A Cross-Linguistic Guide to SignWriting[®]

A phonetic approach



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A Cross-Linguistic Guide to SignWriting[®]: A phonetic approach

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A note from the authors

SignWriting[®], also known as Sutton Movement Writing for Sign Language, was invented by Valerie Sutton in 1974. Over the years the system has changed significantly and has gradually grown in acceptance and popularity in more than 30 countries. While there are other writing systems and notation systems for writing signed languages, we have not found any system that is as useful for writing accurately any sign or movement (including all non-manual movements and expressions) with relative ease and speed. It is also the only writing system that we have tried that is possible to read faster than one can physically produce the signs (outpacing even photos and line drawings in ease and speed of reading).

We have taken much of the material for this manual from a course we developed for teaching SignWriting (SW) to Deaf adults in Spain. That course in Spain focused on teaching the symbols of SW that are used in Spanish Sign Language (or LSE, for *Lengua de Signos Española*) with a heavy focus on reading. It was developed as a 30-hour course, in which the students were not expected to do much homework and much of the in-class time was spent reading stories in LSE. The material was designed so that the simplest and most common symbols were introduced first.

This manual differs from the original course materials in several ways. This is a course for field linguists, not for Deaf signers of one particular language. As a result, this book introduces a larger number of symbols with a focus on understanding the principles behind the symbol formation. While this manual teaches far more handshapes than are likely to appear in any given signed language, even so it is not an exhaustive study; it is almost impossible to teach all the potential handshapes from all the signed languages of the world. However, *any* handshape can be represented accurately, once one understands the principles behind symbol formation.

This course primarily focuses on the *phonetics* of writing rather than the *phonology*. In other words, we focus on details of a sign and not on how to simplify the writing to reflect the system of a particular language. For example, in many languages there may not be a meaningful distinction between a handshape with the thumb extended and the same handshape with the thumb folded over. However, here we will teach all the symbols and leave the task of consolidating non-distinctive symbols for the phonologists and literacy specialists.

The literacy courses in Spain did not expect the students to do a lot of work outside of class. Those courses also focused primarily on reading with less emphasis on writing. Here, many more symbols have been added to the manual. As a result, the student will be expected to do work outside of class, both studying this manual as well as lots of writing practice. The goal of this course is, that by the end, students will be able to sit down in a language-learning situation and accurately and quickly take notes about what they are learning. To reach this level, students will need to put forth a significant effort. As with many skills, "practice makes perfect."

While the original course placed a heavy focus on non-manuals (e.g., facial expressions and head and body movements), this course is primarily interested in writing individual signs. Non-manuals will be introduced in units 10 - 12. This focus on the manual elements of the sign does not mean that non-manuals are not important or that

this writing system is somehow incapable of representing the rich non-manual structures of signed languages. On the contrary, SW has a very extensive set of non-manual symbols capable of recording the intricacies of non-manual movements. However, due to the limitations of this course, we will leave many of the intricacies of non-manuals for discussion in the phonology and syntax courses (although the symbols will be presented here).

While this course is not a literacy course, we have tried to maintain some of the same basic principles, such as starting with the most basic concepts and most common symbols and gradually moving toward the more difficult and more obscure.

The examples in this book come primarily from Spanish Sign Language (LSE) unless specifically marked otherwise. We have purposely chosen this language because most users of this book will not know LSE. One of the primary goals of this course is that the students develop the skill of seeing a sign or phrase that they have never seen before, copy it accurately with their hands, and then write it down (see it, do it, write it).

This is not a literacy course. We will not discuss issues such as how to design literacy materials or which set of symbols should be used for a particular language. Nor will we discuss the sociolinguistic implications of introducing or using a writing system in a Deaf community. Likewise, we recognize that there are other writing systems out there. We have chosen SW because it is best suited for our purpose of writing quickly and accurately in a field situation. Although there are several computer programs available that use SW, we will focus on handwriting. Computer programs will probably change significantly in the next few years but the writing system will likely remain fairly stable.

We hope you enjoy this course and find it useful.

June 11, 2006 Steve and Dianne Parkhurst



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Contents:

- Observer's perspective and signer's perspective
- Hand orientations
- Contact symbols: touch
- Some basic handshapes
- The head, arm/wrist

Two perspectives

Observer's perspective



Signer's perspective

When you sign to someone, you see your own hands. You see the signs from your own perspective.

This is called the "signer's perspective" or *expressive viewpoint*.

When another person signs to you, you see his hands. You are an observer.

This is called the "observer's perspective" or *receptive viewpoint*.





SignWriting is based on the signer's perspective—how you see your own hands when you sign.

Hand orientation



When you read and write a sign, you write it the way you see your own hands.

The palm

If you can see the palm of your hand as you sign, the symbol that represents the hand will be **white** (or not shaded). On a chalkboard, it will be a hollow symbol outlined with chalk.

The back of the hand

When you see the back of your hand, the symbol that represents the hand will be **black** (or shaded). On a chalkboard, it will be the color of the chalk, which may be white.

The side of the hand

When you see the side of your hand, the symbol for the hand will be **half white**, **half black**.

The white/unshaded part of the symbol shows which direction the palm is facing. The black/shaded part of the symbol shows which direction the back of the hand is facing.



Rotating the hand



You can turn the symbol in any direction.

Contact symbol: Touch

SignWriting includes symbols that tell what kind of contact the hands make during the sign. This is the first contact symbol:

Touch

An asterisk is used to mean **touch**.



The **touch** symbol is used when the hands touch each other or some part of the body.

Try to read these signs:



New handshapes







The closed fist

The closed fist is written as a **square**.

If, when you sign, you see the palm of your hand, the symbol used to represent it will be **white**.



If you see the side of your hand, the symbol will be **half black and half white**.



If you see the back of your hand as you sign, the symbol will be **black**.





This square with one line extending from the corner represents the fist with the index finger extended.

If, when you sign, you see the palm of your hand, the symbol used to represent it will be **white**.



ALONE

If you see the side of your hand, the symbol will be **half black and half** white.



LAW

If you see the back of your hand as you sign, the symbol will be **black**.



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The head, arm/wrist

A **circle** represents the head. You have to imagine that you are seeing your own head from **behind** you.

When you are signing with your right hand close to or touching the right side of your head, you write the symbols for the hand and the contact at the right side of the circle, overlap the hand and the head, or write the contact on the head itself:





Contents:

- Hand orientations: the "top-down" point of view
- Straight up-and-down movements
- Contact symbol: brush
- Some basic handshapes
- Straight forward-and-back movements

Two points of view



Forward view Hand parallel to the front wall

When the hand is vertical/upright, or **parallel to the front wall**, it's easy to see what its configuration is when looking from the forward point of view.

But when your hand is horizontal, or **parallel to the floor**, it's hard to see what its configuration is from the forward point of view.

What can we do???

Top-down view Hand parallel to the floor

Because it's hard to see its configuration from the forward point of view, when your hand is parallel to the floor, you write it as if you were seeing it from above.





Remember: this symbol means that the hand is parallel to the floor. It doesn't matter if you can actually look down on it or not.



We'll look at some examples of configurations that we already know, but this time they'll be written from above, parallel to the floor.











Movement arrows

Up-down movements

Up-down movements are parallel to an imaginary wall in front of the signer, on the vertical plane.

They are written with **double-stemmed arrows**:



Unit 2

Vertical

Straight up

Left- and Right-hand movements

Left-hand movements

When the arrow head is **white**, it means that the **left** hand moves:



Right-hand movements

When the arrow head is **black**, the **right** hand moves:



In the following example, only the left hand moves.



In this example, only the right hand moves.



Examples of signs that use one hand:



In the examples below, each hand moves several times. When there are several arrows for each hand, we read the sign's movement **from the center toward the edges** or **from the top to the bottom**.

Examples:



Sometimes seeing all those arrows can be confusing. One simple tool to help us remember where to start reading the arrows is the one written at the right, called a **tie**. The tie helps us remember that these two arrows are "tied together" and their movements are **simultaneous**, happening at the **same time**.



Examples:



Contact symbol: brush

Brush

This type of contact is written as a circle with a dot in the center.

Brush is a light contact in which the hand slides across another surface and then separates again.

Examples:



More handshapes



Handshape:	Is written like this:	Example:
A A		PROGRAM
MA 72	当当当	
(The second seco		OBEY
M	坐 \¥ ¥ 省- 省- 省	** SIGN



Note that these handshapes have a circular base. The circle base is only used in handshapes where the circular form of the fingers is important. In many languages, these two — handshapes are interchangeable; even when the base is



relaxed, forming a circle, signers do not view the circular form as important to the meaning of the sign. In other languages, these handshapes are viewed as distinct and the form of the base *is* important.

More movement arrows

Forward-and-back movement

Forward-and-back movement is movement that is parallel to the floor. It is written with **single-stemmed arrows**:





Note the difference between these pairs of signs:



Remember: these groups of arrows represent movements on two planes:







Movements that are parallel to the floor, or forward-and-back

When the two planes overlap, some arrows on each plane represent the same movements toward the sides.



Straight movement toward the sides can be written using double-stemmed or single-stemmed arrows. *The arrows below represent the same movements*:



These double-stemmed arrows are the same as these single-stemmed arrows.

The sign TABLE can be written either way:



They are exactly the same.

Examples of single-stemmed arrows:



Both hands move as one unit

There are times when the two hands move together as a single unit. Sometimes the use of a separate arrow for each hand becomes confusing and it is difficult to know where to put the arrows. This usually happens when the two hands are touching each other or they follow the same trajectory. In these cases, we use a special kind of arrow head:

We call this an "open" arrow head (it is neither black nor white), and it means that both hands move together as one unit.





Contents:

- Handshape anatomy: thumb
- Signs that touch the body, arms and face
- Changes in handshape and orientation

Handshape anatomy: thumb

As we have already seen, an opposed flexed thumb that is holding down the other fingers is usually not written.





When the unopposed non-extended thumb is up to the side together with the other fingers, it looks like this:







When the unopposed extended thumb is out to the side, it looks like this:





Notice that from the side view, the thumb extends from the **black** part of the hand. When the opposed non-flexed thumb is straight forward, it looks like this:



Some new handshapes that follow these rules:





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The body

Sometimes the hands touch the body. When one hand touches the center of the chest, we write the contact symbol under the hand symbol.



When the hands touch one side of the chest or the shoulders, this heavy bar represents the shoulders. This bar is also used when the hands are close to one side of the body without touching it.



The hips

The second bar represents the hips. When the hands move near the waist, touch the waist or some part of the body near the waist, we write two bars (the top one represents shoulders and the bottom one, hips) and place the hands in relation to the hips. Note that a single horizontal bar **always** represents the shoulders. You **must** write two bars if you refer to the hips.



The arm

When the hand touches anywhere on the arm, we use a long line to represent the arm. If the focus is on the wrist or forearm, the arm bar is attached to the hand. If the point of contact is the upper arm, it is attached to the shoulder. The line must be long enough so that it will not be confused with a finger.



Back of head, back, and buttocks



These curved lines are written at the sides of the circle that represents the head to show that the hand is behind the head.

back of the head



Remember that your perspective doesn't change: just as the height of the hand (page 11) does not affect your ability to write it as if you are seeing it from above, so the position of the head does not change the hand's orientation. In these two examples, the orientation of the hand is the same: in the first, the back of the hand is touching the face; in the second, the palm of the hand touches the back of the head.





This same principle can be used for showing the back and the buttocks.



BACK



The face

Most of the time the hand (number 1 below) or the touch symbol (number 2) can be placed directly on the head symbol to show contact with the **forehead, temples, cheeks, jaw** and **chin**. Other times, piling up symbols becomes confusing. Another option is to place a **scoop** (number 3) on the point of contact, and place the hand and other symbols nearby.



These three options for the sign GERMANY all represent the thumb touching the forehead. Option 1 is a bit unclear due to the overlap of the symbols. Option 2 could be misunderstood as touching two separate locations on the forehead. Option 3 uses the "scoop" to show the location and the touch symbol to show that it is the thumb that touches the forehead.

Examples:



When the hand touches the perimeter of the face, we do not use the scoop. This includes signs that touch the **top or side of the head**, and **under the chin**.



The neck



This is the symbol used to represent the neck, to show that the hands touch or are close to the neck.

the neck





The eyes and eyebrows

When the focus of a sign is the eyes, or when the point of contact is the eyes or near the eyes, we write small semi-circles to represent (open) eyes.

Examples:



When the point of contact is the eyebrows, we use this symbol. (Later we will introduce facial expressions that include raised and lowered eyebrows.)





JOSE MARI (name sign)

The nose and mouth



When the nose is the point of contact for a sign, a short vertical line down the center of the face represents the nose. The contact symbol can be written on the nose line, on the face near it, or off to the side of the face, whichever is clearer or more exact.

Examples:



When the mouth is the point of contact or the focus of a sign, a short horizontal line is used to represent the mouth. (Later we will see that there are many mouth symbols used to represent the facial expressions and mouth patterns.) The simple horizontal line is the neutral mouth symbol and is only used as a point of contact.



QUIET

CIGAR



Changes in handshape and orientations

When a sign **starts with one** *handshape* **and ends with another**, if it is not obvious what the second one will be, we write both the initial and the final handshape. To read the sign, start with the handshape that is closer to the straight end of the arrow, and move the hand toward the arrow head. If there are no arrows that indicate which symbol is read first, we read from top to bottom and left to right.



When a sign **starts with one** *orientation* **and ends with another,** if it is not obvious what those orientations will be, we write both the initial and the final orientations.





Contents:

- Handshape anatomy: pinky, middle and ring fingers
- Some complex arrows
- Straight movements on the "side-wall" plane
- Basic punctuation

Handshape anatomy: pinky finger

The pinky extends at a 45-degree angle from the corner of the base. Notice that on the side view, the pinky extends from the white corner.



Middle and ring fingers

The **middle** finger is longer than the index and extends at a 90-degree angle from the center of the base. The **ring** finger is shorter than the middle finger and is usually placed between the corner and the middle of the base. The exception to that rule is when only the ring and pinky fingers are extended.



Note: the arm bar is thicker and longer than the middle finger. As in TATTOO, when the orientation of the hand is awkward, it may be necessary to write both arms to make it clear which hand is the dominant hand.

 YOUNGER BROTHER (Hong Kong SL)
 FIRST
 SECOND
 THIRD

More movement arrows

We can write more complex movements on the two planes (the front wall and the floor) using the single-stemmed and double-stemmed arrow convention that we use for straight arrows.



Unit 4

More straight movements

We have already seen straight arrows on two different planes (1 and 2):



But what about diagonal movements on this plane?

A horizontal line written across an up or down arrow is used to represent straight movement that moves away from the signer, up or down. The line can be thought of as representing the distant horizon. The horizontal line is close to the head of the arrow to show that the end point of the movement is away from the body (toward the horizon).



A black dot written between the lines of an up or down arrow is used to represent diagonal movements that move closer to the body in a straight diagonal line. The black dot is closer to the head of the arrow to show that the endpoint of the movement is closest to the body. Note that the black dot does not imply that the hand actually touches the body. The dot is only used as a relative point of reference.



Basic punctuation

Punctuation is mostly used for writing texts, not for phonetic transcription. However, a few basic punctuation marks are useful.

The symbol that corresponds to a **period** can be viewed as a long pause or a completion of an idea. At this point signers usually blink and might put their hands in a neutral postion briefly.

The symbol that we use for a **comma** refers to a short pause, sometimes while a signer mentions a list of items. We will introduce the full range of punctuation later in this course.

When we write a complete sentence, we finish the sentence with this symbol, which represents a **period**:

Two thin lines represent a **comma**. We use commas between items in a list or between related ideas. The use of commas helps us visually separate one idea from another.









"My house is narrow but tall, it has three floors."

TALL (pause)



Contents:

- Handshape anatomy: hooked fingers
- Circular movements
- Contact symbols: rub, hold, in-between and strike

Handshape Anatomy: "hooked" fingers

"Hooked" handshapes refer to handshapes that flex the finger joints (phalangeal joints). Notice which direction the fingers hook when the hand is rotated. On the front and back orientations, the fingers curl toward the part where the thumb would be. On the side view, the fingers curl toward the palm.



The thumb (when flexed and unopposed) always curls upward.



Thumb to the side (flexed, unopposed) vs. thumb forward (opposed):







Note: The index finger is turned away from the thumb on the front and back views. This helps us see that the index and thumb are not on the same plane. Compare this with the next three handshapes. Note: On the thumbforward handshapes, the index comes out of the top corner on the same side as the thumb. This shows more clearly the relative size of the gap between the thumb and fingers. Note: The gap can be larger or smaller than the normal gap. Many signed languages don't make this gap size distinction except in classifier constructions where the exact gap corresponds to a reallife measurement.

More hooked handshapes:





Degree of finger flex:





The degree of flexing may not be contrastive in some languages. However, the less-hooked symbol is more accurate when the point of contact is the tip of the index finger.





Examples:



ANTIQUE



JUNE





TO COME

JUNE (LSC)

More examples:



Circular Movement

SignWriting has arrows for various kinds of circular movements. This first type of circular movement starts at the elbow; the forearm and hand move as a unit with no wrist rotation. The arrow head shows the direction of the movement and the number of circles; it may also show the place where the movement starts. We will look at this type of movement on three planes.





Circular movement

When the hand moves in a circle on the same plane as the front wall, the movement you would use to wash a window, the movement is written with this arrow (plane 1).

This circular movement is always the same distance from the body.





TO LOOK FOR

OPINION



When the hand moves in a circle in a movement like you would use to wash a table with a cloth, this movement is written with this arrow (plane 2).





The arrow stem is **thicker** when the hand is **closer to the body** and **thinner** when the hand moves **farther from the body**.



Plane 3 (y,z) Circular movement



When the hand moves in a circle, the same movement used for rowing a boat, the movement is written like this (plane 3).

The arrow stem is **thicker** when the hand is **closer to the body** and **thinner** when the hand is **farther from the body**.



Two-handed movements

When a movement is written for both hands, this **tie** symbol **unites** the movements to indicate that that both hands move at the same time. The movement is **simultaneous**.



When the circular movement is written for both hands and the hands alternate, this symbol is used to show that the hands alternate as they circle. To make it clearer that the hands are alternating, the hands and circle symbols can be slightly offset from each other.





Contact symbol: rub

Rub (in a circle)



The motion of rubbing in a circle is written with a spiral.

A **rub** is when your hand makes circular contact with another part of the body, staying in constant contact without ever separating.



Rub (in a straight line)



This type of contact is written with the same spiral symbol, along with one or more arrows.

When the rub symbol is written with an arrow, the arrow determines the direction of the movement. The movement is made with constant contact in the direction(s) of the arrow(s).



Contact symbol: hold

We use a "plus" sign to represent a hold.









MARRIED

BROTHER (LSC)



Contact symbol: in-between

The symbol for **in-between** is an asterisk between two vertical lines.



In-between means a contact between two other body parts. It is most often used for contact between the fingers, but it can also mean that the nose is between the fingers or the hand is between the upper arm and the body.



Contact symbol: strike

Strike or hit is written using the "pound" sign (a tic-tac-toe grid).

Strike/hit means contact that is more forceful than a simple touch. In LSE, it intensifies a sign.





Contents:

- Handshape anatomy: bent handshapes
- Finger movement

Handshape anatomy: "bent" fingers

Bent handshapes refer to those handshapes where the fingers bend from the knuckle joint closest to the hand (metacarpal joint). These handshapes rotate like the hooked handshapes. If the fingers and thumb point in the same direction, the fingers point toward the palm of the hand.





There are exceptions to this rotation rule. As we saw with the hooked fingers (and illustrated below), when the bent fingers are on a separate plane from the extended thumb, the fingers must face the opposite direction from the thumb.



More "bent" handshapes:



Notice the difference between these two handshapes.





Thickness of the fingers: The handshape with only one finger extended uses a thin line for the finger. The handshape that represents multiple fingers uses a thick line.

Here the fingers are bent and spread.





Shape of the base: The square base is used when at least one finger tip is touching the palm:





The **rectangular** base is used when **all fingers are away from the palm:**



The **5-sided** base is used when all fingers are either fully extended or hooked (but not bent).



Examples:



Finger movements

Middle (phalangeal) joint closes



When the finger closes in the middle, as in a squeeze, this finger movement is written as a **black dot**.

We write the black dot near the finger that closes. Two black dots means two squeezes.

Examples:



Middle (phalangeal) joint opens When the finger as in a flick, the movement is wr circle. We write the cir fingers that flick

When the fingers are extended, as in a flick, the opening movement is written as a **white circle**.

We write the circle near the fingers that flick open or near the place where the movement is done. Two circles means two flicks.

A few handshapes that are commonly used with flicks:



If one configuration is more important than the other, we write the most important one. Usually the initial handshape is the most important; however, there are a few examples in which the end handshape is more important. These signs sometimes start with an "O" or a "1", and some start with an ASL "8", but they finish with these handshapes:





When the fingers bend from the knuckle, this movement is written as the tip of a small arrow head that points down.

When there are two arrow heads, the fingers bend twice.



PILLOW



UNDERSTAND





DREAM

Opening the fingers (metacarpal joints) from the bent position



When straight fingers are extended from the bent position, the movement is written as a small arrow head that points upward.

When there are two arrow heads, the fingers are extended twice.









TO EXPEL

UGLY

TURN ON LIGHT

INTELLIGENT
Opening and bending the fingers (metacarpal joints)



The fingers move togther, opening and closing from the knuckles, as if they were one unit. They are bent and extended together. This movement is represented by a string of arrow heads that point up and down, usually turned to match the up-and-down movement of the fingers.







ANGEL

FISH

MOUNTAIN



BUTTERFLY



WEAK



FRAMED PAINTING

Alternating opening and closing of the fingers from the knuckle (metacarpal) joints





The fingers alternate moving up and down, like when you drum your fingers on a table.

The symbol for this alternating movement is a double row of small arrow heads pointing up and down (2, 3 or 4 peaks).



Unit 6

Closing the hand from the knuckles, one finger at a time



The fingers close once, one at a time, starting from the little finger and ending with the index finger.

The symbol used to represent this single close of the hand is two arrow heads, one inside the other, pointing down.

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Remember: when a sign starts with one configuration and ends with another, if it is not clear what the two configurations are, we write both the first and the second. Also, if the index closes first, write the symbols closer to the index finger, angling toward the pinky (see note on page 70).



Opening the hand from the knuckles, one finger at a time



The fingers are extended, opening the hand one finger at a time, starting with the index and ending with the little finger.

The symbol for this alternating opening of the hand is two small arrow heads, one inside the other, pointing up.



Note: In some languages, opening or closing the hand one finger at a time can start with the pinky or the index/thumb. In some cases it may be contrastive and you will need to specify which finger starts the process.



Contents:

- Handshape anatomy: "mixed" handshapes
- Arcs on three planes
- Touching the ear or hair

Handshape Anatomy: "mixed" handshapes

There are a number of handshapes whose fingers have mixed degrees of flexion. For example, some fingers may be extended and others bent, as in the following examples:



Notice how the SW symbols for the extended fingers differ: the handshapes on the previous page have the index forward; the handshapes below have the middle or ring finger forward.



The following handshapes show one finger bent forward, with the others extended. When the thumb and bent finger are on different planes, the finger and the thumb must be shown on different sides of the hand symbol.



INDEX extended



MIDDLE extended



RING extended

In these handshapes the thick finger line is used to show that multiple fingers are extended together:



In these handshapes some fingers are fully flexed, others bent or rounded, and still others are fully extended. Notice that since some of the fingers are fully flexed, the base shape is a square (rather than a rectangle, as in the handshapes above).



Examples:



Curved Movement

These are the arrows that represent curved movements that form partial circles, on the same three planes as before.





Plane 1 (x,y) Curved movement

This group of arrows represents parts of the circular movement on the same plane as that of washing the window (plane 1).

These arrows represent movement that curves one direction or the other, without letting the hand come closer to or move farther from the body.



CHAMPIONSHIP FINAL RAINBOW TIRED

The SW program has 8 arrows that represent curved movement on this plane.



This group of arrows represents the parts of the same circular movement on the plane used for washing the table (plane 2).

These arrows represent curved movement that moves toward and away from the body.

The arrow stem is **thicker** when the hand moves **closer** to the body and **thinner** when the hand moves **away** from the body.



This group of arrows represents parts of the same circular movement as before, the movement used for rowing a boat (plane 3).



These arrows represent the same motion, but in the opposite direction:



These two arrows represent movements that curve over the top of the circle. The first comes back toward the signer in an arc, and the second goes up and over in an arc away from the signer. Singlestemmed arrows, with wider sections nearer the signer, are used because the basic movement goes more back and forth than up and down.

The arrow stem is thicker when the hand is closer to the body and thinner when it is farther away.



These two arrows represent movements that curve at the bottom part of the circle. The first represents a movement that comes closer as it curves under; the second curves down and under as it moves away from the signer. The basic movement is back and forth.

The arrow stem is thicker when the hand is closer to the body and thinner when the hand moves away from the body.



TO BE BORN





FROM THIS POINT ON



These two arrows represent up-and-down movement that curves toward the body. The basic movement is up and down, so the arrow used is double stemmed.

The black dot between the arrow stems means that the hand moves closer to the body during its trajectory and then moves away.

TO TAKE ADVANTAGE OF



These two arrows represent up-and-down movement that curves toward the horizon. Doublestemmed arrows are used because the basic movement is up and down.

ALREADY

The line that crosses the arrows represents the horizon; it means that the hand moves farther away from the body as it moves up or down, then it comes closer again.

∁₀∰





.))

ABOVE

SLICED HAM

RICH (money)

HIGHEST

The ear(s) and the hair

Woman NOISE COCHLEAR IMPLANT

When the hand touches the hair or the sign focuses on the hair, use this symbol.









DETAILS

HAIR STYLIST

SHAMPOO



Contents:

- Handshape anatomy: together and spread—C, E, and LSM
- Complex arcs
- Position symbols

Handshape Anatomy: C, E and LSM handshapes

Below are some handshapes that have not yet been introduced. The rotation of these handshapes follows the same principles as previous handshapes.





Some signed languages (e.g., Spanish Sign Language, LSE) tend to spread the fingers, while other signed languages (e.g., Mexican Sign Language, LSM) tend to keep them together. Some of these handshapes are used in LSM:



Unit 8











SHEEP (LSC) FINGERSPELL









SQUID EUROPE EXTREMADURA SCHOOL (LSM) (a region of Spain)



WORK (LSM)



TIME (old LSM)



FAMILY (LSM)



WEDNESDAY (LSM)

Complex arcs

Any type of movement can be written, whether complex or simple. We have already seen a curve and a circle. The curves can be written as sweeping arcs or tight circles. Circles can be full circles, ³/₄ circles, ¹/₂ circles, or ¹/₄ circles. Other movements include waves, repeated arcs, and spirals.

These movements are parallel to the front wall.





These movements are parallel to the side wall:



POSTPONE ANCESTORS HEREDITARY OCEAN

Position symbols

Sometimes it is hard to know which hand is on top of or in front of the other. These symbols can be used to make this information explicit.



Imagine a picture frame (above). Imagine placing an object on the top of the frame. The symbols on the right, with two lines (like a picture frame) and a bump, are sort of like placing your hand (the bump) on a picture frame (the two lines) that's hanging on the wall in front of you.



Now imagine a table; you're looking down on it (above left). Imagine touching the edge of the table with your hand. The symbols on the right, with single lines (like the edge of the table) and a bump, are sort of like placing your hand (the bump) on the side of the table (the line).

The lines represent the surface that the dominant hand contacts, whether it's the non-dominant hand, the forearm, etc. The "bump" represents the dominant hand and shows its relationship to the non-dominant hand or

surface of contact. Don't be confused about whether the hand is upright or parallel to the floor; these symbols simply show whether the hand is above or below a surface (first set), or in front of or behind a surface (second set).

If the hand symbols overlap, the position symbols are helpful; they let us show explicitly which hand is on top of or behind the other.

If two hands touch, and one is located to the right and the other to the left, position symbols are usually not necessary.

On each plane, the symbols we use most are the ones at the top and bottom of each set.

Look at these examples:





Contents:

- Handshape anatomy: under, over, crossed and stacked
- Arm twists
- Serial movements

Handshape Anatomy: under, over, crossed and stacked

Some handshapes are articulated with the thumb tucked inside or with the fingers draped over the thumb. In some handshapes, the fingers are crossed or stacked on top of each other. Most of these handshapes are relatively rare in signed languages, and we will not try to represent every possibility, nor can we show examples of each.

The first example below is a very common handshape and is often referred to as the "key" handshape. The index finger curls around the tip of the upright thumb. The second handshape below shows the thumb sticking up between the index and middle fingers (ASL "T"). The third handshape shows the thumb pushing the middle finger up.



If the knuckle of the middle finger is raised slightly (without the thumb pushing it up from underneath, as shown above at right), it is written like this:

In these examples, the thumb is tucked inside the closed hand:



Fingers can also be crossed.



Note: In ASL's letter "R", the index finger leans toward the ulnar side of the hand, and the middle finger crosses over it. These two fingers can also be crossed in the opposite direction. When documenting the *phonetic detail* of a language, it is important to specify which finger is crossed over the other. We specify this by writing the **finger that goes underneath as a straight line** starting from its normal position when extended, and writing the **finger that crosses over it at a slight angle**.

Since <u>most</u> languages are not going to make a meaning difference based on which finger is on top, a more generic symbol can be used. This symbol draws attention to the fact that the fingers are crossed but does not specify which finger is on top:



There are several "stacked" handshapes that occur in some sign languages. Again, notice which finger is stacked on top of the other.



Examples:



Arm twists

When the forearm is in an upright (vertical) position, or parallel to the wall, and twists, this is the arrow used to write that kind of twist.





The two parallel lines mean that the forearm is in a vertical position, just like double-stemmed arrows show movement on the vertical plane, or parallel to the front wall, or up and down.

The single-stemmed curved arrow means that the hand's rotation is parallel to the floor. Any of the four parts of the circle can be written.



These are the four basic types of this kind of arrow, and each can be used for either hand. To write the wrist rotation, choose the arrow that best describes the movement that your hand makes.













When the forearm is in a horizontal position, or parallel to the floor, and points forward and rotates, this arrow is used to write the movement.





The single line means that the forearm is parallel to the floor, for the same reasons that a single-stemmed arrow represents movement that is parallel to the floor.

The double-stemmed curved arrows mean that the hand rotates on the wall plane.

These are the four basic forms of this type of arrow. To write the movement, use the arrow that best represents the rotation of the forearm.







DOUBLE

TO BREAK



When the forearm is in a horizontal position, or parallel to the floor, crossing the body, this arrow is used to represent the movement.





The horizontal line means that the forearm is parallel to the floor, in the same way that a single-stemmed arrow represents a movement parallel to the floor.

The movement goes up and over, or down and under, just like the arrows that represent the top and bottom parts of a circle.

These are the four basic forms of this kind of arrow. To write this movement, use the arrow that best represents the movement of the forearm.





TO CLOSE (with key)



TO SIT DOWN



ID CARD

When you shake your forearm, as if you were shaking water from your hands, you use these symbols depending on the orientation of the forearm:





Trilled movements with the forearm parallel to the front wall

Trilled movements with the forearm parallel to the floor







MAN

FOREST

NORMAL



These arrows represent a straight movement with a simultaneous forearm twist, either as a single twist (first two groups) or a trilled movement (a rapid shaking motion) (second two groups).



Serial movements

When you want to write a movement in which **one hand moves and then the other,** this symbol is used. It means that one hand completes its action before the other starts to move. This symbol is related to the ties that represent simultaneous movements and alternating movements that we have already learned.









TO SPEND MONEY

TO BUILD

TO CALL A MEETING



TO WALK



PLANTS SPRINGING UP


Contents:

- Handshape anatomy: degrees of bending
- Side view and top-down view of the body
- Wrist movements

Handshape anatomy: degree of bending

Most of the time it is sufficient to specify that the fingers are either fully extended or bent at a 90-degree angle. It is rarely important to write inbetweeen degrees of bending. However, there are ways to write these subtle differences.



Below are the symbols for the index and middle fingers bent at the same angles as the three handshapes on page 104:



When writing phonetically, we need to be able to write small differences between handshapes, so it is important to know how to differentiate several degrees of bending. When choosing the symbol set for an orthography, most of this phonetic detail is ignored, and only a few easy-to-write and easy-toread symbols are used.

When writing the ASL letter M, in which the index, middle and ring fingers are bent over the thumb, these symbols are used (in SignPuddle):



Unit 10

These handshapes (sometimes used for ASL letters N and M) are represented by these symbols in SignWriter.



Sometimes it may be necessary to specify that two selected fingers are bent at different angles.



Side view and top-down view of the body

Most of the handshapes we have introduced in this unit (10) are most iconic and easiest to write from a side view. Normally we write the body from the signer's own perspective. However, occasionally there are signs that are hard to read from that perspective. An alternative perspective allows us to see the sign from the side. In these cases it is necessary to write a **side-view head** (with nose and eye) and a **dashed line representing the wall in front of the signer**. This is usually avoided in day-to-day writing as it can cause confusion regarding the direction of arrows.



PRESENCE the city of SANTANDER OBEY (LSM) (right hand moves forward) (both hands move down and away from the body)

Sometimes a **view of the body from above** is helpful in seeing how far the hands are from the body, movements toward the body, and signs that pass over the top of the head, written by showing the head and shoulders from above. This view can be used anytime that it makes the sign clearer since it does not cause confusion with the direction of the arrows like the side view



More examples:



Wrist movements

Some circular movements start from the wrist. In the examples below, the forearm stays in one position and the hand rotates in a circle. These are the arrows used for this movement on the three planes.



TO LOOK AROUND

Plane 1(x,y)Wrist rotation parallel to the wall in front of the signer



MANY HOURS

Plane 2 (x,z)Wrist rotation parallel to the floor



When the forearm stays in one position and the hand moves back and forth or up and down from the wrist, we write the movement with a "wrist bar," a short line that represents the wrist. The arrows show the directions that the hands moves, and the wrist bar simply shows that the movement arrows apply only to the hand (and not to the arm).





Any movement that is **primarily a wrist or hand movement** can be expressed by writing the **wrist bar** symbol **with the appropriate arrow**.







the letter Z

PARENTHESIS

2-PT SHOT IN BASKETBALL



Contents:

- Introduction to non-manual elements
- Eyebrows
- Punctuation: phrase marking, questions and quotes
- Head and body movement
- Dynamic symbols and classifiers

An introduction to non-manual elements

These next two units will focus on a wide variety of facial expressions and head and body movements. Most of these elements occur at the phrase level rather than at the individual sign level. For example, a negative head shake will often cover all the signs in a phrase and not just occur during the actual sign meaning NO or NOT.

The non-manual elements can change the meaning of a sign. For example, the sign TO-WALK can be altered to mean different things based on the facial expression or body posture:

- Walking leisurely
- Walking determinedly toward a goal
- Walking while angry
- Walking while tired
- Walking in my sleep
- A sad and mournful walk

The speed or tenseness of the sign can also change the meaning and is often combined with facial expression and body movement:

- Walking quickly
- Walking slowly
- Walking dreamily
- Big person walking
- Small person walking

It would be impossible to include all the possible facial expressions, but we hope to give you the most common ones, as well as cover a wide range of non-manual articulators.

Eyebrows

In many languages eyebrows play a crucial role in questions and in determining the subject of the clause. Eyebrows can either be raised (topic) or lowered (content question) as well as tensed (a worried or hopeful expression). Compare the illustrations below. The first face is neutral and therefore there is no need to write the eyebrow position.



Punctuation

Before we continue with more facial expressions, here are a few more punctuation markers that are very useful with these non-manual elements. These two symbols have already been introduced:



When the eyebrows (or other non-manual elements) cover a whole phrase, it is cumbersome to include the facial expression on each sign in the phrase. To avoid this, there are several options:





Raised eyebrows over the first few signs of a sentence.



Lowered eyebrows over the whole sentence.

Option 2: phrase bar above phrase (this option is not available with some computer programs, nor will it work with writing vertically in Sign Puddle).



Hopeful expression over two sentences

Question marks

Questions are enclosed between the symbols as shown below. If a facial expression is necessary to determine the type of question, it can be added above the initial question mark. Although many spoken language writing systems do not put a question mark at the beginning of a question, we have found it useful in signed languages: the question word often comes at the end of the phrase, yet the questioning facial expression starts at the beginning of the phrase. The first "question mark" signals the need to start using the correct facial expression.



Sometimes it is better to leave the question facial expression on the question word and let the question mark at the beginning signal the reader that a question is coming.



Colon and quotation marks

There are several other punctuation marks that are useful when writing texts. The **colon** is used to preceed a list of items. Some use it to precede a quotation. In each case the punctuation stands for a specific change in non-manual elements; this can include body shift, change of eye gaze, a different facial expression, etc. At the outset of documenting an unstudied language, the researcher will probably want to write the details of these non-manual elements; at other times, however, using a specific form of punctuation can be a helpful shortcut.

Quotation marks are also useful shortcuts that represent all the complex nonmanual elements that accompany a change in speaker, including body shift and change of direction of eye gaze. At this time there is not universal agreement about which symbols should be used to represent a quote. Below are three possible ways.



Head movements

You can write head movements that go up and down (like when you say YES) and movements that turn from side to side (like when you say NO).

When you nod your head (YES), the movement is written with little up-anddown double-stemmed arrows above the circle that represents the head. When you tip your head up to look at the stars, the movement is written with one double-stemmed arrow that points upward. When you tip your head down to look at the floor, the movement is written with one double-stemmed arrow that points downward.

When you shake your head (NO), the movement is written with little doublestemmed arrows that point from left to right. If you turn your head to look to one side or the other, write that movement with one double-stemmed arrow that shows the direction you're facing.



When the head moves forward, backward, or toward one side or the other, the movement is written with small single-stemmed arrows above the circle that represents the head.



When the head tilts to the side, making the nose follow a diagonal line instead of a vertical line, these symbols are written above the head. Imagine that you are drawing a (diagonal) line through the nose and crossing the shoulder bar.



head tilted to the right



head tilted to the left



TO SLEEP

Notice the difference between these three types of head movements:



Negative and affirmative phrases are often accompanied by a head shake or nod that covers the whole phrase. In these cases the bracketing symbols, introduced earlier in this unit, are very useful.

The following is part of a story about a cat who is playing with his reflection in the mirror. Here each sign has a different head movement.



Shoulder and trunk movement

When writing a text, sometimes we need to write what the shoulders are doing. If the shoulders are turned toward one side or the other, we position the shoulder bars to represent body turns to one side or the other.



When the movement itself is an important part of the sign, we write the shoulder bar, turned to the side, with an arrow that shows the direction of the movment. /5

The top-down view of the shoulders can also be used to show the body turned one direction or another.



When the body tilts from the hips toward one side, forward, or backward, the movement is written with these small symbols: short lines with a small ball on top, located on each side of the shoulder bar. The small ball represents the head, and the symbol is tilted as if it were a single-stemmed arrow according to the direction the body tilts.



As with any non-manual element, the direction and tilting of the body can be used with the bracket construction to show that a portion of the text is signed with the signer's body facing or tilting one direction or another. Below is the punctuation for a text where a signer might relate a conversation between two people. In the first sentence the signer tilts his body to the right and rotates his shoulders to face the left. The second phrase does the opposite.



Tenseness in signing

When writing a sign that is produced wth the muscles more tense than normal, use this symbol:



REALLY CLOSE



TO HATE



TO THINK HARD







STRANGE

TO HUNT

ANGRY

The tense symbol to write a classifier

To write a classifier, we use the symbol that is used to make a sign tense. When used as an indicator for a classifier, it tells us that the hand is held in space to represent another object. The classifier symbol goes under or next to the hand that is stationary.



TABLE PEN PUT-ON-TABLE

Other dynamic symbols: fast, slow and relaxed

In addition to writing the tenseness of a movement, we can also show that a sign (or phrase) is fast, slow, or relaxed.

This symbol is used to show that a sign is pronounced rapidly or more emphatically than normal.



This symbol is used to show that a sign is pronounced more slowly than normal. This symbol is placed above the entire sign.







A sign or a phrase that is signed in a **relaxed** way would use this symbol. This is somewhat different from the slow symbol. Relaxed is a smoothing of the movement features as well as a slight relaxing of the handshape.



CASUAL CONVERSATION TO STROLL ALONG LIGHT SNOWFALL

As with all non-manual elements, these dynamic features can be applied to a whole phrase or sentence using the brackets as discussed above.



Example of punctuation for a sentence signed faster than normal.



Contents:

- Eyes: aperture and eye gaze
- Nose
- Mouth: jaw, lips, teeth, cheeks and tongue
- Air flow

Eyes

We already learned the symbols used to represent the eyes when the hand is near or touches the eyes. When the eyes do something specific, these symbols can be used:



Sometimes it is important to specify that the eyes are closing or opening. We use the same kind of symbol for the eyes that we use for closing and opening the base joint of the hand. We write it either over or under the eye symbol. If the focus is the fluttering of the eyelashes, the movement symbol can be placed under the eyelash symbol.



close both eyes (blink)

close one eye (wink)

flutter eyelashes

Eye Gaze

Sometimes it can be important to write the direction the eyes are looking. We represent the eye gaze with two kinds of arrows: single stemmed and double stemmed. This illustration shows single-stemmed arrows, which tell us that the eyes are looking straight forward, toward the right or toward the left.



Unit 12

Here we see the double-stemmed eye-gaze arrows, which show that the eyes look up, down, to the side and diagonally.



Nose

The only systematic use of the nose as a linguistic significant non-manual element is the "nose scrunch" or "nose wrinkle". It is often accompanied by lowering the eyebrows or raising the upper lip.



Mouth

SignWriting has many symbols for mouth movements. They can be used to write mouth patterns associated with lip reading (and have been used for this in Germany). Also, with the addition of diacritics not introduced here, SW can also be used to write non-visible tongue positions.

These are some of the more common mouth shapes:







lips spread ("ee")





open mouth ("ah")





wide open mouth





rounded mouth ("oh")





rounded mouth, lips extended ("u")





lips rounded and extended, mouth closed (kiss)

Remember, the illustrations are from the observer's perspective, but the SW symbols are from the signer's perspective. This means that if the left side of the mouth on the illustration is raised, the right side of the SW symbol is raised.



one side of mouth raised

one side raised with teeth

biting side of mouth











top lip over bottom

lips in

bottom lip over top



Inflating one cheek only would be written like this:











teeth biting upper lip

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teeth biting upper lower lip ("f")







tongue between tight lips





tongue to the side with open mouth



tongue out and up





tongue out and down



tongue pushing out lip

Any of these tongue symbols can be rotated as needed:





tongue in cheek

jaw to the side forward

down

Sometimes the tongue or lips can trill during a sign. For these signs we use the same kind of movement symbol as for the opening and closing of the fingers (base joint) but placed directly above or beside the part of the mouth that is moving. The "biting" movement uses the "strike" symbol.



Air flow

If we want to represent either blowing air or sucking it in, we use the following symbols.







suck in air through the mouth



suck in air through the nose

Regular breathing is not usually marked; however, there are symbols that do mean inhale and exhale.

If it is necessary to represent breathing, this symbol can be used.

When combined with a dynamic symbol, the breathing can be fast, slow, labored, or relaxed.



inhale

exhale





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Appendix: Partial List of Symbols141-146

Appendix: Partial List of Symbols



Contents:

- Handshapes
- Movement arrows
- Other symbols
- Punctuation marks

Handshapes





Partial List of Symbols

Movement arrows







Partial List of Symbols



Partial List of Symbols

Punctuation marks





When the hand is turned so the fingers point toward the side, we can write the handshape with either of two symbols, from the two points of view. They represent the same configuration and orientation. Use the one that seems more logical or easier to read; sometimes that is determined by the position of the other hand.

