public Schools: An Illusion of Inclusion that Perpetuates Language Deprivation. *Maternal and Child Health Journal*, 24(11), 1323-1329.
- Cokely, D. (2005). Shifting Positionality: A Critical Examination of the Turning Point in the Relationship of Interpreters and the Deaf Community. In M. Marschark, R. Peterson, & E. Winston (Eds.), *Signed language Interpreting and Interpreter Education* (pp. 3-28). Oxford University Press. <https://doi.org/10.1093/acprof/9780195176940.003.0001>

- de Wit, M. (2020). *A Comprehensive Guide to Signed language Interpreting in Europe, 2020 edition*. Self-published. (Printed by Create Space, Baarn, M. de Wit)
- Hodge, G., & Goswell, D. (2021). Deaf signing diversity and signed language translations. *Applied Linguistics Review*. <https://doi.org/https://doi.org/10.1515/APPLIREV-2020-0034>
- Janzen, T. (2008). *Topics in Signed language Interpreting*. Philadelphia, PA: John Benjamins Publishing Company. (Also available via ebrary)
- Roy, C. B., Brunson, J. L., & Stone, C. A. (2018). *The academic foundations of interpreting studies: An introduction to its theories*. Gallaudet University Press.
- Roy, C. B., & Napier, J. (2015). *The signed language interpreting studies reader* (Vol. 117). John Benjamins Publishing Company.
- Witter-Merithew, A., Johnson, L. J., & Russell, D. (2005). *Toward competent practice: Conversations with stakeholders*. Registry of Interpreters for the Deaf, Incorporated.

References

- Adam, R., Aro, M., Druetta, J. C., Dunne, S., & Klintberg, J. (2014). Deaf interpreters: An introduction. *Deaf interpreters at work: International insights*, 1, 18.
- Adam, R., Carty, B., & Stone, C. (2011). Ghostwriting: Deaf translators within the Deaf community. *Babel*, 57(4), 375-393.
- Antonini, R., Cirillo, L., Rossato, L., & Torresi, I. (2017). Non-professional interpreting and translation : state of the art and future of an emerging field of research. <http://www.jbe-platform.com/content/books/9789027266088>
- Baigorri-Jalón, J. (2015). The History of Interpreting Profession. In R. J. H. Mikkelsen (Ed.), *The Routledge Handbook of Interpreting* (pp. 11-28). Routledge. .
- Baker, C. P., C. (1978). Focusing on the nonmanual components of American Sign Language. In P. Siple (Ed.), *Understanding language through sign language research*. Academic Press.
- Baker-Shenk, C. (1983). *A microanalysis of the non-manual components of questions in American Sign Language* [dissertation, University of California, Berkeley].
- Ball, C. (2007). *The history of American Sign Language interpreting education*. Capella University.
- Bauman, H. D., & Murray, J. (2009). Reframing: From hearing loss to deaf gain. *Deaf Studies Digital Journal*, 1(1), 1-10.
- Bauman, H. D., & Murray, J. J. (2010). Deaf Studies in the 21st Century: 'Deaf-gain' and the Future of Human Diversity. In M. Marshark & P. E. Spencer (Eds.), *The Oxford Handbook of Deaf Studies, Language, and Education*, (pp. 210-225). Oxford University Press.
- Beldon, J., Forestal, E., Garcia, L. M., & Peterson, D. (2009). NCIEC Deaf Interpreting Initiative RID Deaf Caucus, Philadelphia, PA. . http://www.diinstitute.org/wp-content/uploads/2012/06/RID2009_DI_FINAL0802.pdf
- Bogaerde, B. v. d. (2007). Interpreter training from scratch. In C. Wadensjö, B. Englund Dimitrova, & A.-L. Nilsson (Eds.), *The critical link 4. Professionalisation of interpreting in the community* (pp. 283-295). John Benjamins Publishing Company.
- Boudreault, P. (2005). Deaf interpreters. In T. Janzen (Ed.), *Topics in signed language interpreting: Theory and practice* (pp. pp. 323-355). John Benjamins.

- Brasel, B. (1976). The effects of fatigue on the competence of interpreters for the deaf. Selected readings in the integration of Deaf students at CSUN, 19-22.
- Brentari, D. (2010). *Sign Languages*. Cambridge University Press.
- Brunson, J. L. (2011). *Video relay service interpreters: Intricacies of sign language access*. Gallaudet University Press.
- Campbell, R., MacSweeney, M., & Waters, D. (2008). Sign language and the brain: a review. *The Journal of Deaf Studies and Deaf Education*, 13(1), 3-20.
- Carty, B., Macready, S., & Sayers, E. E. (2009). "A Grave and Gracious Woman" Deaf People and Signed Language in Colonial New England. *Sign Language Studies*, 9(3), 287-323.
- Caselli, N. K., Hall, W. C., & Henner, J. (2020). American Sign Language Interpreters in Public Schools: An Illusion of Inclusion that Perpetuates Language Deprivation. *Maternal and Child Health Journal*, 24(11), 1323-1329.
- Charlton, J. I. (1998). *Nothing about us without us*. University of California Press.
- Cokely, D. (2005a). Curriculum revision in the twenty-first century: Northeastern's experience. *Advances in teaching sign language interpreters*, 1-21.
- Cokely, D. (2005b). Shifting Positionality: A Critical Examination of the Turning Point in the Relationship of Interpreters and the Deaf Community. In M. Marschark, R. Peterson, & E. Winston (Eds.), *Sign Language Interpreting and Interpreter Education* (pp. 3-28). Oxford University Press. <https://doi.org/10.1093/acprof/9780195176940.003.0001>
- Crasborn, O. (2015). Transcription and notation methods. In E. Orfanidou, B. Woll, & G. Morgan (Eds.), *Research methods in sign language studies. A practical guide* (pp. 74-88). John Wiley & Sons. <http://eu.wiley.com/WileyCDA/WileyTitle/productCd-1118271416.html>
- De Meulder, M., & Hualand, H. (2021). Sign language interpreting services: A quick fix for inclusion? *Translation and interpreting Studies*, 16(1), 19-40.
- De Meulder, M., Kusters, A., Moriarty, E., & Murray, J. J. (2019). Describe, don't prescribe. The practice and politics of translanguaging in the context of deaf signers. *Journal of Multilingual and Multicultural Development*, 40(10), 892-906.
- de Wit, M. (2020). *A Comprehensive Guide to Sign Language Interpreting in Europe, 2020 edition*. Self-published. (Printed by Create Space, Baarn, M. de Wit)
- Deuchar, M. (1984). *British Sign Language*. Routledge & Kegan Paul.
- Eberhard, D. M. S., G.F.; Fenning, C.D. (2021). *Ethnologue: Languages of the world*. Twenty-fourth edition. SIL International. Retrieved 2021-03-05 from <https://www.ethnologue.com/>
- Eckert, R. C., & Rowley, A. J. (2013). Audism: A theory and practice of audiocentric privilege. *Humanity & Society*, 37(2), 101-130.
- Emmorey, K. (2002). *Language, cognition, and the brain. Insights from sign language research*. Lawrence Erlbaum Associates.
- Fant, L. (1990). *Silver Threads: A Personal Look at the First Twenty-five Years of the Registry of Interpreters for the Deaf*. RID Publications.
- Forestal, E. (2011). *Deaf Interpreters: exploring their processes of interpreting* [Capella University].
- Gaiba, F. (1999). Interpretation at the Nuremberg trial. *Interpreting*, 4(1), 9-22.
- García, O., & Wei, L. (2014). Language, bilingualism, and education. In *Translanguaging: Language, bilingualism, and education* (pp. 46-62). Springer.

- Gile, D. (1995). *Basic Concepts and Models for Interpreter and Translator Training*. John Benjamins.
- Gile, D., & Napier, J. (2015). Comparing signed and spoken language interpreting. In *The Routledge handbook of interpreting* (pp. 141-155). Routledge.
- Heßmann, J., & Hillert, G. (2001). Training programmes for sign language interpreters and support workers in Germany. Open and distance teaching opportunities. In (pp. 5).
- Hickock, G., Bellugi, U., & Klima, E. S. (1996). The neurobiology of sign language and its implications for the neural basis of language. *Nature*, 381, 699-701.
- Hiddinga, A., & Crasborn, O. (2011). Signed languages and globalization. *Language in Society*, 40(04), 483-505. <https://doi.org/doi:10.1017/S0047404511000480>
- Hochgesang, J. A., Crasborn, O., & Lillo-Martin, D. (2017-2021). ASL Signbank. Haskins Lab, Yale University. <https://aslsignbank.haskins.yale.edu/>
- Hodge, G., & Goswell, D. (2021). Deaf signing diversity and signed language translations. *Applied Linguistics Review*. <https://doi.org/https://doi.org/10.1515/APPLIREV-2020-0034>
- Hodge, G., Goswell, D., Whynot, L., Linder, S., & Clark, C. (2015). What Standards. The need for evidence-based Auslan translation standards and production guidelines. Sydney: Australian Communications Consumer Action Network.
- Hult, F. M., & Compton, S. E. (2012). Deaf Education Policy as Language Policy: A Comparative Analysis of Sweden and the United States. *Sign Language Studies*, 12(4), 602-620. <http://www.jstor.org/stable/26190882>
- Kade, O. (1968). *Zufall und Gesetzmäßigkeit in der Übersetzung*. Leipzig: Verlag Enzyklopädie.
- Kelly, J. E. (2001). *Transliteration: Show me the English*. RID Press.
- Kusters, A. (2021). International Sign and American Sign Language as Different Types of Global Deaf Lingua Francas. *Sign Language Studies*, 21(4), 391-426. <https://doi.org/10.1353/sls.2021.0005>.
- Kyle, J., & Allsop, L. (1982). *Deaf people and the community: Final report to the Nuffield Foundation*. School of Education Research Unit, University of Bristol.
- Kyle, J. G., Kyle, J., Woll, B., Pullen, G., & Maddix, F. (1988). *Sign language: The study of deaf people and their language*. Cambridge university press.
- Ladd, P. (2003). *Understanding deaf culture*. Multilingual Matters.
- Leahy, A. (2016). The history of interpreting. *British Deaf News*, (January), 14-16.
- Leeson, L., & Grehan, C. (2004). To the lexicon and beyond: The effect of gender on variation in Irish Sign Language. *To the lexicon and beyond: Sociolinguistics in European deaf communities*, 39-73.
- Llewellyn-Jones, P., & Lee, R. G. (2014). *Redefining the role of the community interpreter: The concept of role-space*. SLI Press.
- Lucas, C., Robert Bayley, R., & Valli, C. (2001). *Sociolinguistic variation in American Sign Language*. Gallaudet University Press.
- Lucas, C., & Valli, C. (1989). Language contact in the American deaf community. In *The sociolinguistics of the Deaf community* (pp. 11-40). Elsevier.
- Lucas, C., & Valli, C. (1992). *Language contact in the American deaf community*. Brill.
- Major, G., & Crezee, I. (2018). Shared Learning Between Spoken and Signed Language Interpreters and Students. *International Journal of Interpreter Education*, 10(2), 2.

- Malcolm, K. (2005). Contact sign, transliteration, and interpretation in Canada. In T. Janzen (Ed.), *Topics in signed language interpreting. Theory and practice* (pp. 107-133). John Benjamins Publishing Company.
- Marks, A. (2018). "Hold the phone!": Turn management strategies and techniques in Video Relay Service interpreted interaction. *Translation and Interpreting Studies. The Journal of the American Translation and Interpreting Studies Association*, 13(1), 87-109.
- McCaskill, C., Lucas, C., Bayley, R., & Hill, J. C. (2011). *The hidden treasure of Black ASL: Its history and structure*. Gallaudet University Press Washington, DC.
- McKee, R. L., & Napier, J. (2002). Interpreting into International Sign Pidgin: An Analysis. *Sign Language & Linguistics*, 5(1), 27-54.
- Mellinger, C. D. (in press). *Interpreting and Language Access: Spoken Language Interpreters in U.S. Educational Contexts*.
- Miles, M. (2000). Signing in the Seraglio: mutes, dwarfs and jestures at the Ottoman Court 1500-1700. *Disability & Society*, 15(1), 115-134.
- Mitchell, R. E., & Karchmer, M. A. (2004). Chasing the Mythical Ten Percent: Parental Hearing Status of Deaf and Hard of Hearing Students in the United States. *Sign Language Studies*, 4(2), 138-163.
- Moriarty, E., & Kusters, A. (2021). Deaf cosmopolitanism: calibrating as a moral process. *International Journal of Multilingualism*, 18(2), 285-302.
<https://doi.org/10.1080/14790718.2021.1889561>
- Moser-Mercer, B. (1978). Simultaneous interpretation: A hypothetical model and its practical application. In *Language interpretation and communication* (pp. 353-368). Springer.
- Namy, C. (1978). Reflections on the Training of Simultaneous Interpreters A metalinguistic approach. In *Language interpretation and communication* (pp. 25-33). Springer.
- Napier, J. (2001). *Linguistic coping strategies of sign language interpreters Macquarie University*].
- Napier, J. (2002). University Interpreting: Linguistic Issues for Consideration. *The Journal of Deaf Studies and Deaf Education*, 7(4), 281-301. <https://doi.org/10.1093/deafed/7.4.281>
- Napier, J. (2004). Sign language interpreter training, testing, and accreditation: An international comparison. *American Annals of the Deaf*, 149(4), 350-359. <Go to ISI>://000225804700006
- Napier, J. (2017). Not just child's play. *Non-Professional Interpreting and Translation: State of the Art and Future of an Emerging Field of Research*, 129, 381.
- Napier, J. (2021). *Sign Language Brokering in Deaf-Hearing Families*. Springer Nature.
- Newmark, P. (1991). *About translation* (Vol. 74). Clevedon, UK: Multilingual Matters Limited.
- Pöschhacker, F. (2003). *Introducing Interpreting Studies* (1st ed.). Routledge.
- Poizner, H., Klima, E., & Bellugi, U. (1987). *What the hands reveal about the brain*. MIT Press.
- Pollitt, K. (2000). On babies, bathwater, and approaches to interpreting. *Deaf Worlds*, 16(2), 60-64.
- Quigley, S. P., & Youngs, J. P. (1965). *Interpreting for Deaf People, a Report of a Workshop on Interpreting* (Governor Baxter State School for the Deaf, Portland, Maine, July 7-27, 1965).
- Registry of Interpreters for the Deaf. (2005). *NAD-RID Code of Professional Conduct*. Retrieved from https://drive.google.com/file/d/0B_HBAap35D1R1MwYk9hTUpuc3M/view

- Reilly, J. S., McIntire, M. L., & Bellugi, U. (1990). Faces: the relationship between language and affect. In V. V. a. C. Erting (Ed.), *From Gesture to Language in Hearing and Deaf Children* (pp. 128–142). Springer Verlag.
- Robinson, O. (2021, June 18, 2021). *Abled Arrogance, Not Hearing Fragility*. Retrieved from <https://notanangrydeafperson.medium.com/abled-arrogance-not-hearing-fragility-3cc7d2a496e3>
- Rosenstock, R., & Napier, J. (Eds.). (2016). *International Sign: Linguistics, Usage, and Status*. Gallaudet University Press.
- Schmitt, P. (2017). Representations of Sign Language, Deaf People, and Interpreters in the Arts and the Media. *Sign Language Studies*, 18(1), 130-147. <https://www-jstor-org.ezproxy.neu.edu/stable/26478214>
- Stokoe, W. C. (1960/2005). Sign language structure: An outline of the visual communication systems of the American deaf. *Journal of Deaf Studies and Deaf Education*, 10(1), 3-37.
- Stone, C. (2009). *Toward a Deaf translation norm*. Gallaudet University Press.
- Stone, C., & Woll, B. (2008). Dumb O Jemmy and others: Deaf people, interpreters, and the London Courts in the eighteenth and nineteenth centuries. *Sign Language Studies*, 8(3), 226-240.
- Sutton-Spence, R., & Woll, B. (1999). *The linguistics of British Sign Language: an introduction*. Cambridge University Press.
- Tervoort, B. T. M. (1953). *Structurele analyse van visueel taalgebruik binnen een groep dove kinderen* [PhD, Universiteit van Amsterdam]. Amsterdam.
- Vélez-Ibáñez, C. G., & Greenberg, J. B. (1992). Formation and transformation of funds of knowledge among US-Mexican households. *Anthropology & Education Quarterly*, 23(4), 313-335.
- Venuti, L. (2017). *The Translator's Invisibility: A History of Translation* (1st ed.). Routledge <https://doi.org/https://doi.org/10.4324/9781315098746>
- Whynot, L. (2015). *Assessing comprehension of international sign lectures: linguistic and sociolinguistic factors* [Macquarie University]. Sydney, Australia.
- Whynot, L. (2016). *Understanding International Sign. A Sociolinguistic Study*. Gallaudet University Press.
- Witter-Merithew, A., Johnson, L. J., & Russell, D. (2005). *Toward competent practice: Conversations with stakeholders*. Registry of Interpreters for the Deaf, Incorporated.
- Wittmann, H. (1991). Classification linguistique des langues signées non vocalement. *Revue québécoise de linguistique théorique et appliquée*, 10(1), 88.
- World Federation of the Deaf, n.d., <https://wfdeaf.org/>
- Wurm, S. (2014). Deconstructing translation and interpreting prototypes: A case of written-to-signed-language translation. *Translation Studies*, 7(3), 249-266. <https://doi.org/10.1080/14781700.2013.819293>
- Zeshan, U. (2000). *Sign language in Indo-Pakistan: a description of a signed language*. Benjamins.