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Basic clause negator in Sadat Tawaher Sign Language

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Abstract. Sign languages (SLs) generally have several manual signs to negate sentences, usually with one sign serving as the *basic clause negator* and with its function being only to reverse the polarity of a clause without adding any additional semantic content. We identify the basic clause negator in *Sadat Tawaher Sign Language (STSL)*, a SL that emerged in a single household in a small Iranian village around sixty years ago. While STSL has several manual negators, all of which may serve as sentential negators, we argue that one negator, NEG_{basic}, is the *basic* clause negator. The data includes both isolated sentence productions and story-telling elicited from native STSL signers. The evidence for NEG_{basic} comes from distributional frequency, semantic function, negative concord, and negative responses.

Keywords. Basic clause negator, manual negator, negation, sign language, spoken language

1. NEGATION. Negation is the opposite of affirmation. It is one of the unique features of human language that has received considerable attention in the scholarly literature. All languages studied thus far possess one or more strategies to negate a sentence, i.e., to reverse the truth condition of the sentence (Zeijlstra, 2013). Spoken languages use a variety of strategies to express negation. Numerous attempts have been made to analyze the negation systems of the world's languages from a typological perspective, e.g., Klima (1964), Dahl (1979, 2010), Payne (1985), Zanuttini (2001), and Miestamo (2005), among others. For instance, Payne (1985), in a crosslinguistic overview of negative elements, mentions four major classes of elements through which sentential negation is realized in the languages of the world: negative verbs, finite auxiliaries, negative particles, and negative markers in the form of derivational morphemes.

Standard negation has been defined as 'the basic way(s) a language has for negating declarative verbal main clauses' (Miestamo, 2005, p. 1). In typological research, main declarative sentences are used to determine the basic (or canonical) word order of a language (Munro, 2013). For such sentences to be used in typological research, they also need to be pragmatically neutral and have a human / agent subject, an action verb, and a noun phrase object (Frey, 2015). As for the basic clause negator, we adopt Zeshan's (2006a) definition: "a particle that simply reverses the polarity of the clause, without any additional semantic content" (p. 47). In our current search for this negator, we extend the definition of basic clausal negation to further types of main, active, non-embedded (simple) declarative clauses so that it includes transitive, intransitive, and ditransitive, verbal and non-verbal (= copular) sentences, with agentive or non-agentive subjects and with noun phrase as well as pronominal objects. Thus, our definition is broad and applies to such sentences as those involving weather predicates, reversible and non-reversible predicates, as well as pragmatically marked sentences, e.g., those involving topicalized elements. Non-sentential negation (e.g., constituent negation) was excluded from the study.

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2.1 NEGATION IN SIGN LANGUAGE. Sign languages (SLs) use manual signs and non-manual markers (NMMs) to negate sentences (Quer, 2012). Manual signs indicate negative meanings which range from basic negative operators to specific ones (Zeshan, 2006a). NMMs are facial expressions and head and body movements such as raised, lowered, or furrowed brows, head turn, headshake, etc., that mark different clause types like yes-no questions, wh-questions, relative clauses, negative sentences, among others. In some SLs, the manual marker is required while the NMM is optional; these are manual-dominant. In other SLs, the NMM is required whereas the MM is optional; these are non-manual dominant. Most, if not all, SLs have several manual signs at their disposal to negate sentences as will be elaborated later.

2. BASIC CLAUSE NEGATOR. In this section, we briefly describe basic clause negators in American SL (ASL), New Zealand SL (NZSL), Türk İşaret Dili (Turkish Sign Language, TİD), Hong Kong SL (HKSL), and Indo-Pakistani SL (IPSL), and other SLs for which no specific basic clause negator has been described yet such as Finnish Sign Language (FinSL) and Greek SL (GSL). Our choice of these SLs is motivated by geographical diversity.

ASL is a non-manual dominant SL in that side-to-side headshake alone can negate the sentence. Nonetheless, in ASL, the basic syntactic negator is the manual sign NOT which is almost always accompanied by side-to-side headshake (glossed as 'neg' in the examples in (1), (2), and (3)) (Figure 1) (Fischer, 2006). In addition to headshake, the negation of a negative sentence may also be reinforced by a frown.

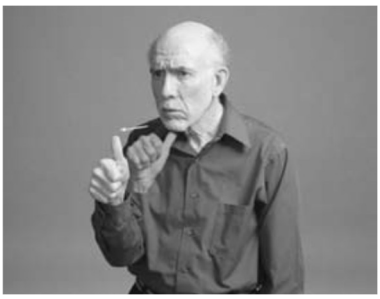

Figure 1. Basic clause negator NOT in ASL (Fischer, 2006, p. 187)

According to Fischer, *NOT* may occur pre-verbally, or sentence-finally when the rest of the sentence is topicalized. NOT negates both stative predicates and active verbs as in (1) and (3), respectively:

neg
(1) FATHER NOT SICK (Example 66 in Fischer, 2006, p. 186)
'Father isn't sick.'

neg
(2) FATHER SICK NOT (Example 67 in Fischer, 2006, p. 186)
'Father isn't sick.'

neg
(3) NOW^DAY FATHER NOT WORK (Example 68 in Fischer, 2006, p. 186)
'Father isn't working today.'

Whether in preverbal or sentence-final positions, NOT has the same meaning and behaves similarly (Wood, 1999). Fischer states that signers may alternatively opt to use other negative

signs such as NONE or NOTHING in place of NOT although some signers might reserve these signs for negative existentials.

McKee (2006) states that the older generation of NZSL used one generic sign, NEG, which she refers to as 'traditional generic negator'. According to McKee, this sign resembles a gesture used by hearing people and is used for most basic negative functions, such as 'not', 'don't', 'can't', 'never', and 'should not', although its current use is restricted to certain contexts, e.g., as a negative imperative or to add emphasis.

The basic clause negator in TİD is *NOT* (Figure 2). This sign usually appears in sentence-final position, often cliticizes to a preceding host sign, especially after high-frequency predicates like KNOW, UNDERSTAND, and LIKE, and is optionally marked by backward head tilt ('neg-tilt') and raised eyebrows (Zeshan, 2006b).

Figure 2. Manual negator in TİD (Zeshan, 2006b, p. 150)

			neg-tilt	
(4)	BEN	KONUŞMAK	DEĞİL	(Example 27 in Zeshan, 2006b, p. 148)
	$INDEX_1$	SPEAK	NOT	
	'I am not a speaking (person).'			

HKSL is also reported to have several manual negators. According to Tang (2006), the most common ones are NO / NOT, NOT-HAVE, and NOT-YET. Although the author does not clarify directly, it seems implied that NO / NOT is the basic clause negator in HKSL.

Figure 3. NO / NOT in HKSL (Tang, 2006, p. 217)

Finally, IPSL has a basic clause negator NEG which reverses the sentence polarity only and which does not add any other semantic content as in (5) (Zeshan, 2006a). NEG is usually accompanied by an optional headshake (glossed as 'neg' below) and may also express non-existence (6) even though IPSL has a dedicated negative existential sign, NEG-EXIST.

		neg	
(5)	TODAY HOLIDAY	NEG	(Example 13 from in Zeshan, 2006a, p. 318)
	'Today is not a holiday.'		

(6) INDEX$_3$ J-O-B WORK NEG (Example 17c from in Zeshan, 2006a, p. 319)
'He doesn't have a job.'

It is important to note that although all languages, spoken and signed, have negation, not all SLs are believed to have a basic clause negator. For instance, Savolainen (2006) reports that while FinSL has several manual clause negators such as ZERO, NO, NOT-EXIST, EMPTY, DO-NOT, NOT-YET, CANNOT, BE-FORBIDDEN, IS-NOT-WORTHWHILE, it apparently lacks what the author terms 'a neutral negative particle' which simply means 'not'. Instead, each of these negators is used in a certain context and has a specialized meaning that a neutral negative sign would not convey. For example, ZERO conveys emphatic negation in nominal or verbal predicates (7) while NOT-EXIST is a negative existential and conveys non-existence in addition to other meanings (8).

(7) INDEX$_1$ MONEY ZERO (Example 28 in Savolainen, 2006, p. 296)
'I've got no money at all.'

raised eyebrows + squinted eyes headshake
(8) AUSTRALIA index MOUNTAINS NOT-EXIST (Example 33 in Savolainen, 2006, p. 296)
'There are no mountains in Australia.'

Antzakas (2006) reports that GSL has several manual negation particles which fall into two categories: those with upward hand movement (CANNOT, WANT-NOT, and NOT-B) and those with side-to-side hand movement (NOT-G and NOT-B(shake)). In both groups, the hand and head movements are synchronized and the NMM may spread over the whole clause (9). The author, however, does not specify any of the negators as being the basic clause negator.

Figure 4. NOT-B in GSL (Antzakas, 2006, p. 264)

TILT
(9) INDEX1 AGAIN GO NOT-B (Example 6 in Antzakas, 2006, p. 266)
'I won't go (there) again.'

In Zeshan's (2006a) volume on negation and interrogative constructions, all 37 SLs but possibly one have at least one negative particle that serves as the basic clause negator. In manual-dominant SLs the basic negator is a manual sign while in non-manual dominant SLs, a NMM, usually a headshake, serves this purpose.

3. SADAT TAWAHER SIGN LANGUAGE. The current study examines negation in Sadat Tawaher Sign Language (STSL) and aims to identify the basic clause negator in this SL. STSL is a manual dominant SL and has several manual sentential negators. This SL emerged naturally approximately sixty years ago in single family who lived in a small village called *Sadat Tawaher* located in southwestern Iran (population about 450). STSL emerged as a *gestural* communication system after an approximately 20-year-old man lost his hearing completely. As this man had learned his native language, Khuzestani Arabic, but had no reading or writing literacy and as his

family had no access to deaf education, the only means to communicate to him was through gesture. This gestural system eventually developed into a SL with a grammatical system independent of the surrounding spoken language, Khuzestani Arabic (KhA).

About 50 individuals, including immediate family members, distant relatives, and friends, have learned STSL so far. STSL has a basic SVO word order and commonly allows SOV. As far as we are aware, there have been no other deaf individuals in the village of Sadat Tawaher nor any other sign language. STSL signers speak when they sign, an observation that will become important later in this study. The hearing family members have learned STSL either as their native language or from an early age. Other individuals who have also learned STSL include neighbors and friends. Sadat Tawaher is a close-knit community with KhA as the only spoken language. Most inhabitants engage in farming, fishing, hunting, and raising livestock.

Figure 5. Sadat Tawaher

Figure 6. Sharing food in Sadat Tawaher

Figure 7. Farming in Sadat Tawaher

4. METHODOLOGY. This section describes the participants, data, and data collection procedure.

4.1. PARTICIPANTS. Participants were thirteen STSL signers, consisting of 10 males and 3 females, aged 27-54. Eight signers were CODAs[1] and one signer was a non-native signer who had signed for about thirty years by the time of the writing of this piece. We categorized as CODAs those participants who were born and lived in the same house as the deaf person and grew up signing to him daily. In the current study, this group includes four of his children and four of his grandchildren. Table 1 provides more details about the participants.

Participant	Sex	Age[2]	STSL proficiency	Relation to deaf person	Type of data contributed
P #1	F	7	native - low	granddaughter	signed sentences
P #2	M	8	native - good	grandson	signed sentences
P #3	M	9	native - good	grandson	signed sentences
P #4	M	10	native - good	grandson	signed sentences
P #5	M	11	native - good	grandson	signed sentences
P #6	M	11	native - good	grandson	signed sentences
P #7	M	27	native - high	grandson	stories
P #8	M	30	native - high	grandson	signed sentences
P #9	M	37	native - high	son	signed sentences
P #10	M	40	native - high	son	signed sentences
P #11	F	42	native - high	daughter	signed sentences & stories
P #12	F	51	non-native - high	daughter-in-law	signed sentences & stories
P #13	M	55	native - high	son	signed sentences & stories

Table 1. Participants' profiles

The participants' proficiency was estimated based on informal observations of their signing with the deaf individual. These observations were made by one of the authors who is a native signer of STSL (but from whom data were not elicited for this study).

4.2. DATA. The relevant data included 1361 negative sentences which were elicited through isolated signed sentence productions and free story-telling. The sentences consisted of a wide variety of declarative sentences including intransitive, transitive, and ditransitive ones, those with agentive animate and inanimate subjects, weather predicates, and those with nominal and pronominal subjects and objects. Sentences that lacked an overt subject (VO / OV) were also included in the analysis since STSL commonly drops a pronominal subject due to discourse factors. The two data collection methods are described below.

4.2.1. SIGNED SENTENCE PRODUCTIONS. For this task, twelve participants signed 36 negative Arabic sentences. The participants were asked to sign these sentences as naturally as possible. Some

[1] Child of deaf adults

[2] Age during study

sentences were discarded from the final analysis for various reasons[3] and overall, 356 sentences were considered for analysis from this task. The following are examples of the stimuli that were presented to the participants:

(10) sˤaħbi ma-ʃæræb tʃay
friend-1s.gen neg-drink.3sg.perf tea
'My friend didn't drink tea.'

(11) ʔəl-wælæd ma-zæʕ əl-bit
the-boy neg-push.3sm.perf the-girl
'The boy didn't push the girl.'

(12) ma-dʒaʕdæh tə-mtˤər
neg.3sf.sit.imperf 3sf.rain.imperf
'It's not raining.'

4.2.2. STORY-TELLING DATA. In this task, we asked the participants to narrate two types of stories. The first type of story is what is known among the Arab population of Khuzestan as the Stories of Levant. These are stories that are narrated by adults at family gatherings or by parents to children at bedtime to teach moral principles in an amusing way. In the second type of narrative, the participants were asked to simply describe current and past everyday activities, incidents, lifestyle, etc. After the narrative data had been collected, we analyzed the stories for any negative sentences of the types described above, i.e., main, active, declarative, simple sentences. Other types of negative sentences such as negative imperatives or negative wh-questions / yes-no questions were not included in the current analysis. Overall, the narrative videos totaled 5 hours, 13 minutes, and 28 seconds in length, in which we found 1005 negative sentences.

4.3. OBJECTIVE & HYPOTHESIS. We aimed to identify the basic clause negator in STSL. We hypothesized that,  although  STSL has several manual sentential negators, only one, which has a closed flat CL-B or open CL-5 handshape, serves as the basic clause negator. We refer to this negator as NEG_{basic}.

5. RESULTS & DISCUSSION. In this section, we provide an overview of negation, the various manual negators, and the evidence for NEG_{basic} as the basic clause negator in STSL.

5.1. NEGATION IN STSL. STSL is a manual dominant SL. Signers may thus express sentential negation with a manual negator alone (13b), most commonly in sentence-final position, or both a manual negator and a NMM (13a), but never by means of a NMM alone (13c). The NMMs for each manual negator are as follows: backward head tilt (bht) for NEG_{basic} and NEG_{poss}, and side-to-side headshake for NEG_{proh} and NEG_{exist}. For NEG_{other}, there is no dedicated NMM because this manual negator varies depending on the meaning it expresses. For instance, to express NOT-KNOW, i.e., lack of knowledge, the manual negator is accompanied by a shoulder shrug while to express NOT-LIKE or NOT-WANT, the dominant hand moves away from the signer's body accompanied by commonly a head turn. Furthermore, when the NMM is present, it never spreads over adjacent signs or constituents (13c & 13d). However, in the vast majority of negative sentences, the NMM is left out or hardly visible. Therefore, since in STSL a negator must be manual and can never be a NMM, only manual negators were considered for this study. In other words,

[3] E.g., absence of manual negator, incomplete signing, & signing of the wrong sentence.

the NMM seems to function more like part of the phonological make-up of negation and not an independent sign of its own.

(13) a. BROTHER DRINK TEA $\overline{\text{NEG}_{\text{basic}}}^{\text{bht}}$
'My brother does not drink tea.'

b. BROTHER DRINK TEA $\text{NEG}_{\text{basic}}$

c. * BROTHER $\overline{\text{DRINK TEA}}^{\text{bht}}$

d. * BROTHER DRINK TEA bht

5.2. MANUAL NEGATORS IN STSL. In this section, we briefly describe the five manual clausal negators in the data which we refer to by the following names: $\text{NEG}_{\text{basic}}$, NEG_{proh}, NEG_{poss}, $\text{NEG}_{\text{exist}}$, and $\text{NEG}_{\text{other}}$. The subscript in the name of each negator refers to the (primary) semantic function of that negator. NEG_{proh} has a prohibitive function and mostly adds emphatic negation; NEG_{poss} and $\text{NEG}_{\text{exist}}$ negate possessive and existential sentences, respectively. Lastly, $\text{NEG}_{\text{other}}$ consisted of several manual negators which configurationally did not look like any of the other manual negators and which seemed to form negative formulaic expressions such as NOT-KNOW, NOT-WANT, NOT-LIKE, etc. An example for each manual negator is provided below.

(14) $\text{NEG}_{\text{basic}}$:

LEADER TALK $\text{NEG}_{\text{basic}}$
'The leader didn't talk.'

(15) NEG_{poss}:

GIRL ONE NEG_{poss}
'He didn't have a daughter.'

(16) NEG_{exist}:

CLOCK NEG_{exist}
'There was no clock [we didn't have one].'

(17) NEG_{proh}:

COME NOTHING NEG_{proh}
'He would not come home empty-handed.'

(18) NEG_{other}:

WITCH HORSE EAT MAN NEG_{other} [NOT-KNOW]
'The witch was eating the horse and the man did not know that.'

5.3. BASIC CLAUSAL NEGATOR IN STSL. Of these five manual negators, we now provide evidence that NEG_{basic} serves as the basic clause negator, hence the subscript *basic*. NEG_{basic} consists of a single upward movement of the dominant hand or of both hands from the wrist accompanied by a simultaneous backward head tilt. NEG_{basic} is identical in its manual and non-manual elements to the clause negators of GSL and TİD (see Figures 2 & 4 above) and configurationally looks like the following:

Figure 13. NEG_{basic}

5.4. EVIDENCE. The evidence for the claim that NEG_{basic} is the basic clausal negator comes from the following areas: (i) frequency of use, (ii) domain of use, (iii) contextualization, (iv) pragmatic / semantic flavor, (v) comparison with the spoken language, (vi) negative concord, and (vii) negative responses. This evidence is discussed in detail below.

5.4.1. (I) FREQUENCY OF USE. The first telling piece of evidence for NEG_{basic} as the basic clause negator is the frequency with which it was used across the signed sentence productions and narrative data. Overall, there were 1361 negative sentences. Regardless of context and data collection method, NEG_{basic} was the most common manual negator. NEG_{basic} was used 356 times (100%) in signed productions. As for the stories, there were 1096 negative sentences (Table 2). Of these, 1005 sentences (91.7%) had an overt manual negator while in 91 sentences (8.3%), no negator (manual or non-manual) was present in sign (although it was present in speech). This latter group of sentences was excluded from the analysis. NEG_{basic} was used 746 times out of 1005 (74.2%) while all the other negators (NEG_{poss}, NEG_{exist}, NEG_{proh}, NEG_{other}) combined were used in only 259 cases (25.8%). Overall, across signed productions and stories, NEG_{basic} was used in 1102 out of the total number of 1361 sentences (81%). The other four negators were used 259 times (19%).

	Overt neg					No overt neg
	NEG_{basic}	NEG_{poss}	NEG_{exist}	NEG_{proh}	NEG_{other}	
#	746	59	45	37	118	91
%	74.2%	5.9%	4.5%	3.7%	11.7	-
Total	1005					91

Table 2. Distribution of manual negators in stories

5.4.2. (II) DOMAIN OF USE. The second piece of evidence is semantic in that NEG_{basic} negates a semantically diverse group of sentences including not only clauses with main verbs but those that lack an overt verb such as possessive and existential sentences. Furthermore, STSL does not seem to have dedicated signs for HAVE and EXIST although further research is needed to confirm this claim. Thus, NEG_{basic} can also suggest non-existence (19d) and lack of possession (19c). The results from the stories are especially telling as there are quite a few examples of such usage of NEG_{basic}. In addition, NEG_{basic} negates not only action verbs (19b) but also stative ones (19a). Thus, its use includes both events and states.

(19) a. IX-3 RICH NEG_{basic}
'He's not rich.'

b. IX-3 DRIVE NEG_{basic}
'He doesn't drive.'

c. HUSBAND FARM NEG_{basic}
'My husband doesn't have a farm.'

d. WATER EIGHT DAY BREAK WATER NEG_{basic}
'The water had been shut off for eight days. There was no water!'

5.4.3. (III) PRESENCE (OR ABSENCE) OF CONTEXTUALIZATION. As mentioned above, the participants used all the manual negators in the stories but only NEG_{basic} in the signed sentence production task. We believe this is because the signed sentences were decontextualized and isolated. Therefore, in the absence of context, the signers used only NEG_{basic} and reserved the other negators for contextualized situations as in the stories. In other words, the stories provided the

participants with an opportunity to use negators with the specific semantics that they intended, e.g., NEG_{exist} for non-existence, NEG_{proh} for prohibition and warning, etc., while in the absence of such context, NEG_{basic} serves that purpose, hence its unique use in the signed sentence productions. The following examples support this claim:

(20) a. BOY LOVE FATHER NEG_{basic}
'The boy does not love his father.'

b. SOLDIER SHOOT MAN NEG_{basic}
'The soldier did not shoot the man.'

c. MAN NEXT-TO WALL NEG_{basic}
'The man is not next to the wall.'

d. MAN DIE NEG_{basic}
'The man didn't die.'

5.4.4. (IV) PRAGMATIC / SEMANTIC FLAVOR. Our reasoning for this claim is based on the fact that NEG_{basic} is used to reverse the polarity of a pragmatically *neutral* (i.e., decontextualized) sentence without adding any pragmatic or semantic flavor. That is, NEG_{basic} is used in pragmatically unmarked contexts while other negators such as NEG_{proh} are used in marked contexts and add an adverbial meaning (as shown with 'never' and 'not at all' in the English translations of the example in (21). The evidence comes from the type of data collection method. Our claim here is straightforward: The data collection methods seem to have impacted the participants' choice of the negator in that all the stimuli from the signed productions were negated with NEG_{basic} only, whereas the sentences from the stories were negated with all five manual negators. The signed sentence productions likely provided the participants with sentences out of their natural context and thus were pragmatically neutral. This issue becomes clearer once signed sentences from the stories along with their spoken counterparts are considered (next section).

5.4.5. (V) COMPARISON WITH THE SPOKEN LANGUAGE. As mentioned before, STSL signers speak when they sign. In most cases where negators other than NEG_{basic} were used, especially with NEG_{proh}, Arabic adverbials such as *kəlʃi* 'nothing', *kəlləʃ* 'at all' or *æsˁɬæn* 'never' were added in speech as in (21). This indicates that these negators add a semantic flavor that NEG_{basic} does not add since such spoken words never accompanied NEG_{basic}.

(21) ʔəl-əbnæyyæh ma-mat-æt dˁæˁɬˁɬ-æt ʕædlæh **kəlʃi** ma-bi-hæh
the-girl neg-die-3sf.perf remain-3sf.perf alive nothing neg-with-her
GIRL DIE NOT STAY ALIVE NEG_{proh}
'The girl didn't die. She stayed alive. There was nothing wrong with her at all.'

5.4.6. (VI) NEGATIVE CONCORD. STSL allows a sentence to be negated with more than one manual negator while the sentence remains negative as in (22).

(22)

PAST AC FAN NEG_{exist} NEG_{basic}
'In the past, there were no air conditioners or fans at all.'

We believe that the occurrence of multiple negators with the sentence remaining negative is a type of negative concord (NC). NC is optional in STSL and is used for emphasis only. We found 86 instances of NC in the data (Table 3) all of which occurred in the stories, more evidence that the narrative data were contextualized (while the signed sentences were decontextualized). Of the 86 NC combinations, 80 instances (93%) are two-negator combinations, and the rest are three-negator combinations. Furthermore, 50 NC combinations (58.1%) have NEG_{basic} as their initial negator while 36 combinations (41.9%) start with a different negator. We take this finding to be evidence for NEG_{basic} as the basic clause negator.

Two-negator combinations													Three-negator combinations					
NEG_{basic}-initial			Non-NEG_{basic}-initial										NEG_{basic}-initial					
$NEG_{basic}NEG_{basic}$	$NEG_{basic}NEG_{proh}$	$NEG_{basic}NEG_{exist}$	$NEG_{exist}NEG_{proh}$	$NEG_{exist}NEG_{basic}$	$NEG_{exist}NEG_{basic}$	$NEG_{exist}NEG_{poss}$	$NEG_{proh}NEG_{exist}$	$NEG_{proh}NEG_{basic}$	$NEG_{poss}NEG_{other}$	$NEG_{poss}NEG_{exist}$	$NEG_{poss}NEG_{proh}$	$NEG_{poss}NEG_{basic}$	$NEG_{basic}NEG_{exist}NEG_{proh}$	$NEG_{basic}NEG_{proh}NEG_{basic}$	$NEG_{basic}NEG_{basic}NEG_{proh}$	$NEG_{basic}NEG_{basic}NEG_{basic}$	$NEG_{basic}NEG_{exist}NEG_{basic}$	$NEG_{poss}NEG_{exist}NEG_{proh}$
10	33	2	20	1	2	1	3	1	1	3	2	1	1	1	1	1	1	1
86																		

Table 3. NC combinations in the stories

Now the question arises as to whether 58% is that much better than 42%. The answer is a certain yes as this finding shows that, in ascending to the first place in the NC sequences, NEG_{basic} has outcompeted four other negators which accounted for 42% of the NC instances combined.

5.4.7. (VII) NEGATIVE RESPONSE. The last piece of evidence for NEG_{basic} being the basic clause negator is not sentential but comes from negative responses, i.e., simply saying 'no', that occurred in the stories. Although negative responses do not constitute clausal negation, they probably provide the most basic way the participants construe negation to be. One could imagine that, in creating a sign language, signers would have to first come up with a sign meaning 'no' and then employ that sign at the sentential level. In any case, the results from negative responses are as follows:

	NEG_{basic}	NEG_{proh}	NEG_{poss}	NEG_{exist}	NEG_{other}
	42	3	0	0	2
Total	47				

Table 4. Negative response particles

As Table 4 shows, NEG_{basic} is used far more frequently (89.3%) than any other negator as negative response particle NEG_{proh} (6.3%) and NEG_{other} (4.2%). NEG_{basic} is thus almost exclusively used as a negative response particle. Note that not only a manual negator but also a non-manual negator or both manual and non-manual negator can be used to say '*no*' as an independent sign in STSL. In examining negative response particles for this report, we only considered those which involved a manual negator.

6. CONCLUSION. We have presented evidence that while STSL has several manual negators, one, i.e., NEG_{basic}, is the *basic* clause negator. We defined a basic clause negator as one that is used the most frequently, adds no additional semantic content or flavor and is thus pragmatically neutral, and is used with any type of verb to negate not only action and state verbs but also nominal sentences as well as those sentences that lack an overt verb, e.g., HAVE and EXIST. NEG_{basic} clearly fulfills all these criteria as shown by the extensive evidence from frequency of use, domain of use, contextualization, pragmatic / semantic flavor, comparison with the spoken language, negative concord, and negative responses.

NEG_{basic} coincides with a co-speech gesture used by hearing people in Sadat Tawaher when expressing negation, a finding that has been reported for many SLs, e.g., ASL (Fischer, 2006), NZSL (McKee, 2006), and GSL (Antzakas, 2006). We conclude that NEG_{basic} was a co-speech gesture that was adopted by STSL signers for sentential negation. The fact that NEG_{basic} serves basic clausal negation renders it a plausible candidate for possibly being the first negator to emerge in STSL with other manual negators emerging later. However, it is equally likely that all negators have always been in use in STSL since the other manual negators are also used by the hearing culture although to a lesser extent. Thus, one is tempted to claim that the data from STSL signers in this study might in fact reflect patterns found within the co-speech gestures in the hearing culture. This claim needs to be empirically verified by data from the hearing culture.

Finally, while NEG_{basic} primarily functions as a marker of neutral sentential negation, it can also convey nuanced meanings such as emphasis. This is often achieved through repetition (evident in the NC combination of NEG_{basic} NEG_{basic}) or NMMs like an intense brow raise and focused gaze. Similar observations have been noted in other sign languages, such as the use of NO-NO in TİD (Zeshan, 2004) and NEG-CONTR in NZSL (Zeshan, 2006b).

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