The Morphology of Classifier Handshapes in Italian Sign Language (LIS)

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This chapter analyzes the classifier system of Italian Sign Language (LIS), a topic that has not previously been addressed. However, such studies have been made for other sign languages, for eample, ASL (Boyes-Braem, 1981; Padden, 1983; Supalla, 1986; for a review Wilbur, 1987) Danish Sign Language (Engberg-Pedersen, and Pedersen, 1983), and Swedish Sign Language (Wallin, 1988). These studies propose various classifications and different terminologies. In the present analysis, I adopt the theoretical framework outlined by Liddell and Johnson (1987) in their analysis of spatial locative predicates of ASL. I became familiar with Liddell and Johnson's theory during the academic year I spent in Washington, D.C., at Gallaudet University, in the Department of Linguistics and Interpreting.

LIDDELL AND JOHNSON'S ANALYSIS OF CLASSIFIER PREDICATES IN ASL

In their analysis, Liddell and Johnson isolate, according to the meaning of the individual movements, three categories of predicates: process roots, stative-descriptive roots, and contact roots.

In the first category, the process roots, the movement of the hand corresponds to movements of entities. For example, in

(1) 3-CL (move right to left)

the movement of the hand corresponds to the movement of a vehicle. In another example,

(2) 1-CL (move right to left),

the movement of the hand corresponds to the movement of a person.

In the second category, the stative-descriptive roots, the sign describes a state rather than an action or a process. In these signs, the movement of the hand corresponds to physical attributes of the object being described. For example, in

(3) B B (lumpy surface),

one hand remains stationary while the other traces out the shape of a surface. In this example, the movement of the hand does not correspond to any change in the entity, but shows the form of the object being described.

In the third category, the contact roots, the movement consists of a single, short, typically downward movement followed by a hold that establishes the location and orientation of the entity being represented by the handshape. For example, in

(4) 3-CL (contact root),

the sign locates a vehicle but does not correspond to any movement of the vehicle. If a movement should be represented, it would become a process root.

To summarize, the three categories share the following three characteristics: hand configuration is meaningful; location of the hand is meaningful; orientation of the hand is meaningful. Furthermore, Liddell and Johnson propose a classification of the hand configurations that are used in these productive predicates into six categories: whole entity, surface, instrument, size, width-depth, and perimeter shape.

ANALYSIS OF CLASSIFIER PREDICATES IN LIS

I identify Liddell and Johnson's three categories of predicates in LIS. In the following examples I use the notational system adopted for LIS in Corazza et al. (1985) and Volterra (1986).

An example of a process root is

(5) B-CL (move to right)

in which the handshape can represent a surface or a vehicle or an animal turning to the right.

An example of a stative-descriptive root is

(6) B B (lumpy surface).

In this case, as in the ASL sign, only the shape of a surface is represented.

An example of contact root is

(7) B-CL (short downward movement).

In this case, the handshape can represent the location of a surface or a vehicle or an animal.

I identify the following categories of meaningful hand configurations: grab, surface, descriptive, perimeter, and quantity.

Grab

The first category is very similar to the category called "instrument" by Liddell and Johnson. It contains handshapes where the grasping hand acts as an instrument or represents the instrument itself. The characteristics of this class of handshape morphemes are as follows:

- They can be used only with a process root, for example,

  (8) T (FISHING-LINE), C (GLASS), L (CLOTHES-PEG).

- They can operate on body locations and they allow other handshapes to be located on them, for example,

  (9) B B (PRESS-SANDWICH), 5 H (BEND-KNIFE).

- They show control over some other entity, for example,

  (10) C (pick up a glass and release it).

A first list of handshapes in this category are found in table 1 and figure 1. The corresponding meaning is reported with each handshape.

Surface

The handshapes in this category represent surfaces. They have the following characteristics:

- They are used with a contact root and a process root, for example,

  (11) B-CL (CAR).

- They can operate on body locations and they can represent a surface upon which other entities can be located, e.g.

  (12) V-CL (PERSON).

This category contains various types of vehicles represented by different handshapes, for example,

(13) Y-CL (AIRPLANE).

Different handshapes represent also the number of people

(14) 4-CL (FOUR PERSONS).

Table 2 and figure 2 contain a list of handshapes included in this category.

Table 1. **Representative Grab Morphemes**

Handshape	Meaning
G	finger
H	knife
... 3	crane
L̂	small object
... L	round, small cup
# L	clip
... 5	ball
# 5	postcard
B̂	sandwich
C	glass
G	hook, scratch
As	suitcase
○ F	coin
V	hooks
I	string
# F	sheet of paper
# T	fishing line

Descriptive

The handshapes in this category contain information about shape and size of entities and sometimes other information as well. This category is similar to what Liddell and Johnson call "depth and width morphemes." These handshapes share the following characteristics:

- They are used only with a descriptive root, for example,

  (15) B B (DESERT).

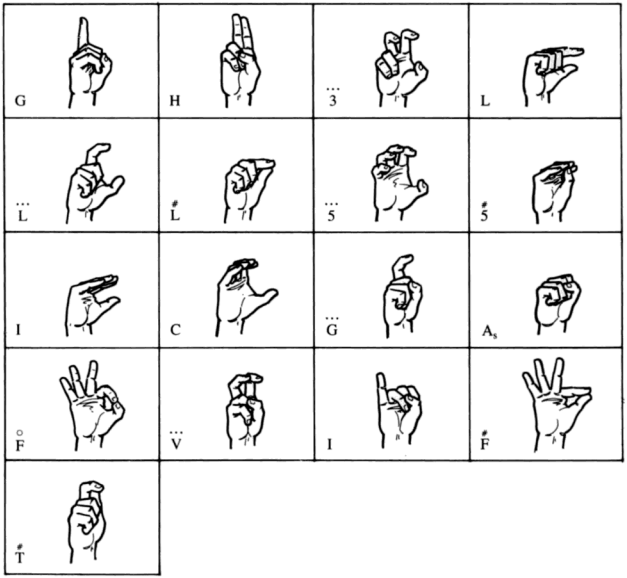

Figure 1. **Representative grab morphemes.**

- They can operate on body locations, but they will not allow any other handshape to be located on them, for example

  (16) G (LINES),

  (17) C C (COLUMNS).

  The handshapes of this category are reported in table 3 and figure 3.

Perimeter

The handshapes in this category provide information about the perimeter of single entities. They have two characteristics, the first distinguishes them from descriptive handshapes; the second distinguishes them from surface handshapes:

Table 2. **Representative Surface Morphemes**

Handshape	Meaning
G	person, pole, knife, leg
H	plank, person, knife
Y	airplane
V	two persons, standing
3	three persons
⋯ 3	crane, pimple
L	gun
L̂	small objects
⋯ L	glass, little cup
5	five persons
⋯ 5	ball, cupola
5	tulip
4	four persons
B	frame, book, car, motorcycle
B̂	book, sandwich
C	glass
⋯ G	hook
As	handle
○ F	coin
⋯ V	on one's knees

- They are used with a process root and a contact root, for example

  (18) L L (PLATE).

- They can operate on body locations but they will not allow other handshapes to be located on them, e.g.

  (19) L L (PLATE-ON-HEAD).

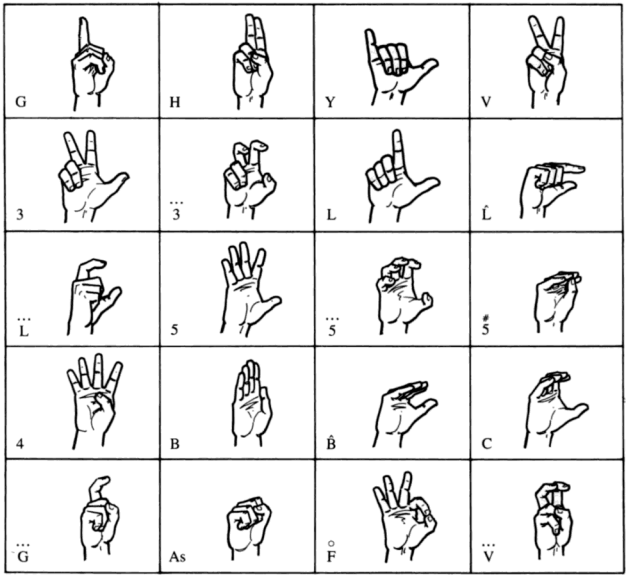

Figure 2. **Representative surface morphemes.**

When other handshapes are located on it, the same hand is classified as surface morpheme. A list of handshapes from this category is reported in table 4 and figure 4.

Quantity

This category is very similar to what Liddell and Johnson called "Extent morphemes." The handshapes in this category contain information about change in length, height, or volume. The change described can represent a decrease or an increase. I have chosen the term "quantity," but I am not yet sure that this term describes the meaning of the category in the right way.

The handshapes of this category have the following characteristics:

- They are restricted to use with a process root, for example,

Table 3. **Representative Descriptive Morphemes**

Handshape	Meaning
G	dot, line, liquid, path
H	wide line
V	two lines
3	three lines
L → L̃	rectangle
L̂	tape
L̈	vase
L̃	thin line
5	five lines
5̈	freckles
4	four lines
B	wall
B̈	cupola
B̂	thickness
C	column
G̈	hook
O	tube
F̊	tube
V̈	scratches
I	line
F̃	thin

(20) L] L (cigarette-becomes-shorter),

(21) L] L (liquid-in-a-glass-diminishing),

(22) Bo] B (pile-of-papers-reducing),

(23) C] B (pile-of-papers-reducing).

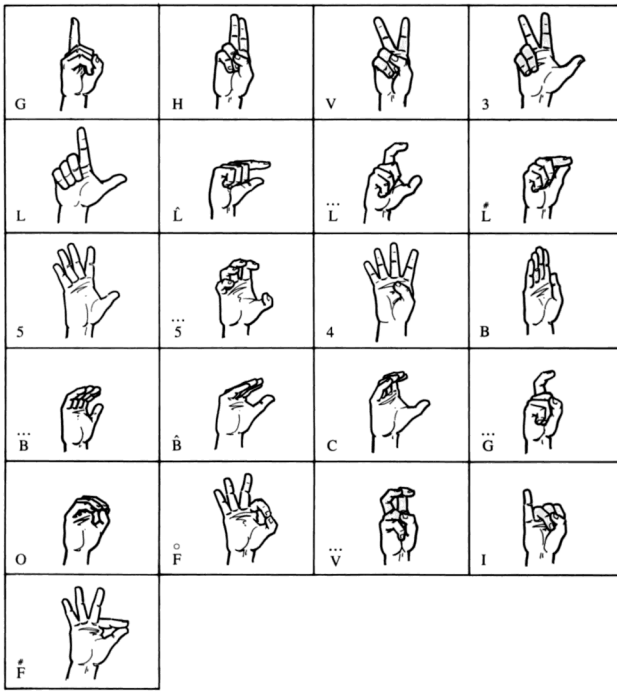

Figure 3. **Representative descriptive morphemes.**

Examples (20), (21), and (22) refer to length, depth of a liquid and volume respectively. The choice between examples (22) and (23) depends on the sign previous used in the sentence, but the meaning remains the same.

- They can operate on body location but they will not allow other handshapes to be located on them (see example [20]).

Table 5 and figure 5 report the complete list of handshapes in this category.

Table 4. **Representative Perimeter Morphemes**

Handshape	Meaning
L	frame
⋯ L	plate

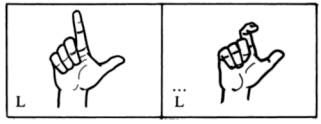

Figure 4. **Representative perimeter morphemes.**

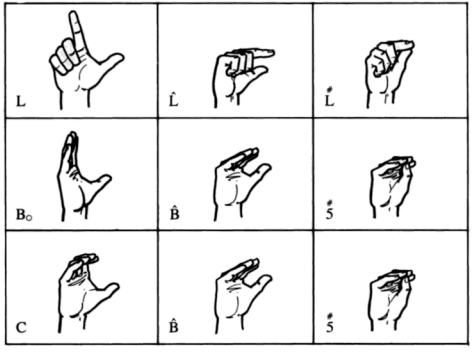

Figure 5. **Representative quantity morphemes.**

Table 5. **Representative Quantity Morphemes**

Handshape	Meaning
L → L̂	liquid, person, cigarette
Bo → 5̂	thickness
C → 5̂	idem

CONCLUSION

In this analysis I divide predicate roots into three categories, and I proposed five categories of handshape morphemes. I have found interesting rules on the combinability of predicate types and handshape morphemes. Some of the categories and some of the restrictions are similar to those found for ASL, but sometimes they look different.

I have not identified in LIS the category called "whole entity" by Liddell and Johnson. Examples in ASL are

(24) 3-CL (vehicle),

(25) V"-CL (animal).

In LIS, I have found handshapes that can represent groups of entities but not the whole category. These include:

(26) B-CL (car or animal),

(27) G-CL (long-thin-animal),

(28) $\overset{\cdots}{5}$-CL (big-animal or group-of-animal).

These handshapes do not have the same characteristics of those predicates in Liddell and Johnson's whole-entity category. In ASL, it is ungrammatical to place any other handshape morpheme on one of the surfaces of a whole entity classifer. In LIS, all the handshapes listed in examples (26), (27), and (28) allow other handshapes to be located on them.

More data on signers' intuitions and on spontaneous production are needed in order to make a complete analysis of the classifier system in LIS. Furthermore, a better understanding of the classifier system of a sign language can help us to understand the formational rules of the signs in that language.

NOTE

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