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**Verb Agreement, Negation, and Aspectual Marking  
in Egyptian Sign Language**

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**Verb Agreement, Negation, and Aspectual Marking  
in Egyptian Sign Language**

**by**

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## **Abstract**

# **Verb Agreement, Negation, and Aspectual Marking in Egyptian Sign Language**

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This research represents an initial attempt at a linguistic analysis of the grammar of Egyptian Sign Language (LIM). The paper addresses verbal agreement, negation, and aspectual marking in LIM and frames these grammatical features in a typological context. Particular attention is paid to the class of directional verbs, which spatially inflect to agree with their arguments, and the sub-class of backward directional verbs. The agreement structures of these verbs, as well as suppletive imperative verbal forms, generally pattern with directional verbs in other signed languages; this paper analyzes apparent exceptions in relation to similar irregularities in other signed languages.

There is an unusually large inventory of negative-marking strategies and an average-sized set of aspectual markers in LIM. Among them are crosslinguistically uncommon patterns such as frustrative (non-success/non-achievement) aspectual marking, a negative imperative, and possibly also morphological negation via either handshake change or palm-orientation reversal. The analyses and questions presented here lay the groundwork for future research in LIM and other signed languages.

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## **Chapter 1: Introduction**

### **1.1 Signed Languages and Sign Linguistics**

In the latter half of the twentieth century, signed languages began receiving attention as unique and natural linguistic systems differing from spoken languages in their grammar, lexicon, and modality. Research on signed languages has expanded scientific understanding of language emergence, language acquisition, cognitive processing of language, and structural and semantic variation in human language, as well as numerous other fields of study. Many similarities exist between spoken and signed languages, such as the presence of phonological, morphological, and syntactic structure. In spite of these parallels, the visual-spatial modality of signed languages contrasts with the audio-oral modality of spoken languages, resulting in several important differences, such as the grammatical use of signing space, the production of simultaneous utterances with paired articulators, and the potential for signs to convey more iconic information.

A great deal of sign linguistics research has focused on the signed languages used in the Anglophone world and Europe. However, an increasing number of studies have worked toward broadening the typological perspective through examinations of the linguistic structure of lesser-known signed languages such as Ugandan Sign Language (Lutalo-Kiingi forthcoming) and Kata Kolok (de Vos 2012), as well as crosslinguistic studies of particular linguistic features and phenomena such as patterned iconicity (Padden et al. 2013), possessives and existentials (Zeshan & Perniss 2008), and negation marking (Zeshan 2004). Taken together, the study of both signed and spoken languages

helps to construct a more complete understanding of the diversity of forms and functions in language, and of the ways in which languages emerge, change, and interact.

## **1.2 Egypt and Egyptian Sign Language**

The signed language used by the Egyptian Deaf community is known as Egyptian Sign Language, which I abbreviate as LIM, after the Egyptian Arabic *Lughat il- 'Ishāra il- Maṣriyya*. Over a four-month period (Feb–May 2012), I learned, observed, and used LIM with Deaf and hearing signers in Cairo and Alexandria. Deaf signers and hearing sign educators report that mutually intelligible varieties of LIM are used in major urban centers including but not limited to Cairo, Alexandria, Port Said, and Luxor. In accordance with the general effort in the sign linguistics community to reduce and remove dependence upon spoken language analysis, the present research is guided by current sign typology literature and in-depth linguistic studies of other signed languages. This paper contributes to the typological literature by analyzing patterns of verb agreement, negation, and aspectual marking in LIM, a signed language which has not previously been subjected to linguistic inquiry.

Apart from my field notes, the only documented data on LIM of which I am aware are contained in a DVD dictionary independently published by The Deaf Unit, a Cairo-based ministry of the Episcopalian Church in Egypt (Deaf 2006), and a textbook independently published by the Asdaa' Association for the Hearing Impaired in Alexandria (Asdaa' 2006). My field notes consist of individual signs, phrases, and songs recorded in a combination of handwritten and digital SignWriting, as well as a few

photographs and short videos. The DVD dictionary (Deaf 2006) is composed of fifty sections grouped thematically; the list of themes includes monetary denominations, body parts, religious terminology, and sports. In total, there are about 2600 dictionary entries, but at present I have coded only about 600 signs for handshape, palm orientation, movement, part of speech membership, grammatical function, and so forth. The DVD also contains about a dozen short signed stories, some with a voice-over in Egyptian Arabic; however, technological issues have prevented me from accessing most of these video files.

The textbook (Asdaa' 2006) presents about a dozen staged scenarios, each scenario occupying an average of 36 pages with pictures and descriptions of signs, and glosses and explanations in Modern Standard Arabic (MSA). The conversations cover topics such as household duties, family, education, and conspiracy theories; the full data set contains approximately 1100 signs, all of which have been coded. Although a brochure from the same institution (Asdaa' 2010) advertises that the textbook contains detailed explanations of vocabulary only, numerous grammatical rules are proposed for LIM which are based on or compared to MSA constructions. These proposals and comparisons vary drastically both in accuracy and usefulness to linguistic analysis for a

number of reasons, among them the diglossic<sup>1</sup> situation of MSA and spoken Arabic dialects and the extremely low literacy rate (3%) in the Egyptian Deaf population.<sup>2</sup>

The prevalence of hearing loss in Egypt surpasses that of many other developing countries, exceeding 16% in a population of over 80 million (WHO 2007).<sup>3</sup> The government is struggling to meet the needs of its sizable deaf population, and many families are forced to relocate to urban centers in search of legal, medical, and educational services. While there are no statistics on the movement patterns of the Deaf population, mass migrations from Upper Egypt and the Nile Delta have increased Cairo's population fourfold in the last fifty years alone (Miller 2005). While the contact phenomena among spoken Arabic varieties in this linguistically diverse and socioculturally complex environment remain a subject of ongoing research, little to no

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<sup>1</sup> The details of Arabic diglossia extend beyond the scope of the present paper, but an imperfect example of an LIM grammar in MSA would be an ASL grammar written in Chaucerian English. Spoken varieties of Arabic, such as Cairene Arabic, are not taught as written languages in schools, although speakers write dialect in internet chat, text messages, notes, letters, and other daily communications. There are no unanimously agreed-upon conventions for spelling in dialects, whether in Arabic or romanized script; thus, there remains a great deal of orthographic variation in the written realization of spoken Arabic. Throughout the Arabophone world, prevailing language ideologies devalue and denigrate the use of spoken varieties, both in speech and in writing.

<sup>2</sup> The Regional Secretariat for the Arab Region, a subsidiary of the World Federation of the Deaf, reports a 3% literacy rate for the Egyptian Deaf population (WFD 2008), but it does not specify the criteria by which literacy was measured. In all likelihood, functional reading and writing knowledge of MSA qualifies as literacy; we refer again to the diglossic situation to understand that this literacy measure does not speak to the Deaf population's ability to interact with Egyptian society on a daily basis.

<sup>3</sup> Out of 4000 total Egyptian subjects, 641 were diagnosed with some degree of hearing loss; approximately 8.3% were found to have severe, profound, or total hearing loss. This same survey (WHO 2007) contrasts the prevalence of hearing loss in Egypt with that in the US (9.6%), Indonesia (4.6%), Sri Lanka (8.8%), and Oman (5.53%).

attention has been paid to the genesis and historical development of signed language varieties in Egypt and the Arabophone world at large.

There is currently no definitive evidence that LIM has origins in or that it developed under the influence of another signed language. Many signers whom I interviewed in Cairo and Alexandria claim that LIM spontaneously arose “from the culture,” often citing as evidence visually iconic signs that resemble actions, shapes, or widespread co-speech gestures used by the general population. My preliminary observations of signers in Cairo and Alexandria, however, suggest that the lexical and grammatical variation between signers may be linked to sociolinguistic factors including religion, educational background, and city of origin.

On a larger scale, despite a number of lexical and grammatical features shared by many Eastern Mediterranean signed languages, a lexicostatistical study of Jordanian, Al-Sayyid Bedouin, Kuwaiti, Libyan, and Palestinian Sign Languages (Al-Fityani & Padden 2008) concluded that these signed languages are distinct and historically unrelated.

Another factor likely influencing the development of LIM is the ubiquitous Pan-Arabism that permeates through not only spoken language but also signed language prescriptivism. Spoken and written Arabic are regulated by regional Academies of the Arabic Language (*Majāmi` al-Lugha al-`Arabiyya*) modeled after the language academies of Europe and created “to guard the integrity of the Arabic language and preserve it from dialectal and foreign influence... and to adapt the Arabic language to the needs of modern times” (Versteegh 1997: 178). Since the turn of the century, signed languages in the Arab

world have been subjected to similar pressures; Al-Fityani (2012) discusses in great detail the invention and ideologies behind unified Arabic Sign Language (ArSL), as well as various Deaf people's and communities' reactions to its usage and proliferation.

My initial attempts at documentation of LIM were motivated by my personal interest in learning the language and not linguistic analysis, and so the limited number of personal pictures and videos I was able to capture are not approved for publication under the Institutional Review Board (IRB). There are numerous other factors hampering research efforts, including but not limited to the ongoing political turmoil in Egypt, government-fueled xenophobia, and strained tensions between religious groups and socioeconomic classes. Taking into consideration the implications of these linguistic and sociopolitical issues, I have used the textbook (Asdaa' 2006) as my primary photographic resource for the present paper, due to the number of grammatical features that are readily extracted from the text; I also take some examples from dictionary entries recorded on the DVD dictionary (Deaf 2006). The textbook, like other books printed in Arabic, presents images from right to left; thus, a great deal of time was spent cropping, reformatting, and rearranging scanned copies of these images to produce the figures in the present paper, where image sequences progress chronologically from left to right.

During the coding of the available data set, it became apparent that my linguistic investigation would not be as systematic and thorough as I would like. Despite these limitations, this initial foray into the structural analysis of Egyptian Sign Language lays the groundwork for more systematic research in the future.

## **Chapter 2: Verb Agreement**

### **2.1 Introduction**

Sign linguistics literature over the past few decades has produced many conflicting analyses of how the visual-spatial modality affects the realization of verb agreement; how the notions of animacy, transfer, and motion interact with agreement patterns; and, essentially, whether linguists can even construct a clear and unified definition of what constitutes verb agreement in signed languages. One main school of thought proposes that these verbs mark person agreement through directional motion; the other group of scholars argue that this phenomenon is more accurately described as a fusion of linguistic and gestural material, related to pointing gestures. The intricacies of the ongoing debate fall outside the scope of the present paper (for discussion, see Cormier et al. 2013; Lillo-Martin & Meier 2011; Quadros & Quer 2008), but it is sufficient for our purposes to note that signed languages locate arguments in space at referential loci (R-loci) usually by way of indexical pointing at referents that are present. Non-present referents are assigned locations in the signing space, which certain verbs can use to mark argument agreement (for discussion, see Ch. 12 in Klima & Bellugi 1979; Ch. 7 in Liddell 2003). Under the present analysis, verbs in LIM appear to fall into one of three categories that are attested in the vast majority of documented signed languages: directional, spatial, and plain (Aronoff et al. 2005; Lillo-Martin & Meier 2011; Meir 2002).

Directional verbs typically convey a meaning of abstract or concrete transfer (Aronoff et al. 2005), and they subcategorize for both syntactic subjects and objects, also

agreeing in person and number with these arguments. With some exceptions in BSL and DGS, object agreement tends to be obligatory, whereas subject agreement is more marked across signed languages (Rathmann & Mathur 2002). Examples of regular directional verbs in ASL include GIVE, HELP, and ASK. Constituting a subclass of directional verbs are backward verbs, which begin at the object (often the semantic theme or experiencer) and end at the subject (usually the semantic recipient or goal) (Meir 1998). The inventory of backward directional verbs in ASL includes BORROW, TAKE, and INVITE.

Spatial verbs agree with locations of arguments, moving from source to goal, or signed at the location or endpoint of an event. ASL spatial verbs such as PUT, MOVE, and GO-TO denote motion of the arguments themselves, as opposed to the transfer of an abstract or concrete object between arguments. Lastly, plain verbs are generally non-directional and do not show agreement patterns for person or number of subject or object, e.g. EAT, KNOW, and LOVE in ASL. Although the articulation of plain verbs typically lacks an external path or direction (cf. internal motion such as that in ASL sign EAT), certain plain verbs can be spatially displaced to a locus “associated with a location of an event (e.g. WANT, BUY, LEAVE-OUT [in ASL])” (Lillo-Martin & Meier 2011: 106).

Meir (1998) claims that verbs in a given signed language tend to fall into the same class categorization as their closest counterparts in other signed languages; most of the verbs in my LIM data do class similarly to their closest counterparts at least in ASL, with several notable differences in directional verbs and suppletive imperative forms. In Section 2.2, I analyze several verbs in the LIM directional class (§2.2.1) including



backward verbs (§2.2.2), also addressing issues such as person marking and argument dropping (§2.2.3). Section 2.3 provides an analysis of suppletive imperative forms that prove difficult to categorize under the proposed system. Finally, I discuss in Section 2.4 possible explanations of how these forms fit into the typological framework of verb agreement in sign languages.

## 2.2 Directional Verbs

### 2.2.1 Regular Directional Verbs

Many of the prototypical ASL directional verbs provided by Padden (1988: 212) show the same agreement patterns as their corresponding LIM verbs. For instance, the person agreement for the LIM verbs LOOK-AT/WATCH, TELL, and HELP functions similarly to their ASL counterparts, but they also differ in several crucial ways. Firstly, LIM expresses the concepts ‘look at’ and ‘watch’ with a single verb, while ASL employs two verbs LOOK-AT and WATCH; Figure 2.1 shows that LIM LOOK-AT/WATCH has an agreement pattern similar to that of ASL LOOK-AT, moving from subject to object.



(Figure 2.1)

DOCTOR i:CL:1“walking towards me”j j:LOOK-AT/WATCH<sub>1</sub>

‘A doctor came towards me and looked at me.’

[Asdaa’ 2006: 309]

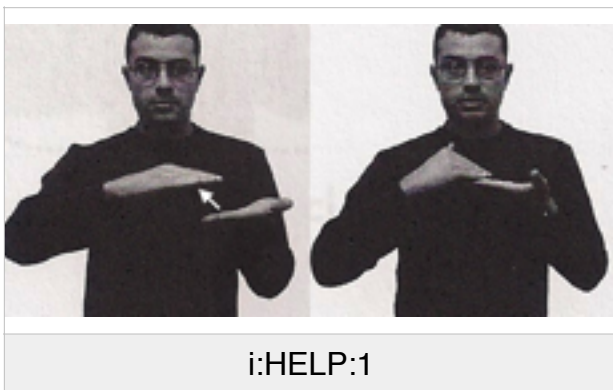


(Figure 2.2)

NOT-KNOW TRUE <sub>2</sub>TELL<sub>1</sub>

‘I don’t know the truth; tell me.’

[Asdaa’ 2006: 521]



(Figure 2.3)

NEIGHBOR SPEAK <sub>i</sub>HELP<sub>1</sub>

‘A hearing neighbor helped me.’

[Asdaa’ 2006: 303]

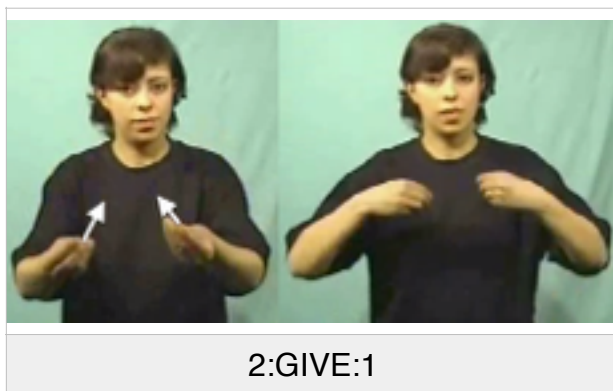
The verb TELL moves from subject to (indirect) object, marking the agent and recipient, as seen in Figure 2.2. My field notes show that the citation form of TELL is signed in front of the chest but does not contact the signer’s body. Similar to LIM LOOK-AT/ WATCH and ASL LOOK-AT, the LIM verb TELL is not a body-anchored sign, and it can therefore be articulated starting at second person (Figure 2.2). LIM TELL contrasts with ASL verbs like TELL and TELEPHONE that obligatorily start on the signer’s body,

which results in exceptional first-person object-agreement forms (Lillo-Martin & Meier 2011: 116) in order to resolve a clash of Body-as-Subject iconicity with Body-as-First-Person iconicity (Meir et al. 2007).

In Figure 2.3, the initial R-locus of HELP is not instantiated with an indexical point, but while the sign SPEAK is articulated with the dominant hand, the non-dominant hand is located at a non-neutral position *i*, displaced forward and ipsilaterally. When signing HELP, the non-dominant hand moves from *i* toward the signer, meeting the dominant hand mid-arc; then the hands move together and end at the first-person position. It remains unclear whether the non-dominant hand is in fact indexing a third person R-locus simultaneous with the dominant hand's signing, or if its location results from anticipatory articulation of HELP. The use of the non-dominant hand for indexing and as a time and space buoy is reported for Swedish and Norwegian SLs (Nilsson 2007; Vogt-Svendsen & Bergman 2007).

LIM appears to have two distinct directional verbs GIVE and GIFT, similar to ASL. The two signs are distinguishable by the tendency for GIVE to be signed with only the dominant hand and GIFT with both hands, as well as the differing hand orientation and point of contact under first-person recipient agreement: for GIVE (Figure 2.4), the fingertips rotate to point inward, in contrast to GIFT (Figure 2.5), where the forearms rotate so that the ulnar edge of the hands contact the chest. The LIM verb GIVE agrees with agent and recipient (compare ASL, e.g.  ${}_2\text{GIVE}_1$  BOOK 'you give me the book'); however, the agreement pattern of GIFT in LIM is less regular. It appears that GIFT in

LIM can agree with theme and recipient in contrast to the ASL verb GIFT, which agrees with agent and recipient (e.g. <sub>1</sub>GIFT<sub>2</sub> CANDY ‘I gift you candy’). This type of agreement (theme to recipient/goal) is more typical of spatial verbs than agreement verbs, but this imperative-like instance of GIFT clearly denotes transfer and not physical motion or location of arguments (cf. §2.3 suppletive imperatives and classifier imperative).



(Figure 2.4)

<sub>2</sub>GIVE<sub>1</sub>

‘You give to me.’

[Deaf 2006: Verbs 2 (1:57)]



(Figure 2.5)

IF EXIST-2 MONEY<sub>i</sub> EXTRA <sub>i(2?)</sub>GIFT<sub>1</sub> SODA

‘If there’s money left over, (you) gift me a soda.’

[Asdaa’ 2006: 354-356]

In Figure 2.5, GIFT does not appear to agree with the signer's addressee; instead, GIFT apparently starts at the location in which MONEY was signed, designated here by i; this would support the analysis of GIFT as a theme and recipient marking verb (e.g. 'gift the extra money to me as a soda'). Alternatively, the verb GIFT may be following the typological tendency for signed languages to drop subject marking (Meir 1998; Meir et al. 2007; Padden 1988), resulting in a reading closer to 'If there's money left over, I'll be gifted a soda.' In order for this analysis to hold, we would have to assume that the sign GIFT starts in neutral space, not associated with any arguments.

In a possible argument against the subject-drop analysis, the corresponding noun GIFT (Figure 2.6) is realized with restricted articulation in neutral space immediately in front of the signer, rather than skewed as in Figure 2.5. It remains to be determined whether this varying use of space for the nominal and verbal realizations of GIFT serves a grammatical function in LIM.



(Figure 2.6)

IX<sub>IDU.INCL</sub> TOGETHER BUY MOTHER TWENTY-ONE GIFT

'Let's you and I buy a Mothers' Day<sup>4</sup> gift.'

[Asdaa' 2006: 349-350]

<sup>4</sup> Mothers' Day is celebrated in Egypt on March 21st.

The next example of the LIM verb GIFT (Example 2.7) is consistent with either the theme-recipient marking analysis and the subject-dropping analysis. In this scenario, the signer (Ghaada) is trying to convince the addressee (Naadir) to work for a company that provides good benefits to its employees. The signer employs role shift during this example, becoming Naadir – it is clearly not Ghaada who will be given pension. By the theme-recipient analysis, the theme PENSION is signed slightly forward and to the right of the midline, which is the same location where the sign GIFT begins to make an arc that ends at the signer (the recipient). It is possible, though, that this right-displacement is simply an effect of PENSION being a one-handed sign rather than a localization of the noun. By the subject-dropping analysis, the sign GIFT starts in the role-shifted neutral space (which has been rotated slightly to the right of the midline) and ends at the signer (the indirect object).

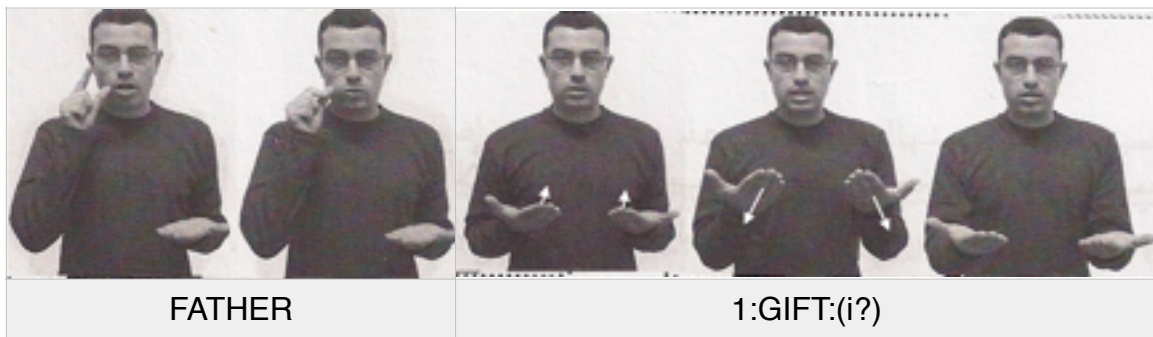


(Figure 2.7)

\_\_\_\_rs:Naadir  
PENSION (i?)GIFT<sub>1</sub> PRESENTATIVE

‘And you’ll be granted your pension, there you go.’ [Asdaa’ 2006: 463-464]

In this last example of GIFT in LIM (Figure 2.8), GIFT moves away from the signer in a forward-upward arc, ending in front of him and slightly displaced to the left. Although the semantic recipient of the lantern is the signer's younger brother, this endpoint does not obviously reference his brother; the preceding signs are articulated in neutral space and the signer does not use an overt indexing point to designate an R-locus for his brother. This is potentially another case where anticipatory articulation of the non-dominant hand is employed in a referent-indexing strategy; in Figure 2.8 the hand remains near the signer's body, the pointing fingers of the open hand perhaps being sufficient to index his brother. Admittedly, this example does not provide as compelling an argument for non-dominant hand indexing as Figure 2.3, where the non-dominant hand starts at the R-locus itself.



(Figure 2.8)

BOY SIBLING SMALL+ FATHER 1GIFT<sub>(i?)</sub> LANTERN

'My father gifts my little brother a lantern.'

[Asdaa' 2006: 405-407]

Neither the theme-recipient marking nor subject-dropping analysis successfully accounts for this agreement pattern. By a different analysis, GIFT in Figure 2.8 might be considered an instance of subject agreement with no object agreement, but this agreement

pattern is extremely rare across signed languages, and although the verb begins at the signer's body, there is no clear evidence that the signer role shifts to portray his father in this situation. Another plausible explanation is that Figure 2.8 shows an uninflected citation form of the verb GIFT, while the other instances of the verb (Figures 2.5, 2.6, 2.7) represent directional realizations of the verb; this would imply that verb agreement is optional. In order to reconcile these divergent agreement patterns of the LIM verb GIFT, more information needs to be gathered about how the verb inflects with non-first person recipient arguments, and how role shift affects the space of R-loci in LIM.

In addition to the LIM verbs GIVE and GIFT, my field notes (2012) and Asdaa' (2006) contain another verb of giving (Figure 2.9). There is no clear initial R-locus for this verb, but instead the sign begins with the dominant hand in the location at which MONEY is signed, and ends with the dominant hand under the non-dominant hand at the signer's body; this final configuration distinguishes the verb from GIVE and GIFT. One plausible analysis is that this verb drops subject marking but agrees with the object – here, first person. It is unclear, however, from this example whether the final position of the sign is an expression of object agreement or whether it is part of the internal motion of the sign. I recorded this form in isolation as *ba'shiish* or BRIBE (Field notes, April 6, 2012), with the dominant hand tapping under the non-dominant hand from the front (identical to the verb in Figure 2.9), but my notes fail to explicitly state whether this particular hand configuration represents inflectional agreement.





(Figure 2.9)

DAD MONEY HAND-MONEY<sub>(1?)</sub>

‘Dad hands out (to me?) holiday-money.’

[Asdaa’ 2006: 420]<sup>5</sup>

Due to the context in this example (Figure 2.9), wherein a father gives money to his son as a holiday gift – not a bribe – I suggest that the sign be glossed instead as HAND-MONEY, where context and possibly non-manual cues distinguish the interpretations of ‘bribe’ and the more innocent ‘hand out a money-gift.’ In spite of the verb conveying a semantic transfer, the data suggest that HAND-MONEY might in fact be a plain verb with no argument agreement. Like the LIM verb GIFT, further data with second and third person recipient arguments is required before a conclusion can be reached.

Similar to LOOK-AT/WATCH, TELL, HELP, GIVE, and GIFT in the examples above, the LIM verbs UNDERSTAND, STOP/DON’T, and SUPPORT also show directional agreement with R-loci; these directional verbs stand in contrast to the

<sup>5</sup> The gloss provided in Asdaa’ (2006: 420) implies that this sentence contains a plural first person object ‘he hands *us* holiday-money [emphasis added]’ despite the absence of spatial inflection for a plural object. The three possible conclusions are that (1) LIM does not consistently use space to express plural object agreement – a conclusion which might be supported by the absence of spatial plural agreement in an imperative classifier construction (see Section 2.3, Example 2.31, Asdaa’ 2006: 500); (2) HAND-OUT-MONEY is a plain verb, and so the object is implied from the context; or (3) the gloss is simply incorrect (as it has, on several other occasions, proven to be).

corresponding plain verbs in ASL. Their agreement patterns in LIM are predicted by the animacy criteria proposed by Rathmann and Mathur (2002: 380), who claim that verbs that can take either two animate arguments or one animate argument and one inanimate (concrete or abstract) argument tend to show agreement. These same criteria do not seem to accurately predict the absence of agreement marking with ASL STOP<sup>6</sup> or SUPPORT<sup>7</sup>; however, UNDERSTAND in ASL, as in English, does not obligatorily take an object (e.g. (IX<sub>1</sub>) UNDERSTAND ‘I understand’), and so Rathmann and Mathur’s animacy criteria are arguably not applicable to this verb.

Discussed in Section 2.2.2 below, LIM UNDERSTAND is a backward directional verb with an irregular agreement pattern that appears to contradict a subject-dropping analysis<sup>8</sup>. And the agreement patterns of LIM verbs STOP/DON’T and ALERT raise questions about the semantics of first-person marking and articulatory constraints affecting their articulation (§2.2.3).

### **2.2.2 Backward Directional Verbs**

As of the writing of this paper, I have identified either two or three backward directional verbs in LIM: TAKE, COPY, and UNDERSTAND. The data contain two examples of TAKE, the first of which is found in isolation, the verb agreeing with second-person

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<sup>6</sup> ASL STOP may be spatially displaced (e.g. when giving driving directions) but does not agree with its arguments.

<sup>7</sup> These criteria also do not predict that LIKE and LOVE in ASL are articulated as plain verbs. [[Review R&M: do they address this directly?]]

<sup>8</sup> For the sake of comparison, object marking is non-obligatory for the corresponding verb *fihim* ‘understand’ in EA.

object (donor) and first-person subject (agent/recipient):  ${}_2\text{TAKE}_1$  ‘I take from you’ (R. Fan, field notes, April 26, 2012). The other instance (Figure 2.10) shows agreement with a third-person donor and a first-person recipient. The signer is discussing with his addressee how the Ahly football team defeated their opponent (located at j) and took back the cup from them; the body rotation and verb agreement with first person show that the signer has taken on the role of the Ahly team.



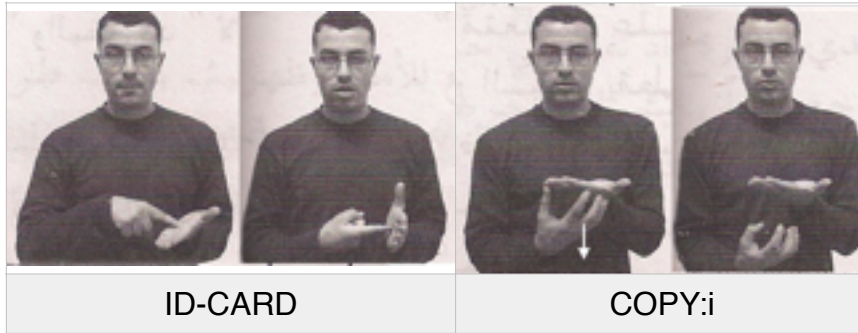
(Figure 2.10)

\_\_\_\_\_rs: Ahly

RH: AFTER AHLY  ${}_1\text{DEFEAT}_j$  CUP $_j$   ${}_j\text{TAKE}_1$   
 LH: DEFEAT $_j$  CUP $_j$   ${}_j\text{TAKE}_1$   
 ‘After that, Ahly defeated their opponent and reclaimed the cup.’  
[Asdaa’ 2006: 441-442]

Whether the few instances of COPY display argument agreement remains unclear, whereas examples of UNDERSTAND are abundant and varied in their agreement marking. The examples in Figures 2.11 and 2.12 show that COPY in LIM may agree with its third-person object argument; the palm of the open-5 hand faces the object, and the hand draws away from the object, fingers slightly contracting. In Figure 2.11, the object is an identification card, represented by a flat object classifier signed by the non-dominant hand. In the latter example (Figure 2.12), COPY marks the teacher’s writing (signed on the imaginary blackboard) as its object. The motion of the verb toward the

signer also appears to agree with the first-person subject before continuing into the next sign, PUT, but this may be incidental to the internal movement of the verb, as suggested by the instance of COPY in Figure 2.11.



(Figure 2.11)

RH: ID-CARD COPY<sub>i</sub>

LH: ID-CARD CL:B''flat surface''<sub>i</sub>

'Make a copy of your ID card.'

[Asdaa' 2006: 114]



(Figure 2.12)

RH: TEACHER WRITE<sub>i</sub> DEAF <sub>i</sub>COPY<sub>(1?)</sub> PUT<sub>j</sub>

LH: TEACHER CL:B''flat surface''<sub>j</sub>

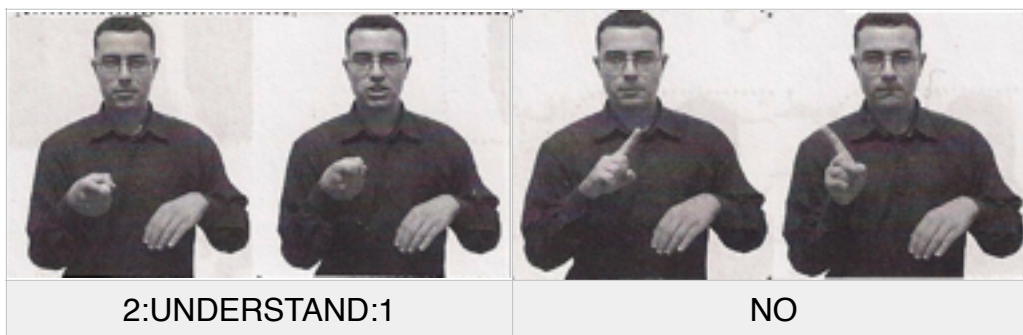
'The teacher writes on the board (at i), and we Deaf students copy what's on the board (from i) and put it on the paper (at j).'

[Asdaa' 2006: 197-198]

Future data collection should determine whether COPY is able to take animate and abstract inanimate object arguments. If COPY cannot take animate object arguments, then it may only agree with the location of the inanimate argument, meaning that the verb may in fact be plain or spatial rather than directional (Rathmann & Mathur 2002), in which

case the sequence COPY PUT in Figure 2.12 might be more accurately interpreted as a spatial verb MOVE-TO, for instance. If COPY can indeed take animate object arguments, determining how COPY and TAKE are articulated with a first-person object and a non-first-person subject would inform the discussion of how directional verbs mark person agreement (see Section 2.2.3 on subject-dropping and first-person agreement).

Turning to the most well-represented backward verb in the data, UNDERSTAND is signed beginning with the extended (or slightly curled) index finger pointing at and located near the object; then the hand moves away from the object toward the subject, while the index finger curls. This verb usually agrees with both animate (Figure 2.13) and inanimate objects (Figure 2.14), and it drops subject and object marking very rarely, if at all. These examples contrast with UNDERSTAND expressing non-first-person subject agreement (i.e. endpoint of the sign) in Figure 2.15. To supply context for this example, the signer is urging her addressee to read the Qur'an during the holy month of Ramadan, even if he just skims it with little to no comprehension; she assures him that Allah will understand his intention and effort. Thus, the verb takes an abstract object argument: the silent recitation and resultant thoughts in the signer's mind.



(Figure 2.13)

\_\_\_\_\_squint  
<sub>2</sub>UNDERSTAND<sub>1</sub> NO AGAIN  
 ‘I don’t understand you. Please repeat.’

[Asdaa’ 2006: 211]



(Figure 2.14)

RH: IX<sub>1</sub> \_\_\_\_\_iUNDERSTAND<sub>1</sub> NO  
 LH: CL:B”flat surface”<sub>i</sub> - - - - -  
 ‘I don’t understand (the notes written on) this paper.’

[Asdaa’ 2006: 200]



(Figure 2.15)

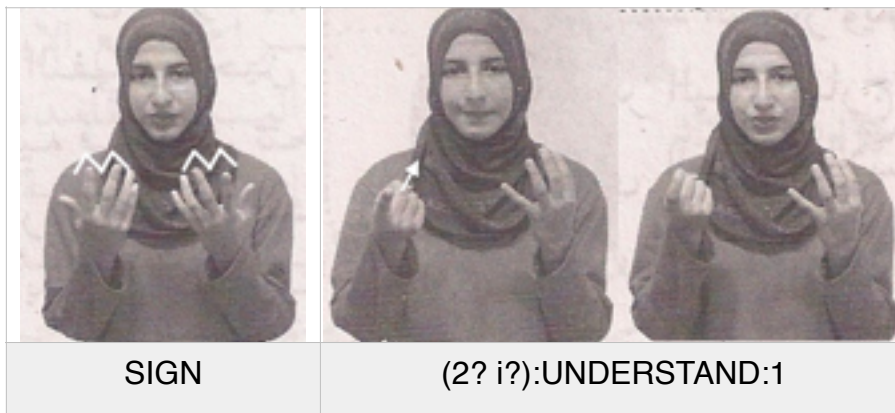
ALLAH<sub>UP</sub> HEADUNDERSTAND<sub>UP</sub>  
 ‘Allah understands what’s in your mind.’

[Asdaa’ 2006: 375-376]

In other cases, such as the example in Figure 2.16, there does not appear to be an established R-locus where the articulation of UNDERSTAND begins. In this scenario, the signer explains to her addressee that if she does not understand the teacher’s signing, she won’t get much out of his class. Although the signer appears to index her addressee with



UNDERSTAND, the context makes it clear that she is not referring to her addressee (or his signing), but rather the non-present teacher's signing. Thus, the object of the verb UNDERSTAND is unclear, in contrast to Figure 2.17, where the object is clearly SIGN, whose articulation perseverates in the non-dominant hand. In both Figures 2.16 and 2.17, SIGN is produced with palms facing the signer, all fingers extended and wiggling in and out. This sign also has a reciprocal inflection where the hands with all fingers extended (but no finger motion) alternate moving in and out between the signer and interlocutor.<sup>9</sup> It remains unclear, however, whether the instances of SIGN in Figures 2.16 and 2.17 agree with their arguments; these may very well be the citation form of SIGN.



(Figure 2.16)

SIGN (2? i?)UNDERSTAND<sub>1</sub> NO

'I don't understand (you? the signing?)'

[Asdaa' 2006: 111]

<sup>9</sup> SIGN in LIM may be an example of an inherently reciprocal verb; much like MEET and KISS in ASL, it is unclear whether the verb expresses argument agreement in its palm orientation and movement pattern. Similarly, depending on the context, the English verb 'to kiss' can imply reciprocity ('John and Mary kissed') or no reciprocity ('John kissed Mary'). This latter English example implies a unidirectionality of action, but it remains to be determined whether SIGN in LIM or MEET and KISS in ASL can express this same kind of unidirectionality.



(Figure 2.17)

RH: MATH TEACHER SIGN<sub>R</sub> LUNDERSTAND<sub>I</sub> EASY/UNIMPORTANT

LH: MATH TEACHER SIGN<sub>L</sub> -----

‘In math, I understand the teacher’s signing easily.’ [Asdaa’ 2006: 203-204]

One explanation is that UNDERSTAND in Figure 2.16 agrees with the signer’s interlocutor ‘the person with whom I’m signing,’ despite the absence of an overt R-locus of her imaginary teacher. A more likely possibility is that this instance of UNDERSTAND is a citation form that doesn’t agree with its object or that simply does not take any agreement marking at all, giving a plain-verb reading ‘There (the teacher) is signing, but I don’t understand.’ If this is the case, then the dominant hand’s motion toward the signer would be considered internal to the sign UNDERSTAND rather than a marking of subject agreement. This particular (non-agreeing?) articulation of UNDERSTAND appears in the data on two other occasions (Asdaa’ 2006: 209, 214) in comparable scenarios. Future research should try to elicit non-first-person object to non-first-person subject agreement patterns with arguments both present and non-present (also without R-loci); this may reveal whether the citation form is employed with a non-present referent and/or a referent that lacks an R-locus in the discourse.



### 2.2.3 Subject-Dropping and First-Person Agreement

As mentioned above in Section 2.2.1, directional verbs tend to drop subject agreement across signed languages. Certain instances of subject-dropping in LIM reveal articulatory constraints and underlying semantics of directional verbs. For instance, the verb ALERT in both Figures 2.18 and 2.19 takes a first-person object in both instances, but the movement of the hand does not appear to mark subject agreement. The subject in Figure 2.18 is second person; the signer is commanding the addressee to wake him up after an hour of rest. In Figure 2.19, the subject is the two Deaf students stationed outside the door.



(Figure 2.18)

IX<sub>1</sub> SLEEP REST {ONE} {HOUR} ALERT<sub>1</sub>

‘I’m going to sleep and relax. Wake me up in an hour.’

[Asdaa’ 2006: 152]



(Figure 2.19)

DEAF TWO STAND DOOR OUTSIDE TEACHER COME ALERT<sub>1</sub>

‘Two Deaf students stand outside the door; when the teacher comes, they alert us.’

[Asdaa’ 2006: 220]<sup>10</sup>

The signer faces (or turns to face) the respective subject in each utterance, but he does not establish an R-locus for either one of them. The hand movement for ALERT with a third-person subject (Figure 2.19) starts at a higher position than the second-person subject (Figure 2.18). If future research reveals the height difference between the second- and third-person subject referent to be significant – possibly meaning this would have to be specified in the lexicon – then the argument for a first-person and non-first-person dichotomy would need to be revisited (Lillo-Martin & Meier 2011: 116). If this height difference turns out to be insignificant, then only the direction of the signer’s face would mark subject agreement, which might mean that ALERT marks only its object (with hand location and movement). Future elicitation should also determine whether ALERT is capable of marking first- and non-first-person subject agreement and non-first-person object agreement (e.g. ‘you alert her’).

<sup>10</sup> Note the apparent absence of overt number agreement for subject and object in the arc of the verb.

Another LIM directional verb that tends to mark object but not subject is STOP/DON'T, as seen in Figure 2.20. The sign begins with the palm of the V hand (index and middle extended) facing the object, then the fingers flex while the hand moves slightly downward and toward the object.<sup>11</sup> Both here and in a similar instance of STOP/DON'T in the data (Asdaa' 2006: 251), the imperative meaning of the verb is likely licensing null subject agreement. The example in Figure 2.21 contrasts with these imperative cases; in this scenario, the narrator enters the hospital with his ill son. There is no obvious subject supplied by the signer, giving the passive-like interpretation 'I got stopped.' I argue that STOP/DON'T is a transitive verb in LIM, where the palm orientation marks the object. Figure 2.21 is crucial to the analysis of STOP/DON'T as a transitive directional verb; although these examples of STOP/DON'T do not exhibit pronounced translational movement, if STOP/DON'T were an intransitive plain verb (e.g. 'I stopped'), then it would be expected to maintain outward palm-orientation rather than changing palm orientation to agree with its arguments, as it does in Figure 2.21.



(Figure 2.20)

<sup>11</sup> Anecdotally, signers provide a folk etymology relating the form of STOP/DON'T to the two short parallel vertical bars of the "pause" icon on TV remote controls and other video technology.

PRAY FOUR FINISH TWO ONE LAST STOP/DON'T<sub>2</sub>

'After the *'ishaa'* prayer, pray *shafa'* and *witr*, then don't perform any further prayers.'<sup>12</sup> [Asdaa' 2006: 409]



(Figure 2.21)

RH: IX<sub>1</sub> STOP/DON'T<sub>1</sub>

LH: CL "cradling son at chest"

'(While carrying my son into the hospital,) I got stopped.' [Asdaa' 2006: 306]

It would also be difficult to argue for STOP/DON'T as a spatial verb, because it does not shift the location of its arguments; the scenario in Figure 2.21 does involve the narrator moving then coming to a halt, but the prohibitive usage in Figure 2.20 is figurative (e.g. 'stop doing what you were doing!') rather than a command to physically stop moving.

Future data collection should determine whether STOP/DON'T can agree with a non-first-person subject and object, and how this type of agreement affects the palm orientation and movement of the sign. If later work reveals that ALERT and STOP/DON'T cannot mark subject agreement like other directional verbs, it is possible that

<sup>12</sup> Islamic prayers are identified in LIM by the respective number of genuflections; thus, the evening prayer *'ishaa'* has four genuflections, the *shafa'* prayer consists of two, and so forth.

these constitute a separate verb class defined by semantic criteria: the signer's facing direction<sup>13</sup> and palm orientation would agree with the experiencer argument.

In Figure 2.22, the verb UNDERSTAND shows that even backward directional verbs may drop subject marking. Recall that subject agreement occurs at the *final* position of a backward verb, due to the reversed direction of movement. Judging from the configuration of the dominant hand, it is clearly marking either SIGN or the first person as object. The dominant hand then moves downward and very slightly forward, which appears to be the articulation of the internal movement of the verb rather than a second-person agreement.



(Figure 2.22)

RH: TEACHER SIGN-recip<sub>R</sub> L/1UNDERSTAND<sub>(2?)</sub> OR-NO

LH: TEACHER SIGN-recip<sub>L</sub> -----

'The teacher (asks), do you understand (me/my signing) or not?'

[Asdaa' 2006: 210]

If Figure 2.22 does in fact show second-person subject agreement, then this verb might contradict Meir (1998)'s prediction that syntax will be encoded in the hand-facing of a

<sup>13</sup> The lexicon would also have to specify the signer's facing direction for first-person object as neutral, due to articulatory constraints on the neck and eyes.

backward verb (see also variation in palm orientation, which is upward-facing in Asdaa' 2006: 200 and inward-facing in Figure 2.17). As of the present analysis, this is the sole instance of UNDERSTAND under (possibly) second-person subject agreement and (possibly) first-person object agreement (cf. Figure 2.15, where the object is the signer's *thoughts*, not the signer himself – as in Figure 2.22; note the differences in height, location, and palm orientation). Further data on the agreement pattern for UNDERSTAND with non-first-person subjects and first-person objects may clarify whether the articulation of UNDERSTAND in Figure 2.22 is simply a result of articulatory constraints restricting forearm and wrist movement away from the signer's body.

In contrast to these one-handed verbs, there are at least two directional verbs in LIM that specify the handshape, orientation, and location of the non-dominant hand: TEACH and DECEIVE.<sup>14</sup> Figures 2.23 and 2.24 demonstrate that the non-dominant hand takes the same handshape but different palm orientation and location for first- and non-first-person object articulations of TEACH. As seen in the first-person object agreement form of TEACH in Figure 2.23, the non-dominant hand takes the same 1 handshape (index extended from fist) as the dominant hand, but the extended index finger contacts the inside of the elbow joint with the palm facing inward. Then the dominant 1 hand with palm also facing inward moves inward toward the signer, bending at the elbow and the

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<sup>14</sup> Future research may show that COPY also specifies the non-dominant hand configuration, cf. ASL COPY, which employs and specifies the orientation of the non-dominant hand under first- and non-first-person object agreement.

wrist so that the extended index finger points at the signer. In Figure 2.23, TEACH may either have no semantic agent ('I am taught'), or ASSOCIATION might be interpreted as the agent ('the association teaches me'), in which case it was not assigned an R-locus and so TEACH does not show subject agreement with it.



(Figure 2.23)

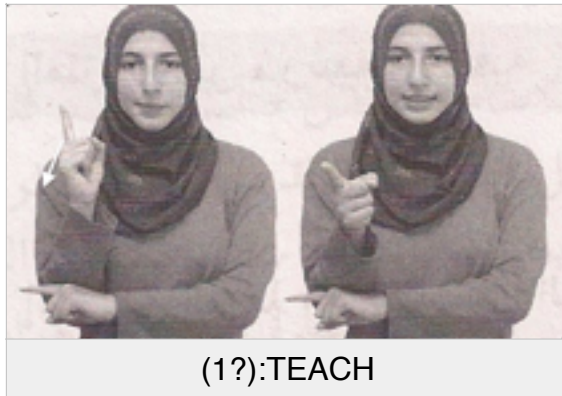
HEAR ASSOCIATION COMPUTER LEARN TEACH<sub>1</sub>

'I hear that at the (Deaf) association, I can learn (and be taught?) computer skills.'

[Asdaa' 2006: 105-106]

The non-first-person object realization of TEACH in Figure 2.24 shows that both hands again take the 1 handshape, but the palm orientations and locations differ; here the non-dominant hand contacts the underside of the elbow joint and the palm faces downward, while the dominant hand orients the ulnar edge toward the object. Then the dominant hand moves toward the object, again bending at the elbow and wrist to end with the index finger pointing at the object. In Figure 2.24, TEACH does not reference an explicit object and there is no apparent semantic patient, although the hand moves forward during the articulation of the verb, much like the instance of GIFT in Figure 2.8

above (§2.2.1); this suggests that Figure 2.24 may be an instance of the citation form of TEACH.



(Figure 2.24)

(1?)TEACH MARKET FOOD BUY HEAVY

‘I teach, then I buy food at the market; that’s a lot!’ [Asdaa’ 2006: 130-132]

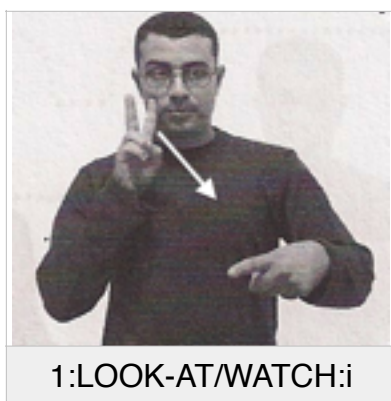
Figure 2.25a shows DECEIVE agreeing with non-first-person subject and first-person object, with the same type of non-dominant hand specifications seen for TEACH in Figure 2.23 in terms of inward palm orientation and placement inside the elbow joint. It is unclear whether the non-dominant handshape must match the dominant handshape in cases like Figure 2.25a, where the non-dominant hand is partially or entirely obscured. Similar to TEACH (Figure 2.24), the non-first-person object agreement (and citation) form for DECEIVE (Figure 2.25b) has matching handshapes (here, V with index and middle extended) and non-dominant hand contact under the elbow of the dominant arm; however, the dominant palm is oriented toward the object in DECEIVE, rather than the ulnar edge as in TEACH.





(Figure 2.25)

Possibly in order to avoid infelicitous (near-)homophony with LOOK-AT/WATCH, the dominant hand does not begin articulating DECEIVE with finger contact beneath the eye, which is the starting position for first-person subject agreement of LOOK-AT/WATCH (Figure 2.26). The signer is explaining that he removed the thermometer from under his feverish son's armpit and looked at it.



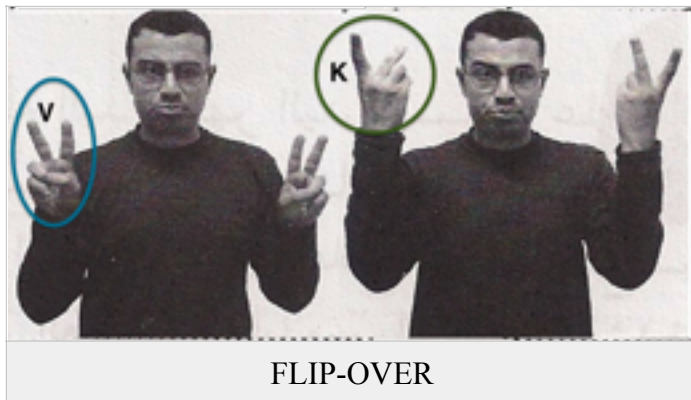
(Figure 2.26)

RH: <sub>i</sub>LOOK-AT/WATCH<sub>i</sub>

LH: CL:D''thermometer''<sub>i</sub>

'I looked at the thermometer.'

[Asdaa' 2006: 313]



(Figure 2.27)

MIND FLIP-OVER

‘My mind flipped over (from anger).’

[Asdaa’ 2006: 308]

As exemplified by the alternation between V and K (index and middle extended, middle bent at base joint to contact thumb) handshapes in Figures 2.25a and 2.27, these two handshapes do not appear to be distinctive, at least in these situations. Although it is possible that they are allophones of the same underlying LIM handshape, variation between V and K handshapes occurs in many signed languages. For instance, TWO in ASL is signed with a V handshape, but the incorporated numeral in TWO-OF-US is realized with a K handshape. In combination with the uniform V handshape in Figure 2.25b, this example suggests that the apparent phonetic difference between initial and final handshape in DECEIVE (Figure 2.25a) is not phonemic.

By this analysis, the verbs DECEIVE and LOOK-AT/WATCH are near minimal pairs, distinguished by non-dominant hand configuration and initial dominant-hand position. Similarly, TEACH and DECEIVE are minimal pairs in first-person object agreement, differing only in handshape (Figures 2.23 and 2.25a); however, TEACH and

DECEIVE are near minimal pairs in non-first person object agreement, differing both in handshape and palm orientation (Figures 2.24 and 2.25b).

In addition to non-dominant hand configuration, other articulatory specifications apply to certain LIM verbs under first-person agreement. Some verbs require specification under first-person object agreement, others under subject agreement; these irregularities cannot be accounted for by a grammatical rule, so they must be specified in the lexicon. For instance, the verb LOOK-AT/WATCH requires the dominant hand to begin with contact beneath the eye when marking first-person subjects (Figure 2.26) and in citation form (Asdaa' 2006: 447), but not with non-first-person subjects (Figure 2.1). In Figure 2.26 the object marking suggests that this is not the citation form of LOOK-AT/WATCH.<sup>15</sup> However, future research should investigate more thoroughly whether this body contact form of the verb can regularly mark first-person subject agreement in the absence of an overt index.<sup>16</sup>

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<sup>15</sup> Compare body-anchored TELL in ASL, which must begin with contact at the chin, and which specifies first-person object agreement with contact at the signer's chest. In contrast, the articulation of ASL INFORM with non-first subject and object (e.g. 'he informs you') has several variants, one of which begins closer to the signer's body then moves in an arc between the non-first loci to show argument agreement; another variation of this sign does not begin near the signer's body. Finally, consider the first-person object form of CALL (e.g. 'she calls me'), which may either agree on the signer's face or the chest. Richard P. Meier (personal communication, December 3, 2014) considers CALL to belong to a face-anchored verb subclass.

<sup>16</sup> Of the six tokens of LOOK-AT/WATCH in the data, only one begins off the signer's body at the location of a classifier (Figure 2.1). The other five tokens all begin with contact beneath the signer's eye; one of these has a second-person subject, but uses the citation form (Asdaa' 2006: 447). The remaining four tokens have a first-person subject, two of which also overtly mark their objects with pointing and motion. In only one of these six instances does there appear to be a nearby overt indexing of first-person subject, but it is possible that this index is part of a separate clause (Asdaa' 2006: 451).

The backward verb UNDERSTAND tends to mark agreement with first-person subject (= endpoint of sign) near the ipsilateral shoulder when the object (=starting point of sign) is located near the signer's body (Figure 2.16; also Asdaa' 2006: 200, 205). The fact that the irregular final hold of this sign occurs at the subject rather than the object position, it may make more sense to refer to this a specification of the sign's articulatory endpoint rather than associating the irregularity with a syntactic subject or object.

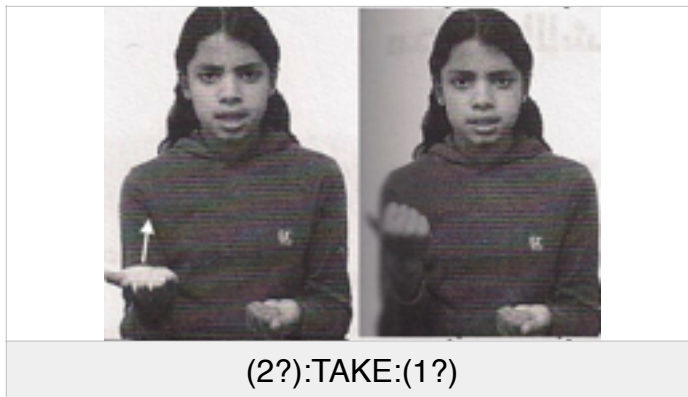
On the other hand, TEACH in LIM begins by orienting the palm toward a first-person object (Figure 2.23), but begins with the ulnar edge of the hand toward a non-first-person object (Figure 2.24); this is similar TEACH in ASL, in that the part of the hand oriented toward the object is unpredictable and must be lexically specified (Lillo-Martin & Meier 2011: 117). Discussed above in Section 2.2.1, LIM verbs GIVE and GIFT in first-person object agreement specify the fingertips and the ulnar edge, respectively, contacting the signer's chest (Figures 2.4 and 2.5), in contrast with their citation and non-first-person object agreement forms, which do not contact the chest.

### **2.3 Suppletive Imperative Forms**

Existing alongside verbs that can function as their own imperatives, such as GIFT (compare Figures 2.5 & 2.7), LIM also has several suppletive imperative forms. A suppletive imperative form is not related to its corresponding regular verbal form by any morphological process. Many Arabic dialects, for instance, have a regularly conjugating declarative verb meaning 'come' which cannot be inflected to form an imperative;

instead, there is a suppletive imperative form. In Egyptian Arabic, the declarative verb form is *gā, yīgi* ‘he came, he comes’ and the imperative is *ta`āl* ‘come (m.)!’

As an example in LIM, although the use of GIVE as an imperative is not attested in the present data, there are at least three suppletive forms for expressing the command “give it” or “bring it here!” in LIM: (1) a reduced articulation of the backward verb TAKE, (2) a suppletive imperative sign that I have glossed as PUT-HERE, and (3) a classifier construction. Valli (2000: 143) explains how ASL imperatives are usually formed through subject-dropping or right-displacement of the subject pronoun, in addition to nonmanual cues like direct eye contact and frowning. In LIM, it appears that the subject is sometimes dropped, but the data contain no instances of pronoun displacement. The eyebrows are drawn together in some cases (Figure 2.28), but not in others (Figure 2.29). Another instance of TAKE as an imperative (Asdaa’ 2006: 116) lacks nonmanual marking. In contrast, the data do not contain any examples of PUT-HERE co-occurring with any obvious nonmanual cues; because direct eye contact is so widespread in non-imperative contexts, I do not consider it to be a diagnostic nonmanual cue in LIM.



(Figure 2.28)

SOCK STINK WASH, \_\_\_\_\_eyebrows  
 (2?)TAKE<sub>(1?)</sub>  
 'I'll wash the stinky socks. Give/bring them to me!'

[Asdaa' 2006: 242]



(Figure 2.29)

MONEY (2?)PUT-HERE<sub>(1?)</sub>  
 'Give me money!'

[Asdaa' 2006: 279]

In terms of manual articulation, TAKE as an imperative form of GIVE (Figure 2.28) appears to make a smaller and more restricted movement compared to the declarative verb TAKE (Figure 2.10), but the direction of arm movement and pointing direction still appear to agree with a second-person donor and a first-person recipient. For PUT-HERE (Figure 2.29), the signer's open non-dominant palm appears to be tilted

forward to mark the second-person donor, and the location of the non-dominant hand in front of the signer's body near the vertical midline marks the first-person recipient.

Lending evidence to this person-marking analysis, the other instance of PUT-HERE (Figure 2.30) may have a non-imperative interpretation, but this is difficult to determine because the phrase is not directly connected to a discourse context; instead, it appears as a general commentary on a cultural practice that occurs during the month of Ramadan. As the holidays approach, the doorman (EA *bawwāb*) or one of his children often goes door to door in the building to ask each tenant for a small amount of money to purchase lights and other decorations to hang on the balconies and around the building.<sup>17</sup>



(Figure 2.30)

BALCONY OUTSIDE DECORATION LIGHTBULB MONEY PUT-HERE

‘Outside the balcony, money is collected(?) for hanging decorations and lights.’

[Asdaa’ 2006: 404]

In Figure 2.30, the position and palm orientation of the non-dominant hand do not appear to mark a donor or recipient (cf. Figure 2.29). Instead, it appears to convey a more

<sup>17</sup> It is also customary to give the doorman an extra tip during the holidays in addition to his monthly payment.

general meaning of ‘money is collected’ or perhaps ‘someone demands money’, but it remains unclear if the slight ipsilateral displacement of the non-dominant hand signifies a meaningful contrast to the hand position in Figure 2.29.

The distribution of PUT-HERE after MONEY also suggests that PUT-HERE may in fact be an imperative form of the verb HAND-MONEY (§2.2.1). If this is the case, PUT-HERE may not be a suppletive form (where the two forms would be unrelated) at all, but a morphological imperative-derivational process, whereby the non-dominant hand is flipped to face palm-up, and the dominant hand’s palm still makes contact with the non-dominant palm. I have yet to find this speculated morphological process occurring with other imperative forms. Further research should determine whether PUT-HERE can be used with objects aside from MONEY, whether the non-dominant hand flip is a productive imperative-formational process for other two-handed verbs, and whether TAKE and PUT-HERE can appear with other agreement patterns, such as second-person to third-person ‘give it to him/her!’

The third way of expressing the imperative meaning ‘give/bring it!’ employs a handling classifier. In this particular context (Figure 2.31), the signer is telling the addressee to bring her bundles of two different types of cloth so that she can decide which pattern she prefers. The handling classifier agrees with both the second-person donor and the first-person recipient.





(Figure 2.31)

RH: PLAID STRIPE BOTH <sub>2</sub>CL"holding cloth"<sub>1</sub> <sub>1</sub>LOOK-AT/WATCH<sub>i</sub>

LH: PLAID (CL:B"flat surface"<sub>i</sub> - - - - - ) - - - - -

'Bring me the plaid and striped cloths so I can look at them.'

[Asdaa' 2006: 500-501]

The verb LOOK-AT/WATCH at the end of the utterance agrees with the first-person subject and the non-dominant hand classifier object. Although the signer anticipates this non-dominant hand articulation (denoted in parentheses in the LH track) simultaneously with the dominant hand signing BOTH, the delayed tensing and flattening of the non-dominant hand suggests that the non-dominant hand only takes on the properties of the cloth when the dominant hand classifier reaches the signer and has successfully "brought the cloth to the signer."

Although the data also lack an imperative usage of COME, the verb does have a suppletive form that I have glossed as COME-IMP<sup>18</sup>. While COME expresses spatial agreement through the pointing of the fingertips at the addressee and then the goal (near or at the signer's location in Example Figure 2.32), COME-IMP uses palm orientation (Figure 2.33). The instance of COME-IMP occurs immediately after the situation

<sup>18</sup> Interestingly, both LIM and EA have suppletive imperative forms for the verbs 'give' and 'come.'

described by Example 1, wherein a doctor comes toward the signer and looks at him. The doctor then tells the signer to come to him, then pulls his hand.



(Figure 2.32)

${}_2\text{COME}_{(\text{near})}$  HOUR WH

‘What time did you come home?’

[Asdaa’ 2006: 137]



(Figure 2.33)

${}_1\text{COME-IMP}_{(3?)}$  CL‘pull hand’

‘‘Come here!’’ (he said) and pulled my hand.’

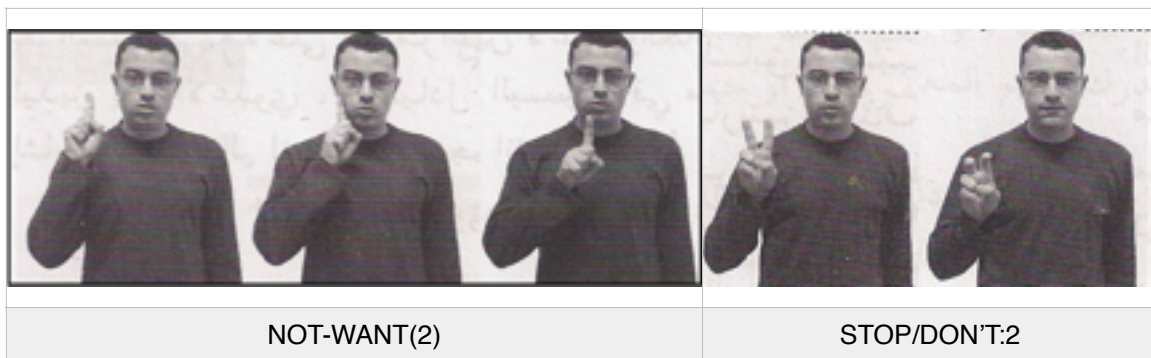
[Asdaa’ 2006: 310]

In Figure 2.32, the final hold of the sign COME in front of and near the signer refers to ‘home’ (the location of both the signer and the addressee) rather than the signer himself.

It is unclear whether the final position and handshape of COME-IMP in Figure 2.33 refers to the doctor or the location associated with the doctor’s R-locus. Thus, it would also be possible to analyze COME-IMP as a backward directional verb (e.g. BECKON),

but the agreement pattern is difficult to conclude from this sole instance of the verb in the data; future elicitation should determine whether this verb can agree with two non-first-person arguments and how the palm orientation changes to agree with a first-person subject.

Discussed in Section 2.2.3, the directional verb STOP/DON'T can be used as a general prohibitive (or vetative) suppletive verb. As seen in Figure 2.20, STOP/DON'T can be used to tell someone to stop moving or discontinue an action, but it can also be used to tell someone to not do something they were planning to do, as in Figure 2.34. The sign STOP/DON'T co-occurs with the non-manual negation marking in the form of furrowed eyebrows and a frown.



(Figure 2.34)

NOT-WANT(2) <sup>neg</sup> STOP/DON'T<sub>2</sub> FUUL FALAFEL BUY HOT  
 'I don't want that; don't (cook that)! I'll buy fuul and falafel hot.'

[Asdaa' 2006: 250-252]

Much like the situation in Figure 2.20, the subject might not be marked at all; the sign begins in neutral space but faces the addressee – the thematic experiencer. Negative imperatives are less common across signed languages than other negators, because “the

functions of negative commands may be subsumed under or combined with other negative functions, in particular negative existentials, emphatic negatives, or negative modals” (Zeshan 2004: 31). At present it remains unclear whether the negative imperative can be expressed by signing a verb along with another negative marker, for instance NO.

## **2.4 Summary**

My analysis of the data shows that the set of directional verbs in LIM generally aligns with the corresponding directional verb class that has been established crosslinguistically for other signed languages, including backward directional verbs and suppletive forms. In spite of the commonalities, the realizations of several LIM verbs do not appear to follow proposed typological tendencies for palm orientation to function as a syntactic marker (Meir 1998), or for subject-marking to be dropped while object-marking remains obligatory (Rathmann & Mathur 2002). These regular and backward directional verbs, as well as their suppletive forms in LIM present a particularly rich area for future research in imperative derivation and suppletion and verb agreement.

## **Chapter 3: Negation**

### **3.1 Introduction**

The first systematic typological surveys of negation in signed languages (Zeshan 2004, 2006a) report that all known signed languages employ at least one uninflected negative particle, and that the most common non-manual negation marking is a side-to-side headshake. Sign languages typically gravitate toward one of two types, distinguished by the grammatical status of non-manual negation. In non-manual dominant systems of negation, a clause can be negated by non-manual markers alone; examples of this type include Deutsche Gebärdensprache (Germany), Svenskt Teckenspråk (Sweden), and ASL. In contrast, a manual dominant system requires a manual negator to negate a clause; examples of this type include Hong Kong SL, Türk İşaret Dili (Turkey), and Nihon Shuwa (Japan).

The available data show that LIM tends toward the manual dominant systems, requiring manual negation marking for basic clausal negation and in the vast majority of other cases, with a few notable exceptions. The relatively large inventory of negative signs in LIM include the following: the basic clause negator NO, at least one negative existential sign, a negative aspectual (frustrative) marker, the negative imperative STOP/DON'T, and an emphatic negative. In addition to its negative existential signs, LIM can use non-manual marking to denote negative existence or insufficiency, at least in time expressions. Crosslinguistic information on frustrative aspect marking in signed languages is currently unavailable.

LIM also employs suppletive negative forms belonging to particular semantic and grammatical domains – verbs of cognition and emotional attitude, as well as existential and aspectual markers – in line with reported typological tendencies for irregular negation marking (Zeshan 2013). The data appear to contain two potential simultaneous morphological processes for deriving negative forms: a sign NEG-IX that replaces the index finger used in referent marking with a Y-handshape to negate the involvement of the referent, and the reversal of palm orientation of a positive sign to derive the negative counterpart.

Although no negative signs in LIM appear to have the ‘O’ and pinkie-extended handshapes, they are both commonly found in negation marking in other signed languages (Zeshan 2004, 2006a). In contrast, the Y-handshape (thumb and pinkie extended, other fingers closed) appears in several LIM negative signs including the emphatic negative, the negative index, and perhaps the psych positive-negative pair IMPORTANT and IMPORTANT-neg. In comparison, ASL uses a Y-handshape for WRONG, but the “horns” handshape (index and pinkie extended, others closed) for nouns with potentially negative evaluative judgment, such as SNOBBISH/SNOOTY, SARCASTIC, MOCK, CIGARETTE, and ALCOHOL. Also, Hou and Mesh (2014) report the usage of a Y-handshape in a negative sign in Chatino SL and in the hearing communities of several regions in Middle and South America.

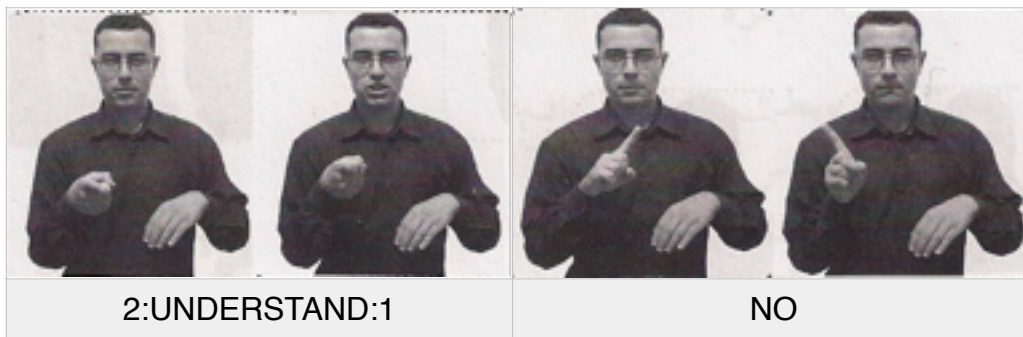
Additionally, Zeshan (2004: 37) reports that outward palm orientation is typically associated with negative meaning. LIM appears to contrast with this pattern, using an

outward palm orientation for IMPORTANT, but an inward palm orientation for the negative IMPORTANT-neg. There are similar palm orientation reversals for several other dyads in LIM.

### 3.2 Types of Negation Marking

#### 3.2.1 Basic Clause Negation

As seen in Figures 2.13 and 2.14 (§2.2.2; repeated below), the basic clause negator in LIM is the sign NO. These examples, along with the absence of clauses negated by non-manual marking alone, suggest that manual negation marking is obligatory and that non-manual negation marking is optional.



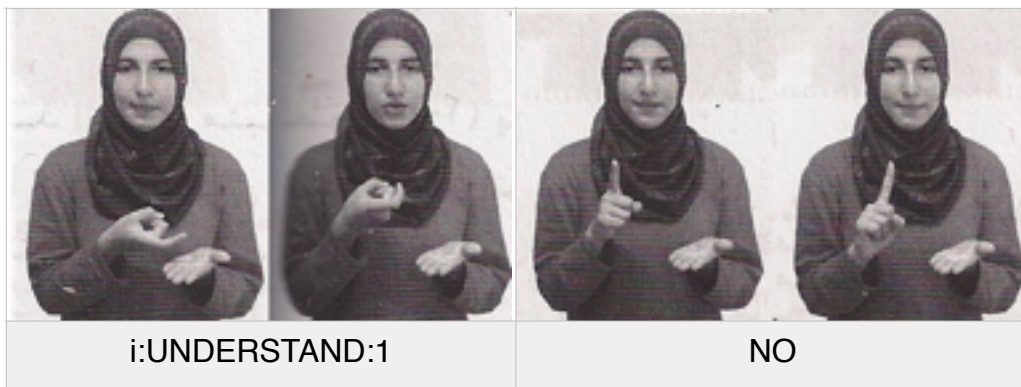
(Figure 2.13, repeated)

\_\_\_\_\_squint

<sub>2</sub>UNDERSTAND<sub>1</sub> NO

‘I don’t understand you.’

[Asdaa’ 2006: 211]



(Figure 2.14, repeated)

RH: IX<sub>1</sub> i:UNDERSTAND<sub>1</sub> NO

LH: CL:B''flat surface''<sub>i</sub> -----

'I don't understand (the notes written on) this paper.' [Asdaa' 2006: 200]

Zeshan (2004) reports that for many signed languages the grammatical status of facial expressions as negation markers is more variable than that of negative head movements such as side-to-side headshake. Example Figure 3.1 shows that even headshake appears to be optional in LIM clausal negation.



(Figure 3.1)

ENJOY NO

'I don't enjoy (it).'

[Asdaa' 2006: 112]

The basic clause negator can also be used to make qualitative judgments about arguments, as in Figure 3.2.





(Figure 3.2)

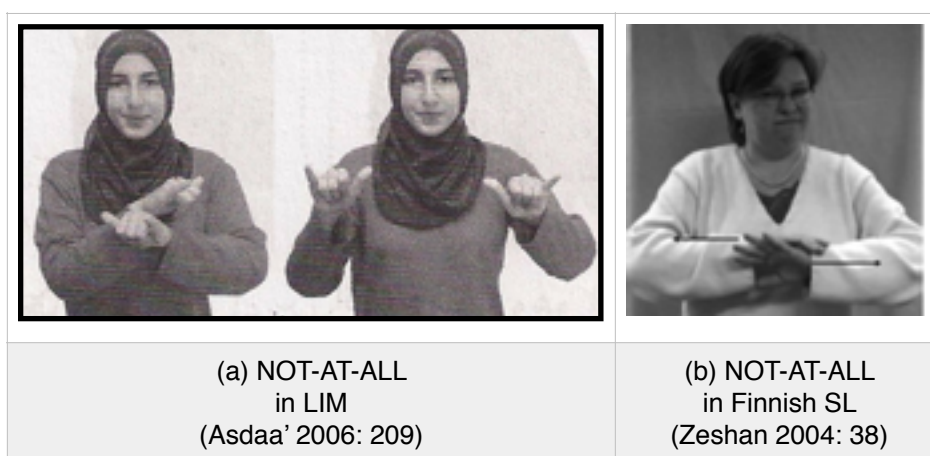
\_\_\_\_\_frown  
SEEM APPEARANCE NO

‘That (fabric pattern) seems ugly!’

[Asdaa’ 2006: 497-498]

### 3.2.2 Emphatic Negative

There is one instance of a negative emphatic marker, accompanied by a puffed cheek followed by a quick deflation of air. Similar non-manual markers appear in other SLs: the puffed cheek in Turkish and Thai SL, and the air puff in Danish SL (Zeshan 2004: 13). Both the puffed cheek and the air puff are relatively uncommon, and the literature does not address whether these two markers co-occur in other signed languages.



(Figure 3.3)

\_\_\_\_\_cheek  
2UNDERSTAND1 NO NOT-AT-ALL

‘I don’t understand you at all.’ [Asdaa’ 2006: 209]

Finnish SL makes use of a similar negative emphatic sign, as shown above. Future research should investigate whether this emphatic can signify negative polarity and can appear by itself in LIM, or whether it must appear with the basic clausal negator NO.

### **3.2.3 Suppletive Negative Forms**

The suppletive positive-negative pairs found in the LIM data are verbs of volition and non-volition (Figures 3.4 and 3.5), KNOW and NOT-KNOW (Figures 3.7, 3.8, and 3.9), and existentials and negative existentials (Figures 3.11 and 3.12). The data and field notes do not contain examples of a compositional negation strategy (e.g. \*WANT NO) for any of these items, and they also suggest that non-manual marking on suppletive negative forms is optional.

Zeshan's typological survey of negation marking strategies lists several semantic and grammatical categories where irregular negatives, such as suppletive forms, occur with great frequency; among them are verbs of cognition, emotional attitude, and possessive/existential marking (Zeshan 2004: 50). The suppletive LIM forms in the data align with these categories, but the precise realization of negation marking in LIM shows regional and/or areal tendencies.

#### *3.2.3.1 WANT and NOT-WANT*

There are several signs expressing 'want' in LIM, two of which are shown in Figure 3.4 below. My field notes contain a third sign WANT(3), wherein the 1- or G-handshape (index extended, or thumb and index extended) moves down the throat and upper chest. I

have numbered NOT-WANT(2) and NOT-WANT(3) to correspond to WANT(2) and WANT(3), respectively, in order to clarify that signs bearing the same number were used by the same signing communities. The extent to which these signs are shared and synonymous among Egyptian signing communities remains to be determined; as such, it is possible that my numbering system inaccurately portrays which suppletive negative forms correspond to particular positive signs.

The metaphor that general desire can be conveyed through the expression of desire to consume food or drink may help explain why all these signs occur in the chest and throat area. For the sake of comparison, Russian SL also articulates WANT on the chest and NOT-WANT at the throat level, perhaps making use of a similar metaphor, semantically extending desire of consumption to generalized desire.



(Figure 3.6)

The sign WANT(3) is very likely the basis for another suppletive negative NOT-WANT(3) also found in the field notes, wherein the 1- or G-handshape moves up the upper chest and throat and ends in front of the chin. This reverses WANT(3)'s direction

of motion, perhaps metaphorically also reversing the polarity of desire. It remains unclear whether this reversal of motion – perhaps accompanied by change of orientation as in NOT-WANT(2) – is a productive strategy in LIM.



(Figure 3.4)



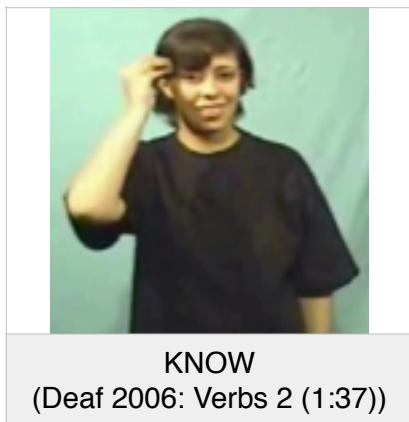
(Figure 3.5)

If reversal of movement direction is a productive negative strategy, then it remains to be seen why WANT(1) and WANT(3) move downward, WANT(2) and NOT-WANT(2) move upward, and NOT-WANT(2) moves forward. This mismatch in direction of movement may also be due to differences between sign communities. My preliminary observations note the following pattern of distribution: WANT(1), WANT(3), and NOT-WANT(3) in the Cairene Episcopalian sign community; WANT(2) in the Alexandrian

Muslim community; NOT-WANT(2) in both the Alexandrian and Cairene Muslim community. Future research should investigate the extent to which this lexical – and possibly grammatical – difference is based on regional or sociolinguistic grounds.

### 3.2.3.2 *KNOW and NOT-KNOW*

The verb pair KNOW and NOT-KNOW also shows suppletion. Anecdotally, the metaphors described by signers for these two signs involve placing knowledge in the mind for KNOW (Figure 3.7), and wiping knowledge from the mind for NOT-KNOW (Figures 3.8 and 3.9). In Figure 3.8, the signer frowns and tilts his head forward during the signing of NOT-KNOW, while Figure 3.9 does not appear to have any distinct non-manual negation markers. These examples suggest that non-manual markers are optional for suppletive negative forms. Crosslinguistically, the forward head tilt is not a common negation strategy, and the grammatical status of the frown is variable (Zeshan 2004).



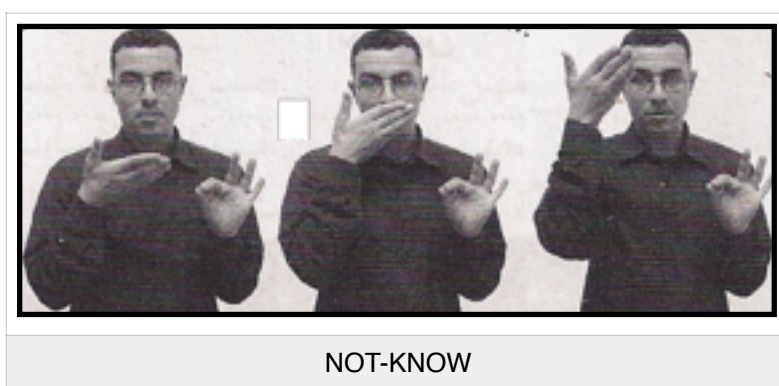
(Figure 3.7)



(Figure 3.8)

		_____	headtiltfwd+frown
NUMBER WH	————	NOT-KNOW	
‘What was his temperature?’	————	‘I don’t know.’	

[Asdaa’ 2006: 313-314]



(Figure 3.9)

ALL NOT-KNOW

‘I don’t know all (that’s written on the board).’

[Asdaa’ 2006: 202]

Comparing other Eastern Mediterranean signed languages, the Lebanese SL (LIL) forms for KNOW and NOT-KNOW (Figure 3.10a) very closely resemble those in LIM. The LIM and LIL negative suppletive form does not, however, appear related to the Jordanian

SL (LIU) form (Figure 3.10b).<sup>19</sup> Crosslinguistically, the LIM and LIL signs for KNOW are very common, while this particular suppletive negative form NOT-KNOW potentially has a shared origin.



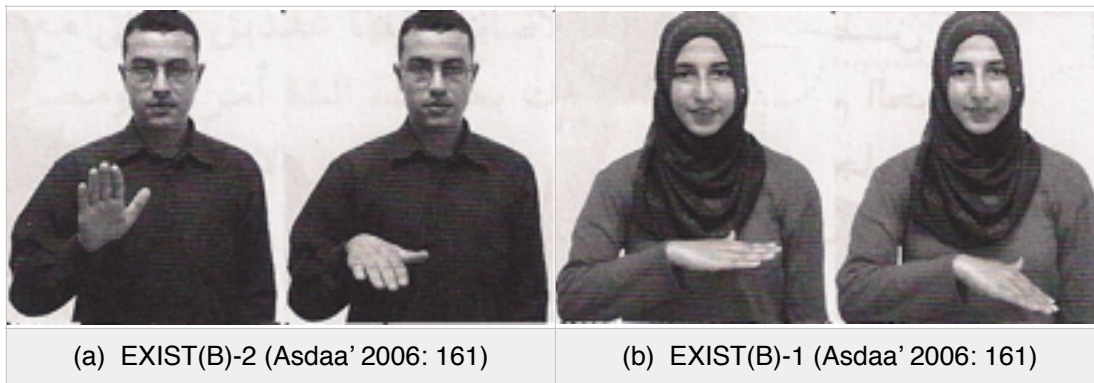
(Figure 3.10)

### 3.2.3.3 *EXIST and NEG-EXIST*

There are several existential signs in LIM, including one that seems to have a presentative function; for the purposes of this paper, only two of these existential signs will be discussed in relation to their suppletive negative forms. I have chosen to name them here according to their respective handshapes. Figure 3.11 shows a scenario where, in (a), the signer asks his addressee whether her parents are still alive and around by signing EXIST(B) away from his body, but closer to and pointing at his addressee; she then responds that they are, signing EXIST(B) near to her body and pointing

<sup>19</sup> Timothy Loh (personal communication, November 30, 2014), who was recently working on an anthropological study of Deaf communities in Jordan, reports that ‘don’t know’ in LIU is actually expressed identically to the sign in LIM and LIL. Perhaps this reported sign is another form NOT-KNOW(2), or the sign provided by Hendriks (2008) is in fact the same sign, but the image is simply unclear about path of motion, handshape change, and final hold location of the sign.

contralaterally in (b). Preliminary observation shows a tendency for EXIST(B) to co-occur with human arguments.



(Figure 3.11)



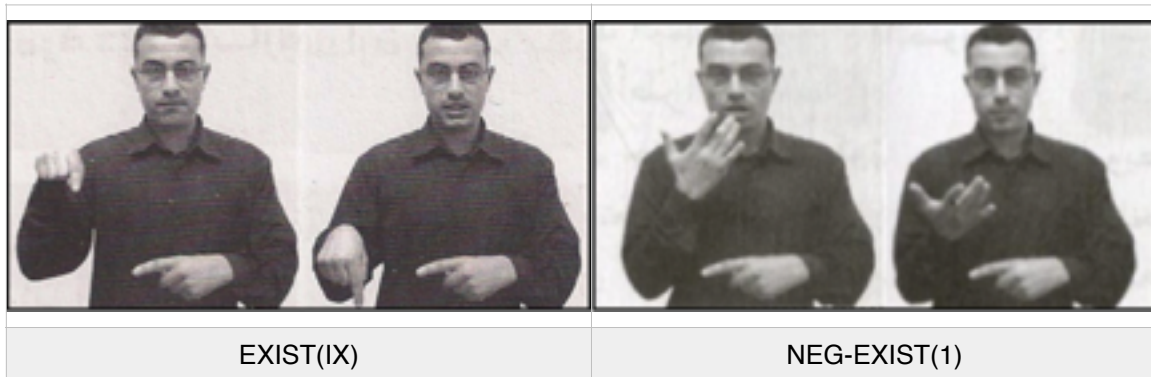
(Figure 3.12)

Shown in Figure 3.12a, EXIST(IX) appears to be a more general existential or possessive marker. Several other signed languages have similar forms to EXIST(IX) which also function as existentials, two of which are shown in Figure 3.12b (LIU) and 3.12c (Tanzanian SL).<sup>20</sup> There are also at least two suppletive negative existential forms.

<sup>20</sup> Sherman Wilcox (personal communication, November 15, 2014) points out the formal similarity between LIM EXIST(IX) and LSF (French SL) IL-FAUT 'must,' the latter of which underwent a change in handshake to become modern ASL sign MUST.



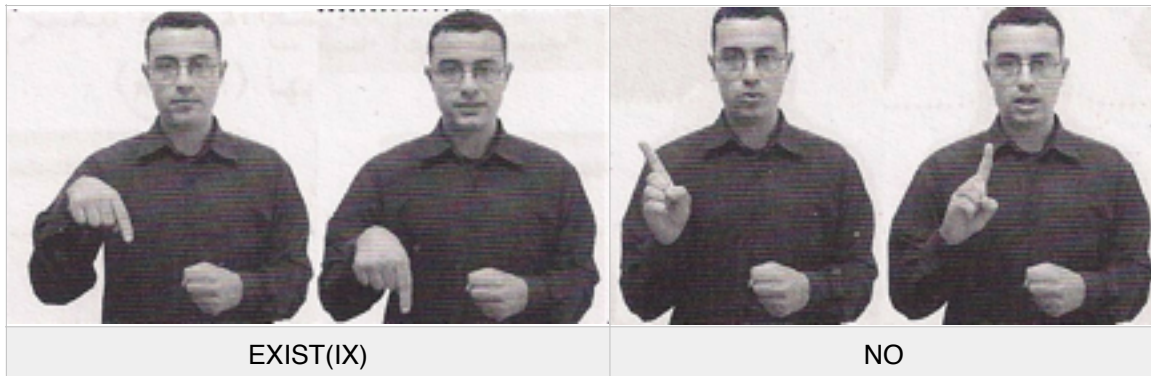
In the data, EXIST(IX) is either coordinated with NEG-EXIST(1), as shown below (Figure 3.13), or the general clause negator NO (Figure 3.14). In the latter example, EXIST(IX) has a possessive function.<sup>21</sup>



(Figure 3.13)

CLASS INSIDE TEACHER EXIST(IX) NEG-EXIST(1)

‘In class, whether there’s a teacher or not...’ [Asdaa’ 2006: 215-216]



(Figure 3.14)

WORK EXIST(IX) NO

‘Does she (have) work or not?’

[Asdaa’ 2006: 182]

The field notes contain instances of EXIST(IX), EXIST(B), and another negative existential that I have chosen to label as NEG-EXIST(2). In this LIM sign, which takes

<sup>21</sup> The data show that possession can be marked with EXIST(IX) or another sign that I have glossed as POSS.

the hinge/bent-B handshape (all four fingers extended together, bent at bottom knuckle to form a hinge shape, variable thumb position), the back of the hand may either tap the chin or rub against it. NEG-EXIST(2) in LIM is similar in form to the LIU negative existential, which has a slightly more open hinge handshape (Figure 3.15a). The Tanzanian and Turkish SL negative existential signs are provided for comparison in Figures 3.15b and 3.15c. All of these signs make use of a similar open palm handshape, but they differ in movement, facing direction, and non-manual marking.



(Figure 3.15)

It will be necessary in future research to perform a more detailed semantic and syntactic analysis of existential and possessive markers to determine whether animacy constraints govern the use of these existential signs, and whether there are restrictions on the coordination of particular existentials and negative existentials. Based on the preliminary observation that certain negative existential forms are used more frequently (or perhaps exclusively) in particular signing communities, future data collection should

also explore the possibility that the observed variation is due to sociolinguistic and regional differences.

### 3.2.4 Negative Existentials

#### 3.2.4.1 *Manual Marking*

In addition to NEG-EXIST(1) and NEG-EXIST(2), another sign (Figure 3.16) only appears once in the data; as such, it is unclear whether this sign is accurately interpreted as a negative existential or perhaps even a completive marker.



(Figure 3.16)

AGAIN ADDITIONAL  
'Is there anything else?'

—— THAT'S-IT(?)

—— 'That's it; nothing.' [Asdaa' 2006: 123]

#### 3.2.4.2 *Non-manual Marking*

In LIM, negative existence or insufficiency of time can be marked with non-manual features (furrowed eyebrows and a very slight forward headshake) in the absence of manual negative existentials (Figures 3.17 and 3.18). The scope of this non-manual marking varies, either co-occurring over the negated element alone, or extending over the entire clause. There are no examples of non-manual negative existential marking with

other arguments, so this may represent only a minor negation strategy in LIM, perhaps even a grammaticalized time expression.



(Figure 3.17)

\_\_\_\_\_neg \_\_\_\_\_neg  
 HEAVY NOT-WANT WORK TIME  
 ‘That’s a lot; I don’t want to do it. There’s not (enough) time/I have no time to work.’  
 [Asdaa’ 2006: 277]



(Figure 3.18)

\_\_\_\_\_neg  
 IX<sub>1</sub> TIME  
 ‘I don’t have (enough) time.’  
 [Asdaa’ 2006: 129-130]

In support of an insufficiency (i.e. ‘not enough’) reading, Zeshan (2004: 50) lists ‘evaluative judgment’ as another semantic domain whose members are commonly

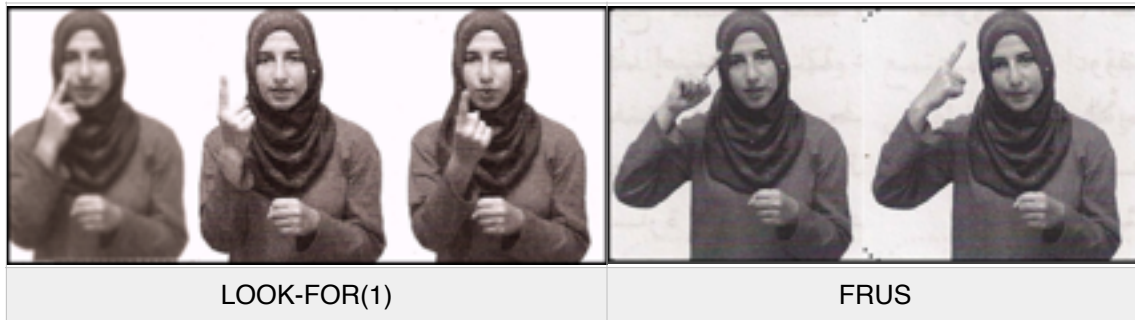
realized as irregular negatives crosslinguistically. Several examples of members in this set are the meanings “not right, not possible, [and] not enough.” Further research should determine the full range of arguments to which this non-manual-only strategy may be applied, as well as whether this non-manual strategy is an evaluative judgment or a negative existential. If the negative existential interpretation stands, then the grammaticality of using a negative existential sign in lieu of (or in addition to) the non-manual marking should also be determined.

### **3.2.5 Negative Aspectual Marking**

The data only contain one type of negative aspectual in LIM: the frustrative aspect, which can be roughly translated as ‘in vain; to no avail’, and which is sometimes referred to as an antiresultative, unsuccessful-goal, or avertive aspect. It differs from the incomplete in that the action may very well be finished, but it did not achieve the intended goal.

#### *3.2.5.1 Frustrative Marking*

In Figure 3.19, the signer has just been asked whether her sister has a job, to which she replies that her sister was looking for a while, but to no avail. In Figure 3.20, the signer’s son has a fever, which, despite his best efforts, he has been unable to alleviate. In both cases, the signer uses FRUS to comment on the futility of the action mentioned in the preceding clause. Instances of frustrative aspect in LIM coincide with several different types of non-manual marking. In Figure 3.19, the head tilts toward the dominant-hand side, while only furrowed/lowered eyebrows mark Example TEMP LOWER. The scope of both types of non-manual marking is the frustrative marker alone.

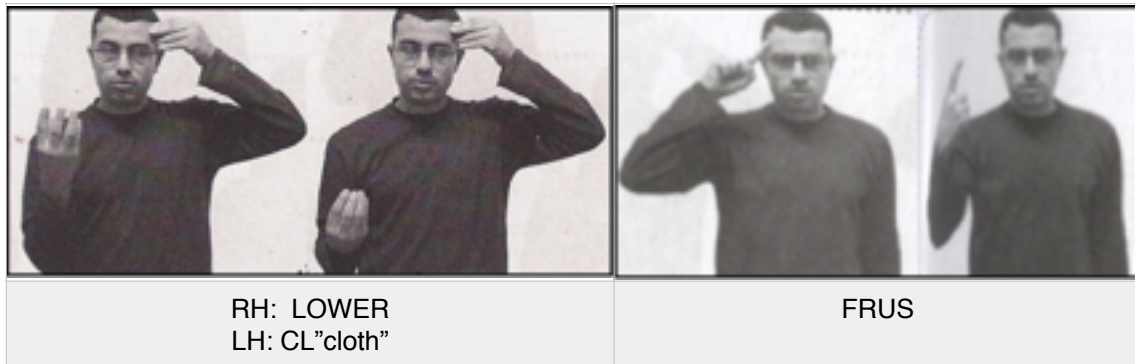


(Figure 3.19)

\_\_\_\_ headtilt  
 WORK LOOK-FOR(1) FRUS

‘She was looking for work, to no avail.’

[Asdaa’ 2006: 182-183]<sup>22</sup>



(Figure 3.20)

\_\_\_\_ furr.brow  
 CL"cloth on forehead" HOT LOWER FRUS

‘I put the washcloth on his forehead to lower his temperature, to no avail.’

[Asdaa’ 2006: 297-298]

Crucial to the interpretation of this sign as a frustrative marker rather than some kind of constituent or clausal negator is the fact that it does not reverse the polarity of the preceding elements. In other words, although analyzing FRUS as a reversal of polarity would still give LOWER in Figure 3.20 an interpretation similar to the intended meaning

<sup>22</sup> In this example, the signer produces another revolution of the index finger, but the second iteration has been removed due to formatting considerations in the present paper.

(‘I put the washcloth on his forehead; his temperature didn’t lower’), the example in Figure 3.19 cannot be interpreted as ‘she did not look for work’ in the given context. Instead, this marker comments on the non-success or non-achievement of the preceding clause.

Frustrative aspect marking appears to be typologically rare in both signed and spoken languages.<sup>23</sup> Zeshan (2004) notes that the most common negative aspectual meaning encoded by signed languages is the negative completive ‘not yet.’ Other aspectual markings in LIM are discussed in further detail in Chapter 4. Although also rare in spoken languages, dozens of languages spoken in South America mark frustrative aspect morphosyntactically with suffixes, clitics, particles, and auxiliaries. Depending on the particular language and context, the frustrative may also be employed to describe a counterfactual or hypothetical situation. Below is an example from Hixkaryana, a Cariban language spoken in the Brazilian Amazon.

*nekaimyatxkon            haryhe ti*  
 they-were-climbing    FRUS   HEA  
 ‘They were trying to climb (but didn’t succeed).’ (Derbyshire 1985: 253, as cited in Müller 2013: 160)

### 3.2.5.2 *Negative Existential as Frustrative*

The negative existential sign might also take on a frustrative interpretation in certain contexts, as in Figure 3.21. No non-manual markings appear with this apparently

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<sup>23</sup> Barbara Shaffer (personal communication, November 15, 2014) notes that an intensified variation of BORING in ASL, signed with the “horns” handshape (both the index and pinkie extended, as opposed only the index in the regular version of BORING), can be used as a frustrative marker. Further research must be done to compare the function and distribution of this ASL sign with that of LIM FRUS.

frustrative usage of the negative existential. The interpretation of the negative existential sign in this situation is ambiguous between negative existence ‘but it was not there’ and frustrative ‘to no avail.’ One way to determine whether a frustrative interpretation is accurate would be to test its grammaticality by replacing FRUS with NEG-EXIST(1) in environments where a negative existential meaning is not possible, such as LOWER in Figure 3.20.



(Figure 3.21)

SHOE LOOK-FOR(2) NEG-EXIST(1)

‘I looked for my shoe, to no avail; but it was not there.’

[Asdaa’ 2006: 242-243]

### 3.2.6 Negative Imperative

As discussed above (§§2.23 and 2.3), the directional verb STOP/DON’T functions as a negative imperative form. To recapitulate, the verb can be used to command someone to stop in the middle of doing something (Figure 2.21), but it also functions as a general prohibitive to command the addressee to not commence with an intended action (Figures 2.20 and 2.34).

### 3.2.7 Morphological Negation



LIM potentially has two morphological processes for deriving negative from positive forms, but the data and my personal experience contain limited examples of both strategies; thus, the productivity of each strategy remains unclear at present.

### 3.2.7.1 *Negative Handshape*

#### 3.2.7.1.1 *Negative Indexing*

This represents the negative counterpart to regular indexical pointing used in marking referential loci. The morphological process replaces the index with a Y-handshape (thumb and pinkie extended), resulting in the pinkie pointing in the direction of motion. Glossed as NEG-IX, the sign references a third person and is non-manually marked by a slight protrusion of the tongue or inflated cheek.



(Figure 3.22)

SEEM IX<sub>i</sub> <sup>neg</sup> NEG-IX<sub>i</sub>

‘Did it seem to be him or not him?’

[Asdaa’ 2006: 520, 527]

#### 3.2.7.1.2 *‘Y’ as a Negative Handshape?*

The O-handshape (thumb forms circle with all fingers together) is typologically common in negation signs, and the extended pinkie is found in East Asian signed languages (Zeshan 2004: 44). In contrast, the Y-handshape found in LIM is not a widely attested

negative handshape<sup>24</sup>, but it does appear with a wrist-twisting motion in Chatino Sign Language and several communities in Latin America and South America, with a range of meanings including a negative existential interpretation (Hou & Mesh 2014).

Among other LIM signs with negative connotations that use the Y-handshape are BREAK (inward-facing Y-hand(s) twist to face outward) and TOILET<sup>25</sup> (outward-facing Y-hand moves downward twice). The Y-handshape is also maintained in the compound MIND BREAK, meaning ‘stupid, idiotic.’ For one-handed BREAK, the Y-handshape does not bear any obvious imagistic iconicity. It is possible that the one-handed variant began as a two-handed sign, where the two inward-facing Y-hands, when placed end to end with pinkies touching or almost touching, represented a thin long object, and the twisting motion signified snapping the object apart. The Y-handshape in TOILET might be representative of the Victorian style pull-cord toilets; although these are uncommon in present day Egypt, and the traditional toilet – essentially a hole in the ground – is much more widespread than any other kind of toilet.

There are also several LIM signs that take a Y-handshape but which lack an immediately negative connotation; most of these signs readily lend themselves to an

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<sup>24</sup> Barbara Shaffer (personal communication, November 15, 2014) points out WRONG in ASL as another negative sign that uses the Y-handshape, but the author is not certain whether WRONG is derived via some morphological handshape-change process in ASL parallel to the proposed derivation of LIM negative index from the index. Although this is beyond the scope of the present paper, one could postulate an ASL morphological negation process involving directional reversal and a change to Y-handshape; applying this process to ASL TRUE (contralateral-facing index finger contacting front of chin moves forward and down) could produce WRONG (inward-facing Y-handshape moves backward to contact chin).

<sup>25</sup> Note that the bathroom and toilet represents an extremely dirty place in Egyptian culture, with a pair of sandals designated for bathroom use that are not to leave the washroom.

iconic interpretation. In the sign YEMEN, the Y-handshape stands for the curved ceremonial dagger (inward-facing Y placed on the belly) that Yemeni men commonly wear on a belt. In other signs, the Y-handshape represents a writing utensil, the ulnar edge sliding forward across the non-dominant hand (as a flat-object classifier ‘paper’) in SCHOOL, and moving from right to left while the forearm twists with limited rotation to show the writing direction of ARABIC. Another sign, RESPONSIBLE, uses the same handshapes as SCHOOL, but instead of sliding, the ulnar edge of the dominant Y-handshape slams down on the open palm of the non-dominant flat-object classifier, iconically putting the pen to paper with force and decisiveness, metaphorically showing the signer’s initiative and ability to take charge and get something accomplished. The Y-handshape is also used as a classifier representing a coat hanger (Asdaa’ 2006: 239).

Discussed in the next section, the sign EASY/UNIMPORTANT and its positive counterpart IMPORTANT both take a Y-handshape and a similar motion to NEG-IX, but they do not appear to agree with a specific referent in the examples found in the present data (Field notes, and Figures 3.23 and 3.24 below). Also, it would be difficult to argue that the Y-handshape supplies a negative meaning in both EASY/UNIMPORTANT and its opposite IMPORTANT.

### *3.2.7.2 Palm Orientation Reversal*

There are several pairs of LIM signs that demonstrate what may be a morphological process reversing palm orientation to derive a negative meaning. In each of these pairs, the inward-facing word bears a negative meaning of the outward-facing word. In the pair

IMPORTANT and EASY/UNIMPORTANT (perhaps IMPORTANT-neg), the Y-handshape moves side-to-side in front of the signer's chest (Figures 3.23 and 3.24). The field notes gloss this latter sign only as EASY, which would also be an appropriate gloss for the scenario in Figure 2.17, where the signer comments on the ease of understanding math, and in another situation where a signer advises that it is easy to lower a fever with a cool, damp cloth to the forehead (Asdaa' 2006: 292). In the context of Figure 3.24, the signer is talking to her husband, who complains that he does not have enough time to complete the grocery shopping. She responds with EASY, which in this situation could either mean 'it would be easy for me to do' or 'if you don't have time, it doesn't matter; it's not important'; she uses this sign with the simultaneous mouthing of the Arabic *mish muhimm* 'not important'. Thus, I decided to re-gloss this sign as EASY/UNIMPORTANT, similar to other minimal pairs in LIM that are distinguished by mouthing alone, such as SOMETIMES/MAYBE.



(Figure 3.23)

IX<sub>1</sub> LEAVE IMPORTANT

'I'm going to leave on an important (errand).'

[Asdaa' 2006: 153]



(Figure 3.24)

EASY/UNIMPORTANT IX<sub>1</sub> BUY

‘It’s unimportant/insignificant; I’ll buy it.’

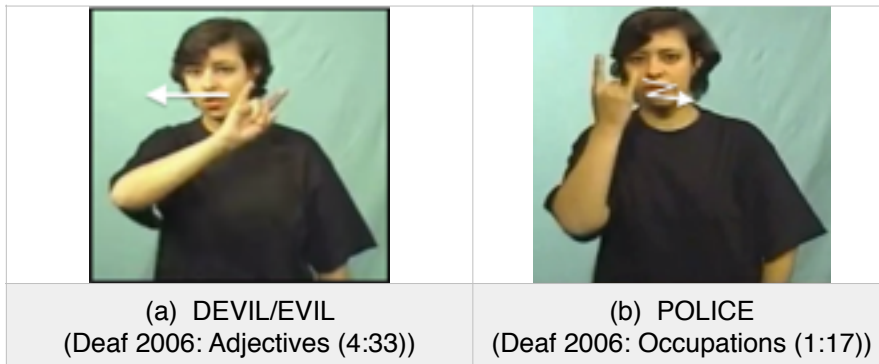
[Asdaa’ 2006: 278-279]

Another possible positive-negative pair is LOOK-AT/WATCH and BLIND (Figure 3.25). The negative sign again is an inward-facing version of its positive counterpart, here with a slightly modified motion. However, it would be misleading and inaccurate to gloss BLIND as LOOK-AT/WATCH-neg, because it does not exhibit the same verbal agreement pattern as LOOK-AT/WATCH, and it has a somewhat negative modal meaning of ‘cannot see/look at/watch’ rather than a verbal negation interpretation, such as ‘does not look at/watch’.



(Figure 3.25)

Another plausible pair is EXIST(B) and NEG-EXIST(2), as seen above in Figures 3.11 and 3.15; although both signs face downward, NEG-EXIST(2) faces downward and inward at the chin. It remains unclear how productive this strategy is, considering that other pairs of signs with opposite palm orientation do not necessarily exhibit the same antonymy. For example, the signs for DEVIL/EVIL and POLICE differ in palm orientation (Figure 3.26), where DEVIL/EVIL faces outward and POLICE faces inward. Taking into account the political atmosphere in Egypt, it would be difficult to argue which of these two signs has a more negative connotation. Another issue is that some signs do not appear to have a counterpart; for instance, the negative frustrative sign FRUS twists to an inward-facing position (Figure 3.19), but no positive counterpart has yet been observed for this sign.



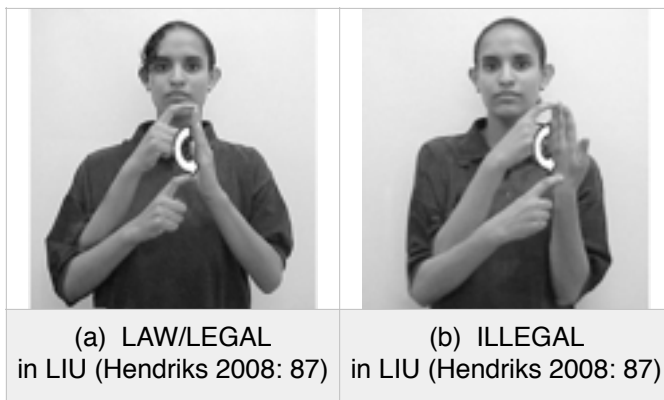
(Figure 3.26)

Finnish SL also employs palm orientation reversal as a negation morpheme (Figure 3.27). This process in Finnish SL is representative of the more typologically common pattern, where the outward-facing hand acts as a negation marker (Zeshan 2004:

37). An example of inward-facing hand orientation as a negative morpheme is reported by Hendriks (2008) for LIU (Figure 3.28). It remains to be seen whether this is an areal pattern of the Eastern Mediterranean.



(Figure 3.27)



(Figure 3.28)

### 3.3 Summary

The inventory of negative markers and the variety of their corresponding functions in LIM stands out crosslinguistically as relatively large. Many of these signs are employed for typologically common types of negation, such as a basic clausal negator and an emphatic negative marker; the suppletive negative forms in LIM also match up with

typological tendencies for verbs with irregular paradigms. However, other negation strategies such as palm orientation reversal and handshape change are documented for only a handful of signed languages – if any at all – and show different patterns of realization compared to LIM. Future research should evaluate whether these are productive and generalizable strategies, or whether they have limited applicability as grammaticalized expressions.



## **Chapter 4: Aspectual Marking**

### **4.1 Introduction**

There are at least three types of aspectual marking in LIM: progressive/continuous, completive/perfective, and frustrative. The progressive/continuous shares its form with the verb CONTINUE, and the completive/perfective with the verb FINISH; at present, it is unclear whether the frustrative marker has any verbal functions, or an interpretation other than non-success or non-achievement. It also remains to be seen whether there are meaningful distinctions between simultaneous morphological processes, perseveration of the non-dominant hand, and sequential aspectual marking.

### **4.2 Progressive/Continuous**

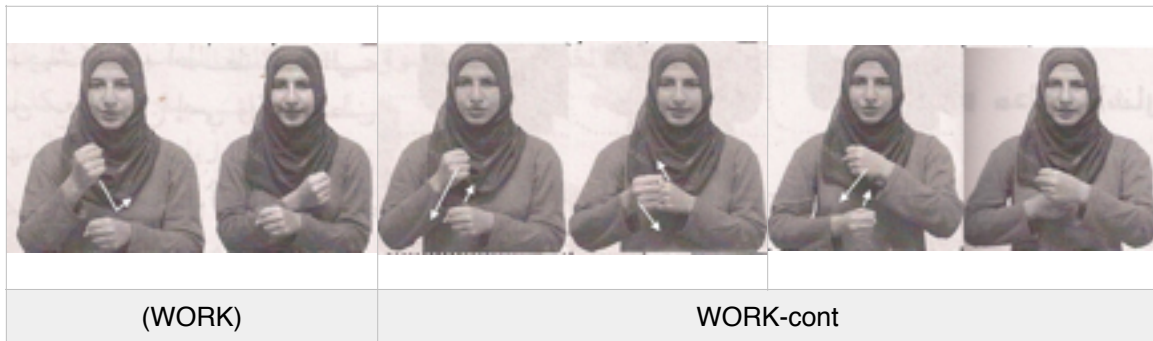
The progressive/continuous is the only observed aspectual marking that can appear as a simultaneous modification of the argument<sup>26</sup>. The field notes contain the sign THINK, where the index finger contacts the temple, and the continuous modulation of THINK, where the index finger makes several circles in the air (clockwise when viewed from the right), hovering slightly away from the temple.

In Figure 4.1, the signer is explaining that she works all week long and barely gets any rest. Unlike the continuous modulation of THINK, the first iteration of the WORK involves contact (as in the unmodified form), while the continuous aspectual modulation

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<sup>26</sup> For a discussion of aspectual modulations on ASL adjectival and verbal predicates, see Chapters 11 and 12 in Klima & Bellugi 1979.

results in the fists making small arcs over each other in alternation, also clockwise when viewed from the right.



(Figure 4.1)

WEEK (WORK) WORK-cont

‘I work all week long.’

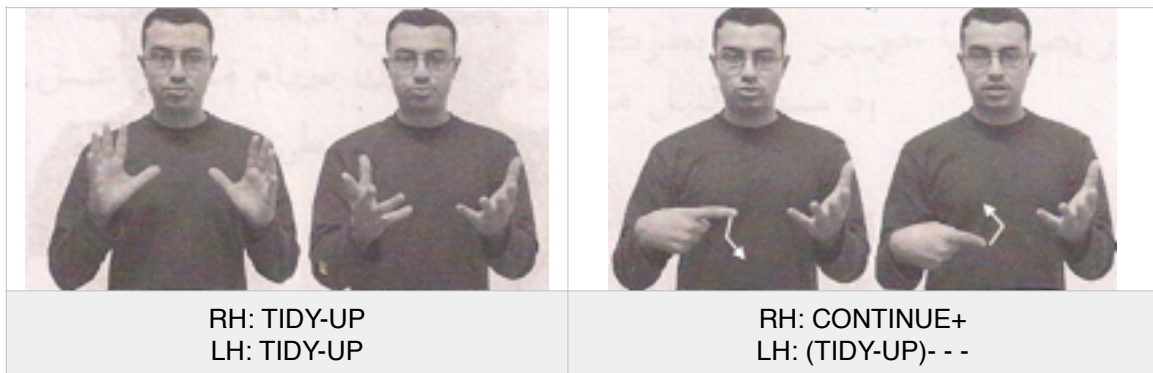
[Asdaa’ 2006: 144]

Similar to WORK, the continuous modulation of LOOK-FOR(1) involves body contact (Figure 3.19 above) before proceeding to a repeated circular motion (clockwise when viewed from below).

These examples demonstrate the continuous aspectual modulation of verbs via the application of CONTINUE’s movement pattern. In my field notes, the verb CONTINUE occurs as a two-handed sign with the index fingers extended, and the index fingers revolving around each other (clockwise when viewed from the right) while both hands move forward simultaneously. The varying patterns of body contact under continuous aspectual modulation may result from differences in the internal motion of each sign in its unmodified form: the unmodified sign THINK begins away from the head and ends with a hold on the side of the forehead; WORK begins with the dominant fist moving toward the non-dominant fist, striking it, then bouncing away; LOOK-FOR(1) begins on

the body and moves outward. With more verbal data, it may be possible to formulate rules for the formation of the continuous modulation based on these internal movement patterns: perhaps contact-final signs like THINK may delete contact entirely, while contact-initial signs like LOOK-FOR(1) must begin on the body; a full unmodified iteration might obligatorily precede aspectual modulation for signs like WORK that show a movement-contact-movement pattern.

Other cases of continuous aspect marking make use of a one-handed variation of CONTINUE while the non-dominant hand holds the element being modified. In Figure 4.2, the signer is commanding his wife to clean up the house; the non-dominant hand in TIDY-UP perseverates while the dominant hand signs CONTINUE. Similar to WORK in Figure 4.1 above, there is a full iteration of TIDY-UP before the signing of the continuous aspectual modulation.



(Figure 4.2)




RH: IX<sub>2</sub> TIDY-UP CONTINUE+

LH: TIDY-UP- - - - -

‘You continue tidying up (the house).’

[Asdaa’ 2006: 147-148]

In another example of this perseveration, the signer in Figure 4.3 asks whether her addressee is still in school, by first signing SCHOOL, and then holding the non-dominant hand while signing CONTINUE with the dominant hand. Similar exchanges occur several other times throughout the data, and each time the addressee replies with a one-handed CONTINUE. These short responses could be interpreted as either an aspectual or verbal reading of CONTINUE.

		
RH: SCHOOL LH: SCHOOL	RH: CONTINUE+ LH: (SCHOOL)- -	(Reply:) CONTINUE+

(Figure 4.3)

RH: SCHOOL CONTINUE+

(Reply:) CONTINUE+

LH: SCHOOL- - - - -

‘(Are you) still in school?’ — ‘Yes (still).’

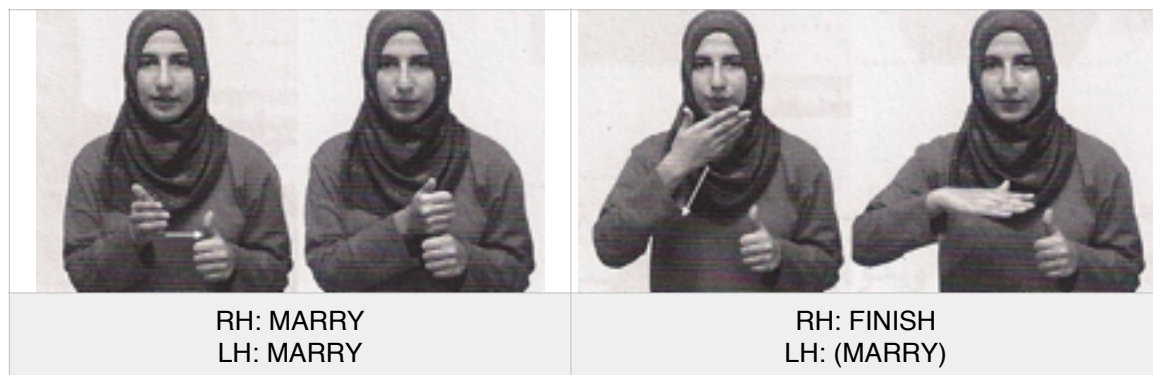
[Asdaa’ 2006: 455-456]

The fact that some arguments take internal modification to express continuous aspect while others show perseveration accompanied by a one-handed version of CONTINUE may be specified lexically, or it may be due to semantic or articulatory constraints that have yet to be determined. The realization of continuous aspect for directional verbs should also be investigated. Finally, it remains unclear whether CONTINUE can be interpreted as the more typologically common negative completive ‘not yet.’ This sign could be tested for a negative completive interpretation by checking

whether it can be used as a negative reply to a question that assumes completion, such as ‘have you finished school?’

### 4.3 Completive/Perfective

The LIM sign FINISH, similar to its counterpart in other signed languages, functions as both a verb and a completive/perfective marker. Although there is no simultaneous modulation of the modified argument, perseveration of the non-dominant hand is also common with the completive marking. In Figure 4.4, the signer responds to the question of whether her sister works without any overt negation marking, but simply by saying she got married.



(Figure 4.4)

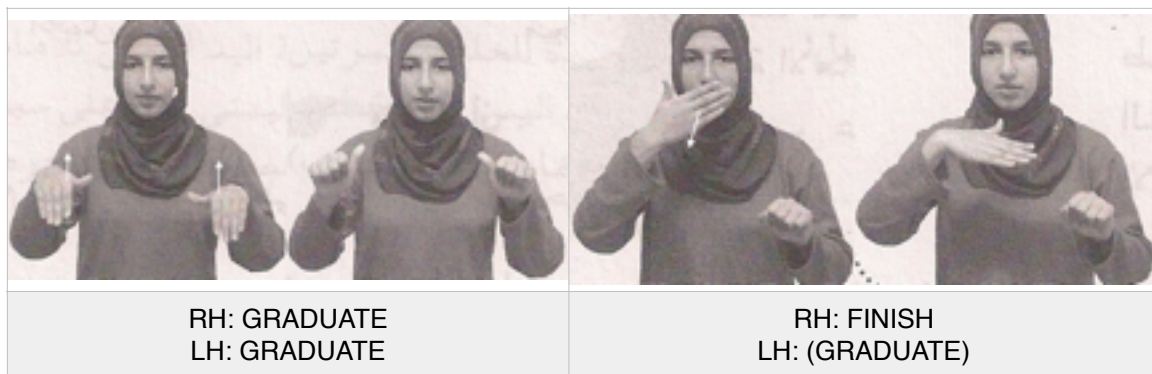
RH: MARRY FINISH

LH: MARRY- - - - -

‘(No.) She got married.’

[Asdaa’ 2006: 179]

In another scenario (Figure 4.5), the signer is asking what kind of work the addressee will do after he has graduated. This usage of the completive sets up a relative clause.



(Figure 4.5)

RH: GRADUATE FINISH WORK WH

LH: GRADUATE- - - - - WORK- - - -

‘After you’ve graduated, what work will you do?’ [Asdaa’ 2006: 457-458]

There are other instances where FINISH is signed with two hands, and the preceding sign does not perseverate, without any apparent distinction in meaning, as in Figure 4.6.<sup>27</sup>



(Figure 4.6)

PRAY FOUR FINISH TWO ONE LAST STOP/DON’T<sub>2</sub>

‘After the *‘ishaa*’ prayer, pray *shafa*’ and *witr*, then don’t perform any further prayers.’<sup>28</sup>

[Asdaa’ 2006: 409]

#### 4.4 Frustrative

<sup>27</sup> The example in Figure 4.6 utilizes the same utterances as Figure 3.20, but focuses on the completive FINISH rather than the negative imperative STOP/DON’T.

<sup>28</sup> Islamic prayers are identified in LIM by the respective number of genuflections; thus, the evening prayer *‘ishaa*’ has four genuflections, the *shafa*’ prayer consists of two, and so forth.

As discussed in Section 3.2.5, the frustrative aspect is marked by separate sign FRUS, or possibly also NEG-EXIST(1). It remains unclear whether the frustrative can also have a negative completive meaning, although both the negative completive and the frustrative share the semantics of non-success and non-achievement.

#### **4.5 Summary**

The types of aspectual marking present in the LIM data reflect crosslinguistically common categories, but several gaps in the inventory remain, including the negative completive. Additional data collection may reveal whether the less common frustrative marker can function in this role. It is also unclear at present whether the continuous aspectual modulation may itself be modified to represent different internal event structures, such as repetition or duration.

## **Chapter 5: Conclusion**

First and foremost, the current research represents the preliminary stages of linguistic investigation into LIM; as of the writing of the present paper, the author is unaware of any previous attempts at analyzing LIM as a linguistic system. Based on a limited sample set of data collected over a four-month period, there is no doubt that additional data must be gathered and a corpus compiled in order for these analyses to extend with more certainty beyond this initial foray. In spite of this shortcoming, other signed languages provide points of comparison for LIM, both in the forms and functions of their signs.

The present paper explores LIM directional verbs, negation, and aspectual marking. Although the LIM directional verb class shows a great deal of similarity to other directional verbs crosslinguistically, several irregularities in argument agreement and dropping appear in the verbal data. The relatively large inventory of negative markers in LIM includes several typologically uncommon negatives, such as a frustrative marker, a negative imperative, and perhaps morphological negation processes that change handshape and palm orientation. There are at least three types of aspectual marking in LIM, only one of which appears as a simultaneous modulation of the sign; it has yet to be determined whether variation in perseveration of the non-dominant hand is linguistically meaningful.

Later stages of research on LIM should investigate the effects of simultaneity, as it manifests in the potential non-dominant hand argument agreement in the verbal system, and as the perseverating feature during different types of aspectual modification. Other



linguistic phenomena that showed up in the data but require further investigation include the possessive and existential system, interrogative marking, lexical class distinctions, signs initialized with cued speech gestures, classifiers, time metaphors, and numeral incorporation. Future work on LIM should explore lexical and grammatical variation in Egypt; personal experience and anecdotal evidence from Egyptian signers suggest that differences in certain lexical and grammatical features distinguish regional and socioreligious varieties of LIM. Further research should also address the possibility of areal effects in the Eastern Mediterranean region and the possibility of substratal influence of other signed languages brought to Egypt by foreign or foreign-trained missionaries and educators.

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