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ASL: A Visual Language

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Language in the Real World: An introduction to linguistics challenges the traditional approaches taken to linguistics to provide an innovative introduction to the subject. By first examining the real world applications of core areas of linguistics and then addressing the theory behind these applications, this text offers an inductive, illustrative, and interactive overview for students. Key areas covered include animal communication, phonology, language variation, gender and power, lexicography, translation, forensic linguistics, language acquisition, American Sign Language, and language disorders. Each chapter, written by an expert in the field, is introduced by boxed notes listing the key points covered and features an author’s note to readers that situates the chapter in its real world context. Activities and pointers for further study and reading are also integrated into the chapters and an end of text glossary is provided to aid study.

Professors and students will benefit from the interactive companion website that includes a student section featuring comments and hints on the chapter exercises within the book, a series of flash cards to test knowledge, and further reading and links to key resources. Material for professors includes essay and multi-choice questions based on each chapter and additional general discussion topics.

Language in the Real World shows that linguistics can be appreciated, studied, and enjoyed by actively engaging real world applications of linguistic knowledge and principles and will be essential reading for students with an interest in language.

Susan J. Behrens is Professor of Speech–Language Pathology and Audiology at Marymount Manhattan College.

Judith A. Parker is Professor of English and Linguistics at the University of Mary Washington.
The truth about ASL is that until you really know it, you cannot appreciate it. Unfortunately, its stigma as an inferior language coerces us not to think of it as a real language until we learn enough of it to see that it is equal to, yet different from, spoken language.

Oliva, 2004, p. 132

AUTHORS’ NOTE TO READERS

The authors of this chapter are second language learners of American Sign Language (ASL). We are excited to have the opportunity to explore some of the basics of ASL linguistics here and are indebted to the members of the deaf community who have shared with us their rich culture and language. We hope that this chapter serves as an informative “appetizer” for those who do not yet know ASL and whets your appetite to look more deeply and seek more information, ideally leading to your own personal interaction with the deaf community, so that you too may truly know and appreciate it.

MV: I was first introduced to American Sign Language and deaf culture when my interests in psychology, languages, and how people understand and communicate with one another converged in an ASL course I originally signed up for “just for fun” in college. I had the privilege of having a deaf teacher who incorporated deaf history, ASL jokes, and her own personal experiences as a deaf person into the course, imparting to us so much more than “the signs for things,” as I had originally expected to learn. My formative ASL years were spent as a dorm supervisor at the Colorado School for the Deaf and the Blind, where I engaged in a true immersion experience like no other. As an instructor of linguistics at Gallaudet University, I continue to learn from the deaf community, my colleagues, and especially my students every day.

DT: My first exposure to American Sign Language came more suddenly than expected. As I
emerged from the subway to register for a class in ASL at the New York Society of the Deaf, I was struck by the sight of two groups of young men, one on the south side of 14th Street and the other on the north side. They were all in the middle of a very heated argument in sign language. Hands were flying, faces were red, and sounds were noisily spitting back and forth across the street. It was a mesmerizing and exciting sight; I had never seen anything quite as clear and passionate, and I was hooked. My original reasons for wanting to “learn signs” were immediately eclipsed by a desire to study and truly learn this new and beautiful language, and I entered into my introductory ASL class with more serious intentions. I was fortunate to learn ASL from all-deaf instructors. I completed every class offered, including the interpreter training program, ending up with a Certificate of Interpreting.

LLW: After my first semester of ASL at Marymount Manhattan College, I was feeling overly confident in my language skills and I decided I would work at a deaf camp for kids that summer. Somehow I had completely forgotten that I had (1) never met a deaf person, and (2) only had one semester of ASL. I showed up the first day of camp and quickly discovered I was the weakest signing staff member. Throughout that summer of miscommunications and unforgettable learning experiences, I realized that what I had thought would be a simple language to pick up was so much more. Since then my understanding of ASL, and my appreciation of it, have continued to grow.

**INTRODUCTION**

**EXERCISE 1**

Before you read further, take this true/false (T/F) quiz. Then, after you’ve read the chapter see if your answers have changed.

1. ASL is a universal language. T F
2. ASL signers from different states have different “accents” and dialects. T F
3. ASL uses the same grammar as English. T F
4. Deaf people prefer to be called hearing impaired. T F
5. ASL signs are pantomimed gestures. T F
6. ASL is easier to learn than spoken languages. T F
7. ASL can be used to discuss abstract concepts. T F

This chapter outlines the main concepts in the linguistic study of American Sign Language (ASL), a language used by deaf people in the United States and a large part of Canada. While the study of languages has been around for centuries, the vast majority of research has focused on spoken languages; approaching the signs used by deaf people as full-fledged, natural languages in their own right and therefore equally worthy of linguistic study is a relatively new concept. The first documented linguistic studies of signed language in the United States were carried out in the late 1950s and early 1960s by a team of researchers at Gallaudet University, led by William Stokoe. Stokoe and his colleagues conducted groundbreaking research, applying linguistic principles to what was at the time referred to simply as “signing” (Stokoe et al., 1965). Their work provided evidence that the signs used by deaf people were not simply pantomimed actions or spoken language produced with the hands; in fact, there are rules for both how to create the individual signs (phonology and morphology) and how to put the signs together to form sentences (syntax or grammar). Showing that signed communication shares all the characteristics that define other natural languages proved that what Stokoe et al. (1965)
termed American Sign Language is indeed a true language and laid the groundwork for the field of ASL linguistics (Valli et al., 2005).

In one chapter it is, of course, impossible to cover all of the aspects of ASL linguistics or to do justice to the remarkable number of discoveries that have been made over the past fifty years in this still-emerging field. Therefore, the focus here is on the main areas of linguistic inquiry and topics that are most of interest to a wide audience. Before we delve into the linguistic concepts, however, it is important that we look back to the past, to situate ASL in its appropriate historical context and to understand its relationship to other signed languages and to spoken English.

**History of ASL**

Many people are surprised to learn that American Sign Language is not a universal language. In fact, there are many different signed languages used by communities of deaf people all over the world; over 120 signed languages have been documented by linguists, and it is likely others are in use that have not yet been identified (Ethnologue, 2009).

Signed languages develop naturally out of humans’ need and desire to communicate with one another, just like with spoken languages, so anywhere there are groups of deaf people in close contact with one another for an extended period of time, a signed language is likely to develop. One of the main places that deaf people have historically come together is in residential schools, and thus most signed languages can trace their roots back to a particular location and a specific school. The roots of ASL reach back to the early 1800s and to Paris, France.

In the early 1800s, a man named Thomas Hopkins Gallaudet traveled from the United States to Europe to study the educational methods used with deaf students there. Gallaudet had met a young deaf girl, Alice Cogswell, and become fascinated with trying to communicate with her and understand how she perceived the world. Alice’s father was convinced that Alice and other deaf children in the United States would benefit from a formal education, and he encouraged Gallaudet to further study methods of teaching the deaf in Europe.

Gallaudet first went to England, but the Braidwood family who controlled the schools there were extremely protective of their methodology, which focused on teaching students using the oral approach, through speech and lipreading, rather than by using signs. After many frustrating months, it happened that Abbé Roch-Ambroise Sicard, director of the school for the deaf in Paris and notable authority on the education of the deaf, came to London to give demonstrations showing his success with the manual approach—a philosophy of deaf education that uses signed language as the mode of communication—using signs to communicate between teachers and students. Gallaudet attended a demonstration, put on by Sicard and two of his most notable students, Jean Massieu and Laurent Clerc, and was invited to return to Paris and learn the methods used there (Lane et al., 1996).

After months of study in Paris, Gallaudet was ready to return to the States. He convinced Laurent Clerc, who had been one of his deaf teachers at the school in Paris, to accompany him back to the United States to help him establish a school for the deaf. The two men worked together at learning each other’s languages; Gallaudet continued to improve his French Sign Language (Langue des Signes Française, LSF) and Clerc began learning English. Together they founded the first school for the deaf in the United States, in West Hartford, Connecticut, in 1817. The school, initially named the Connecticut Asylum for the Education and Instruction of Deaf and Dumb Persons, began with a class of seven students and expanded quickly; thirty-one students hailing from ten states...
were enrolled by the end of the first year. (The school is still open, now called the American School for the Deaf, and currently claims over 4,000 alumni.)

Many of these original students brought their own signs with them to the school in Hartford. These were **home signs** that had been developed by the students and their families in order to communicate; in some places small deaf communities existed and had developed signs (see Groce, 1985, for a description of Martha’s Vineyard as one example). The language that developed at the school was a combination of the students’ home signs and the LSF taught by Clerc. Over the years, graduates of the school and teachers who went there for training established schools for the deaf all over the United States, taking the signs they had learned at the West Hartford school with them (Lucas *et al.*, 2003) (see Figure 12.1). In 1864, Thomas Hopkins Gallaudet’s son, Edward Miner Gallaudet, founded the first college for deaf students, which later became known as Gallaudet University. It was there almost 100 years later that William Stokoe and his colleagues first labeled the signs used by the deaf community as American Sign Language.

A linguistic study comparing a sample of 87 signs in modern LSF and ASL found that 58 percent of them were **cognates**, meaning that the form of signs for the same concepts in the two languages are similar (Woodward, 1978). Linguists cite cognates as evidence that languages are historically related. For example, English and German are historically related and share many cognates: *night* and *Nacht*, *false* and *falsch*, *idea* and *Idee*, to name just a few. Similarly, ASL and LSF are historically related through their common ancestor, the signs used by Laurent Clerc in Paris and later in the United States.

**FIGURE 12.1** Signed instruction spread from Clerc’s school throughout the country

*Source: Lucas and Hogue, 2004, used with permission of C. Lucas and R. Hogue.*
An American in Paris

LLW: On a recent trip to Paris, I saw two deaf men signing on the street. Remembering the history of ASL, and having no knowledge of either spoken French or LSF (Langue des Signes Française, French Sign Language), I approached them to see if we could communicate in any way. Although our languages are indeed different, we were able to have a conversation and found that we were generally able to understand the concepts we were each trying to express.

The history of ASL demonstrates how signed languages develop naturally where groups of deaf people live out their daily lives together and interact, and how signed languages are passed down through these communities. Because this natural development occurs separately in different areas, there is not one universal signed language, but many distinct signed languages recognized throughout the world. The example that often is most striking to Americans is the fact that ASL is not at all similar to British Sign Language (BSL); although English is the written and spoken language of both Britain and the U.S., the signed languages used in the two countries are not related. This point also makes it clear that ASL is not simply a signed version of English; if that were the case, one would expect the British Sign Language and American Sign Language to be very similar, which in fact they are not. Even the signs used to represent the written English alphabet through *fingerspelling* are completely different: BSL uses a two-handed fingerspelling system, while fingerspelling in ASL is one-handed (see Figure 12.2).

Linguistics of ASL

Now that we have established the historical context of ASL, it’s time to turn our attention to the structure of the language itself. Stokoe’s two ground-breaking publications, *Sign Language Structure* in 1960 and *A Dictionary of American Sign Language* in 1965, used linguistic principles to scientifically prove that American Sign Language meets the full criteria of natural languages and should be classified as a fully developed language. Since then many scholars have done significant work to continue to explore the linguistic aspects of ASL, including its phonology, morphology, and syntax, as well as the sociolinguistic factors that impact and influence ASL. The sections covered below provide a glimpse into some of the linguistic aspects of ASL. There are whole books on ASL phonology (Coulter, 1993), ASL syntax (Neidle *et al.*, 2000; Liddell, 2003), and indeed an entire series on the sociolinguistics of ASL (Lucas, 1995). Instead of covering any one area in detail, we hope this survey of the core aspects of ASL linguistics will inspire you to look further into the areas that interest you most; a list of references, with additional suggested readings and materials, is provided at the end of the chapter. Because sign language is a visual and spatial language instead of an auditory one, it presents “a challenge to theories of linguistic universals” (Wilbur, 1979, p. 6). Ongoing linguistic discoveries about ASL and other signed languages continue to foster critical inquiry and expand our understanding of human language.

Iconicity

The factor of signed languages that makes them most different from spoken languages is of course modality. Signed languages are perceived in a visual modality while spoken
FIGURE 12.2 The British Sign Language (BSL) and American Sign Language (ASL) manual alphabets
languages are perceived in an auditory modality. This may seem straightforward on the surface, but it has a whole array of implications for the ways that languages are structured.

**Looking Deeper**

**DT:** As mentioned above, my first vivid exposure to ASL was watching two groups of young deaf men argue across a busy New York City street. As I watched that street scene years ago, I was awestruck, but I was not immediately aware of the complexity and completeness of ASL as a language. Rather, like many newcomers, I’m sure I thought it was more like a form of pantomime, similar to the game of charades. But once I looked below the surface and began to really understand, it became clear that ASL is a complex and sophisticated language complete in itself; so much more than what it seemed on the surface to me that day.

Many people who are not familiar with signed languages believe that they are simply systems of gesture or pantomime. This mistaken notion comes from the assumption that all signs are *iconic.* A sign or word is iconic if its form is related to its meaning. For example, in English there are many words that are iconic, such as *boom,* *ring,* *woof woof,* *ding-dong,* *whoosh,* and other such words that describe sounds. All of these words have in common that the way we say the word in English is related to how the thing we’re describing sounds. If you’ve studied other languages, though, you probably learned fairly early on that different languages use different words to describe the same sounds. The sound of a dog barking in Italian is described as *bau bau,* while in Russian it is *gav gav,* and in Japanese *wan wan.* All of these forms are iconic—the form of the word represents the sound it describes—and yet each language chooses a different way to express it.

When it comes to signed languages, iconicity is more apparent, because the language is expressed in a visual, rather than auditory modality. For spoken language, words can be iconic if they sound like what they represent; “the aural/oral modality is suited for iconic representations of sound images (including sounds of animate origin, such as human or animal vocalizations, and sounds of inanimate origin, such as explosions, rustles, or bells)” (Taub, 2001, p. 64). For signed languages, which are perceived in the

**Exercise 2**

1. Consider the following words: HOUSE, CAT, BOOK, EXPERT, WHY, FINE, WRONG, LIGHT. Try to predict if the ASL signs for these words are iconic or not. Now continue reading. Were your predictions correct? Are the signs iconic in the ways you expected? What aspects of the concepts they express allow for or discourage iconic representations in ASL?

2. Look up the following signs in several different sign languages (do an Internet search or try starting at [http://lsf.wikisign.org/wiki/Langue:Signes_du_Monde/English_TOC](http://lsf.wikisign.org/wiki/Langue:Signes_du_Monde/English_TOC)). Compare how they are represented iconically:

   (a) TREE
   (b) HOUSE
   (c) CAT
   (d) WOMAN
visual modality, signs that look like what they represent are iconic; anything that is visible can potentially be described with iconic signs.

Think about it; in a visual modality you can show the shape of a house, a cat’s whiskers, or a person opening a book. In fact, in ASL the signs for HOUSE, CAT, and BOOK (shown in Figure 12.3) are all iconic.

FIGURE 12.3a  HOUSE—iconically represents a roof and walls

FIGURE 12.3b  CAT—iconically represents a cat’s whiskers

FIGURE 12.3c  BOOK—iconically represents the action of opening and closing a book
Because ASL is produced visually, it’s easy to represent objects iconically, but this does not mean that anywhere near all the signs in ASL are iconic. Many of the signs in ASL, like *EXPERT*, *WHY*, *FINE*, *WRONG*, and *LIGHT* (shown in Figure 12.4) are arbitrary, meaning there is no overt relationship between the form of the word and its meaning.

So signed languages are not simply pantomime or gesture; they contain both iconic and arbitrary forms, just like all other languages, and the fact that there are relatively more iconic forms in signed languages than in spoken languages is simply by virtue of the visual modality being well suited for representing visually perceived objects and actions. “The smaller amount of iconicity in spoken languages, which has been attributed to the inferiority of iconic representations, could just as well have been attributed to the inferiority of the spoken modality in establishing iconic representations” (Taub, 2001, pp. 66–67).

As noted above, signed languages develop naturally wherever deaf people are in ongoing contact with one another. Of course, the initial attempts at communication between people who do not yet share a language are necessarily highly iconic and gesture based. “One way to explain the paradox of a language that has its roots in iconicity yet is abstractly structured is to observe its changes over time. ASL signs exhibit diachronic development in the direction of increasing abstract formation constraints” (Klima and Bellugi, 1979, p. 67). Over time, as certain gestures and iconic representations are used over and over again, they become conventionalized within that language community. Gradually, the widely accepted and frequent gestures transition from spontaneous pantomimes into standardized forms with specific meaning which function as lexical items: they become the words of the new language (Armstrong, 1999; Janzen and Shaffer, 2002).
Linguists who study the diachronic changes in ASL signs have shown that the tendency is for signs to shift from being highly iconic signs to being much more arbitrary. Once a sign has been established, it is then regularized over time and usage to fit within the linguistic system. Frishberg (1975) points out several patterns in these changes, such as centering the content information in the hands and thus reducing head or body movements; limiting the size of the signing space, making it smaller and more standardized; and regularizing the handshapes and movements in two-handed signs so that both hands produce similar action, thus decreasing the amount of visual distraction. These same types of changes, from iconic to arbitrary, can be seen in newer signed languages as they develop, most notably presented in the research on the development of Nicaraguan Sign Language over the past few decades (Kegl et al., 1999; Morford and Kegl, 2000).

**Phonology**

In the field of linguistics, phonology is often defined as the study of the sound system of language. In fact, the word is related to the Greek root phone, meaning ‘voice.’ In spoken language, phonology is the study of the speech sounds—the smallest building blocks of words. Each phoneme, or individual speech sound, does not have meaning on its own, but when combined with other phonemes can create a meaningful unit (a morpheme, but we’ll get to that later).

Signed language linguists challenge the view of languages as only spoken, and have thus taken a wider view of the term phonology and expanded its scope so that it applies to all human languages. Taking this broad approach, any word can be broken up into phonemes, small component parts that individually do not have meaning. In English, phonemes are the individual sounds that combine to form the words; in ASL, the phonemes are the individual parameters (Stokoe et al., 1965) that combine to form a sign: namely handshape, location, movement, orientation, and certain specific facial movements known as non-manual signals. The study of phonology deals with which phonemes a given language uses, how phonemes combine to form words, and how phonemes behave in a particular language.

Every sign in ASL can be analyzed in terms of these parameters:

- **Handshape**: how your fingers and thumb are arranged during the sign.
- **Location**: where you make the sign.
- **Movement**: where and how your hands move through space.
- **Orientation**: which way your palm is facing during the sign.

For example, the sign MOTHER in ASL is produced using a ‘5’ handshape with the palm facing left and moving toward the chin until the thumb touches the chin, and then moving slightly away and returning so that the thumb touches the chin again, as shown in Figure 12.5. Note that one-handed signs are produced using the dominant hand. If you’re right handed, you would sign MOTHER with your right hand and your palm facing left. If you’re left handed, you would sign it with your left hand and your palm facing right.

The hands are not the only articulators used in producing ASL signs; signers also use their faces to add meaning. Examples of uses of eyebrow and head positions to mark sentence types and grammatical structures are provided in the syntax section later on. Some signs also include non-manual signals as a parameter of the signs themselves; if these signs are produced without the appropriate facial movements, they
are incorrect. For example, the sign BITE is produced by closing a ‘C’ handshape on the dominant hand around a ‘B’ handshape on the non-dominant hand (see Figure 12.6). At the beginning of the sign, the signer’s mouth is open; as the dominant hand closes onto the non-dominant hand, the signer also closes her mouth, keeping the lips apart to show the biting action with her teeth. The non-manual signal must be produced so that it co-occurs with the action of the hand.

A few other examples of signs that require a non-manual signal are RELIEVED (blow out air making a ‘phew’ sound), NOT-YET (slightly open mouth with tongue protruding a tiny bit), and SUCCESS (purse lips together then separate them and expel the breath making a ‘pah’ sound), shown in Figure 12.7.

Just as in spoken languages, changing just one of the parameters can potentially make an entirely new word; these words that differ by only one parameter are called minimal pairs. Some examples of minimal pairs in English are bat and hat, pin and pan, and cap and can, where the meaning difference is created by a one-phoneme difference in the same word position. In ASL, the difference between the signs in a minimal pair can be the change in only the location, for example as in the signs ONION and APPLE, or perhaps a change in only the handshape, as in APPLE and CANDY. Look at the pictures of these signs in Figure 12.8 and you will see how similar certain signs can be to one another, with only the difference of a single parameter.
FIGURE 12.7  Signs that require a non-manual signal
FIGURE 12.8  Examples of minimal pairs

ONION

APPLE

CANDY
**So Close and Yet...**

**LLW:** During that first overly confident summer of working at a camp for deaf students, my deaf co-counselors ensured that I learned every “not taught in class” sign and of course all the “dirty words.” Amongst those words was “orgasm.” I could not wait to take all of the new signs back to my class.

One night the campers decided we would sleep under the stars. As usual, I fell asleep quickly, exhausted from trying to function in this new deaf world. All of a sudden I felt myself being shaken and heard the campers shrieking. Sleepily I opened my eyes to see the girls frantically signing: “Orgasm!” “Orgasm!” “Orgasm!” They pointed to their fellow camper huddled in her sleeping bag, awkwardly holding her arm. I was rapidly trying to sign “privacy” and “alone” and so on when I realized ten sets of eyes were blankly staring at me. One of the girls, finally realizing that I didn't understand this situation, grabbed my finger and pointed to the camper’s arm and fingerspelled B-U-G and mimed chomping her teeth up and down.

The camper was not having an orgasm as I had thought, but rather had been bitten by a large bug. As my deaf co-counselors explained the next morning (after they finished laughing), the signs ORGASM and BUG indeed have the same hand shape but are located spatially in different ways and require different facial expressions. Space and facial expression are an integral part of ASL, and that is one minimal pair I will never forget!

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**EXERCISE 3**

Using an ASL dictionary,² compare the parameters of the following pairs of signs. Which parameters do the two signs in each pair have in common? Which parameters are different? If only one parameter is different, that’s a minimal pair!

1. **RED—CUTE**
2. **SIT—CHAIR**
3. **SUMMER—DRY**
4. **BICYCLE—SHOES**
5. **RESPONSIBILITY—BOSS**
6. **ENJOY—HAPPY**
7. **MOTHER—FATHER**
8. **CHILDREN—THING**

*Source: Adapted from Valli et al., 2005: 21.*

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**Morphology**

Morphology is the study of the smallest meaningful units in language and how they combine to make more complex words. People who are interested in morphology want to understand the ways that a language uses smaller units to build larger units, i.e., they study word formation. In this section we will explore two ways in which ASL uses patterns of signs to create new words: deriving nouns from verbs and compounding.


Nouns from Verbs

One way in which ASL creates new words is by deriving some nouns from verbs (Supalla and Newport, 1978; Baker-Shenk and Cokely, 1991). ASL does this by using the same handshape, location, and orientation of the sign for the verb, but repeating the movement and making it shorter and faster. As always, illustrations and examples help make the relationship between these verbs and nouns clear.

Let’s start with the verb SIT. The sign SIT is made in front of the signer with both hands in a ‘U’ handshape (the first and middle fingers extended and together) with the palms facing down. The dominant hand starts above the non-dominant hand and moves downward in one smooth motion so that the bottoms of the dominant fingers are in contact with the tops of the non-dominant fingers (see Figure 12.9a). To produce the related noun sign CHAIR (Figure 12.9b), the signer uses the same location, handshape, and orientation as SIT, but produces a shortened movement repeated in quick succession.

This same change—repeated shortened quicker movement—can apply to several different verbs to produce semantically related nouns (Supalla and Newport, 1978). Other examples of related noun–verb pairs, seen in Figure 12.10a–f, include: FLY and AIRPLANE, PRINT and NEWSPAPER, and SELL and STORE. For all of these signs, the verb is produced with one strong movement and the related noun is produced with a shorter, yet repeated movement. The sign FLY uses a handshape with the thumb, first finger, and pinky extended. The dominant hand begins in a position near the signer’s

FIGURE 12.9 An example of a noun–verb pair
shoulder and moves forward and slightly upward. The handshape iconically represents an airplane’s nose and wings, while the movement iconically depicts the plane moving through the air. To produce the sign AIRPLANE, the signer uses the same handshape, location, and orientation but adds a repeated movement, as shown in the photographs in Figure 12.10. The same relationship can be seen in the examples of PRINT/NEWS-PAPER and SELL/STORE shown in Figure 12.10 c/d and e/f, respectively.

FIGURE 12.10 Some examples of minimal pairs (continued overleaf)
Compounds
Just as a compound is formed in spoken language when two smaller words are used together to create a new word, for example: sweet + heart = sweetheart, ASL and other signed languages also have compounds. For example, similar to English, the signs HOME (Figure 12.11a) and WORK (Figure 12.11b) are both signs that can stand on their own in their own context. However, if you compound the signs and produce them together, the new word formed is ‘homework’ (sign shown in Figure 12.11c).

You may notice when looking at the pictures for these signs, that the entire sign HOME and the entire sign WORK are not produced in the compound sign.
There are, in fact, three rules that apply to the initial signs to change them into the final form of the compound (Liddell and Johnson, 1986):

1. The first contact rule—if an original sign in a compound touches the body, only that contact is kept; any other movements from the original sign do not appear in the compound.
2. The single sequence rule—any repetition of movement in the original sign is deleted when the sign is used in a compound.
3. The weak hand anticipation rule—the non-dominant (or ‘weak’) hand is already in position during the first part of a compound, even though the original first sign may be a one-handed sign.
Let’s clarify these rules a little by looking at our example again: HOME\textsuperscript{\textregistered}WORK. The sign HOME on its own consists of an ‘O’ handshape touching the face close to the chin and then moving upwards and touching on the upper cheek. So the sign HOME contacts the body twice, once at the chin and once on the upper cheek. However, the first contact rule states that for any sign that touches the body only the first contact should be kept in the compound. Therefore, when the sign HOME\textsuperscript{\textregistered}WORK is produced, the hand does not touch the upper cheek; the ‘O’ handshape touching the chin is the only part of the sign HOME that appears in the compound.

The sign WORK is made in the space in front of the signer using both hands in fist handshapes with the palms facing down. The dominant hand starts above the non-dominant hand and moves downward to hit the non-dominant hand twice. (This is very similar to the movement in the sign CHAIR, which was shown in Figure 12.9b.) Because the movement in WORK occurs twice, when it is put into a compound, the single sequence rule applies, and the movement in the compound occurs only once.

The sign HOME is a one-handed sign, but because the sign WORK requires both hands, when the compound HOME\textsuperscript{\textregistered}WORK is produced, the weak hand anticipation rule applies, and the non-dominant hand moves into position at the very beginning of the sign HOME\textsuperscript{\textregistered}WORK. So the sign HOME\textsuperscript{\textregistered}WORK is produced by touching the chin (first contact rule) while moving the non-dominant fist out in front of the signer in panel 2 (weak hand anticipation rule) and then moving the dominant hand down to form a fist handshape that hits the non-dominant hand only once (single sequence rule).

Not all ASL compounds are the same as those found in English. In fact, most of them are very different. Table 12.1 shows a list of some ASL compounds and their meanings. Remember that for all of these compounds, the three compounding rules apply, resulting in the appropriate changes in form between the two original signs and the newly formed compound sign. If you search ASL dictionaries for the signs listed in Table 12.1, you’ll be able to see these principles at work.

<table>
<thead>
<tr>
<th>ASL compound</th>
<th>English translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOOD\textsuperscript{\textregistered}NIGHT</td>
<td>good night</td>
</tr>
<tr>
<td>GOOD\textsuperscript{\textregistered}ENOUGH</td>
<td>hardly adequate</td>
</tr>
<tr>
<td>TRUE\textsuperscript{\textregistered}WORK</td>
<td>truly, seriously</td>
</tr>
<tr>
<td>SLEEP\textsuperscript{\textregistered}SUNRISE</td>
<td>oversleep</td>
</tr>
<tr>
<td>SAY\textsuperscript{\textregistered}NAME</td>
<td>mention</td>
</tr>
<tr>
<td>THINK\textsuperscript{\textregistered}MARRY</td>
<td>to believe</td>
</tr>
<tr>
<td>THINK\textsuperscript{\textregistered}TOUCH</td>
<td>be obsessed</td>
</tr>
<tr>
<td>GIRL\textsuperscript{\textregistered}FRIEND</td>
<td>girlfriend</td>
</tr>
<tr>
<td>BOY\textsuperscript{\textregistered}FRIEND</td>
<td>boyfriend</td>
</tr>
</tbody>
</table>

Source: Adapted from Klima and Bellugi, 1979; Valli et al., 2005.

**Exercise 4**

**Compounds**

Match the ASL compounds in the column on the left with their meanings in the column on the right. Think about the meanings of the two original signs and see if you can guess what the compound form means.
<table>
<thead>
<tr>
<th>ASL compound</th>
<th>English translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 MOTHER~FATHER</td>
<td>(a) brother</td>
</tr>
<tr>
<td>2 THINK~SAME</td>
<td>(b) daughter</td>
</tr>
<tr>
<td>3 GIRL~SAME</td>
<td>(c) son</td>
</tr>
<tr>
<td>4 BOY~SAME</td>
<td>(d) pillow or mattress</td>
</tr>
<tr>
<td>5 BED~SOFT</td>
<td>(e) sister</td>
</tr>
<tr>
<td>6 GIRL~BABY</td>
<td>(f) parents</td>
</tr>
<tr>
<td>7 BOY~BABY</td>
<td>(g) to envision</td>
</tr>
<tr>
<td>8 THINK~EXPAND</td>
<td>(h) agree</td>
</tr>
</tbody>
</table>

**Syntax**

Syntax involves the study of how multiple words are put together to form phrases, clauses, and sentences. The major aspect of syntax that distinguishes signed languages from spoken languages is the way that different types of sentences are marked visually rather than through word order or vocal intonation.

In spoken languages, the vocal intonation is often used to distinguish which kind of sentence we are expressing. For example, consider the many different pitch patterns that could be used with the sentence *You like linguistics*. Imagine a situation in which someone would say each of the following examples. Think about how their meanings are different, based simply on the difference in intonation.

(a) ‘So, you like linguistics. What other classes do you like?’

(b) ‘You like linguistics? I’m taking it now and I really like it.’

(c) ‘You like linguistics? I would have never guessed that about you.’

(d) ‘You like linguistics? I can’t stand it.’

(e) ‘You like linguistics? Of all the things you could like, you really like linguistics??’

The sentence could be said with a fairly stable intonation, as in (a), in which case we would understand it as a statement of fact. In a casual situation a speaker might add a rising intonation at the end of the sentence, as in (b), marking it as a question rather than a statement (a strict grammarian would tell you that the English question should start with the word “do” but often in casual speech the “do” is not used). In addition to using intonation to distinguish between casual questions and statements, English speakers also use intonation patterns to emphasize certain words in the sentence, yielding the variety of different meanings shown above.

English speakers also use word order to mark different types of sentences. For example, declarative statements are generally produced in subject–verb–object order, imperative commands are stated without an overt subject, yes/no questions start with a form of *do* and then the subject and an uninflcted verb, etc.

In ASL, signers use their faces to mark these kinds of syntactic and intonational differences. Since the hands are the most salient articulators, linguistically relevant movements that are not produced with the hands are called non-manual signals (Baker-Shenk and Cokely, 1991). In addition to the non-manual signals discussed in the phonology section, non-manual signals are also used to mark syntactic structures. Non-manual signals on the face include position of the eyebrows, where the eye gaze is directed, the mouth configuration, and whether the cheeks are puffed or not. In addition, the signer can nod his or her head at different points in a sentence and with different levels of intensity to mark some types of sentence and discourse structures. A shake of the signer’s head indicates negation; it can either negate the signs produced simultaneously
with the headshake or negate the entire utterance. Signers also use their shoulders and the position of their body, for example leaning forward or backward, to mark syntactic structures. Let’s look at some examples.

**Declarative Statements**

For declarative sentences that provide information, the face and body are in a neutral position. In many instances, signers nod their heads to mark the end of the sentence and/or to add emphasis to the truth of the statement. This is the unmarked, or most basic, form of sentence in ASL; the other forms described below all include some kind of non-manual marking to distinguish them.

**Topicalization**

In many ASL sentences, the signer begins by mentioning some entity that will be important in what follows. This is called **topicalization**. The topic is separated from the main clause and marked with different facial non-manuals, including raising the eyebrows and pulling the head back, as shown in Figure 12.12. After the topic has been stated, the signer relaxes her face and body back to a neutral position to make a statement related to the topic. Often there is also a short pause between the topic and the statement portion of the sentence.

**Questions**

**Yes/No Questions**

To ask a **yes/no question** in ASL, the signer raises her eyebrows, widens her eyes, and tilts her head and body slightly forward. In addition the signer’s shoulders may be raised and the last sign of a question may be held longer than other signs. For example, in Figure 12.13a the signer is producing the sign READY with her hands; at the same time she non-manually marks this as a yes/no question by raising her eyebrows, widening her eyes, and gazing directly at the addressee to elicit a response. In Figure 12.13b the signer uses the same non-manual marking with the sign GO-AHEAD to ask whether she should proceed or wait. Notice, however, that the handshapes are different in Figures 12.13a and 12.13b. This question could be understood to mean *Shall I proceed?, May I go ahead?, Is it okay if I begin?,* etc. (The label q after the brackets indicates a question.)

![Figure 12.12 'That street? [It's] closed'](image-url)
Wh-questions

Wh-questions, sometimes called content questions, in ASL include a wh-word: WHAT, WHEN, WHERE, WHO, WHY, or HOW. In addition to using these signs to mark questions, non-manuals co-occur with the question. An example is shown in Figure 12.14. The signer squints her eyes and scrunches her eyebrows together. Her head is tilted to the side. (The label whq after the brackets means wh- question)

Rhetorical Questions

Rhetorical questions are questions that will be answered by the person who asked the question. English speakers use rhetorical questions for certain discourse purposes, especially in lecture formats; in ASL they are used more often in everyday conversation. The rhetorical question itself typically includes a wh-question word and is marked by the eyebrows being raised with the head either tilted or shaking slightly. In Figure 12.15, the signer starts with a topic and then marks the three signs FOOD MAKE WHO as a rhetorical question; the rhetorical question is labeled with ‘rhq’ after the brackets encasing the clause. She immediately signs the answer to her question by using a pronoun (pointing to the side) and fingerspelling the name SALLY.
Commands

Commands (also called imperatives) are signed by making direct eye contact with the addressee. The intent is to tell the addressee to do something, so the facial expression is typically serious and may include a frown. In Figure 12.16, the signer topicalizes the phrase THAT REPORT and then commands that the addressee must complete it by next Friday. She maintains direct eye contact with the addressee throughout the command and includes a stern facial expression at the end. In the glosses below the pictures, the imperative clause is labeled with an asterisk at the beginning and the end.

Conditionals

Conditional marking is used when signers want to express ‘if-then’ situations. In ASL the first part of the sentence sets up the ‘condition’ and the second part states the result. The non-manual marking on a conditional clause includes raised eyebrows and the head tilted back and often to one side. Between the conditional and the result statement, there can be a short pause and an eye gaze shift. The non-manual marking occurs during the signs of the conditional clause only. In the example in Figure 12.17, the conditional clause includes the verb PLAY and then the fingerspelled noun ‘chess.’ (Facial expressions in the rest of Figure 12.17 are emotive and emphatic, not grammatical.) Because the conditional includes a verb, the meaning of the conditional is akin to saying “if and when X happens, . . .” The conditional clause is labeled in the glosses with ‘cond’ following the bracket encasing the clause.
Recall from the earlier discussion of iconicity that signers’ hands can be used to represent objects. The examples listed there, HOUSE, CAT, and BOOK, are all “shape-for-shape iconic representations” (Taub, 2001, p. 69), also called “substitutive depiction” (Mandel, 1977: 65). Note that the three example signs iconically represent slightly different aspects of the objects they describe: the silhouette of a house, just the whiskers of a cat, and the opening and closing of a book.

In addition to representing objects in static ways, signers can also depict the size and shape of objects, the relative locations of things, and how things move. These types of signs are particularly difficult to classify and analyze using traditional linguistic terminology developed for spoken languages, as is evidenced by the many labels that have been used to describe them: “classifiers” (Frishberg, 1975; Supalla, 1986), “polymorphemic verbs” (Engberg-Pedersen, 1993), “polycomponential verbs” (Schembri, 2003), and “depicting verbs” (Liddell, 2003).

These signs are clearly iconic but certain aspects are also quite conventionalized within particular signed languages. A few examples are given in Figure 12.18. In Figure 12.18a the signer is showing the size and shape of a metal pipe. She uses the ‘O’ handshape and puffs her cheeks to emphasize the diameter of the pipe; if it were a smaller pipe, the ASL convention would be to use an ‘F’ handshape, and if it were flimsy, she would use a different non-manual with the sign. In Figure 12.18b the signer depicts the locations of two dorms relative to each other; the handshape and palm orientation the signer uses are the conventionalized way to depict buildings in ASL. The sign in Figure 12.18c is a depiction of a person walking a long distance. The first finger extended upwards represents an upright person; the movement through the signing space represents the fact that the person walked from one location to another; both the up and down wiggling of the finger and the signer’s facial expression add the meaning that the distance walked was relatively far. In Figure 12.18d the handshape and movement depict objects moving rapidly forward as a group; it is understood from the context of the story that in this particular case the signer is using this sign to represent a group of boys running across a field.

Signers can also show people’s actions, retell what someone said previously, or represent a character in a story.

[In] the most mimetic, least stylized instances . . . signers are free to do any action at all, with the understanding that their movements represent the actions of some referent person, i.e. someone else, or themselves at a different time. This iconic device is roughly analogous to quoted speech in spoken languages—but for signed languages, what is
a) ‘long thick pipe’

b) <DORM>topic

‘located here and here’

c) ‘person walking a long distance’

d) ‘group of people running across a field’

FIGURE 12.18 Different types of depiction in ASL
reported is not sound but body movement, both linguistic and nonlinguistic, i.e. both signing and other actions.

(Taub, 2001: 75)

Examples of this are shown in Figure 12.19. In Figure 12.19a the signer is depicting someone pulling up a blanket and pretending that he has been asleep. In Figure 12.19b the signer is depicting the dorm supervisor angrily asking who snuck out. The signer shows that he is representing two different characters through the change from a) to b) in his facial expression, eye gaze, and body position. The depiction of people’s words and actions in signed languages is labeled constructed dialogue and constructed action (Metzger, 1995), similar to current analyses of what was formerly labeled “reported speech” in spoken languages.

FIGURE 12.19 Depictions of two different characters in a story

CONCLUSION

This chapter has provided a glimpse of American Sign Language as it is understood through linguistic research. As languages produced in the visual modality, signed languages are able to capture aspects of the world around us and communicate them in ways not accessible through spoken languages in the auditory modality. Simultaneously, they employ many of the same structural features and systematicity that is found in all languages throughout the world. As such, the unique features and qualities of signed languages continue to stretch our definition of language while reinforcing our understanding of the linguistic systems that people use to communicate. The more we broaden our perspectives to include signed languages, the more we allow ourselves to know them and to become truly able to appreciate them.

NOTES

1 “Deaf” with a capital D is often used to refer to individuals who use American Sign Language and consider themselves to be culturally deaf. The word “deaf” written with a lowercase d is used as an all-encompassing term referring to people who have a hearing loss. This chapter will use the lowercase d throughout, except in the names of schools.
2 There are many options for ASL dictionaries. Check out your library or bookstore for ASL dictionaries to borrow or purchase. An Internet search will yield several online ASL dictionaries such as http://commtechlab.msu.edu/sites/aslweb/browser.htm, http://www.handspeak.com/sign/index.php, and http://www.aslpro.com/cgi-bin/aslpro/aslpro.cgi.


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