

Nespor, Marina & Wendy Sandler. 1999. Prosody in Israeli Sign Language. *Language and Speech* 42(2–3). 143–176.

and

Sandler, Wendy. 1999. The Medium and the Message: Prosodic Interpretation of Linguistic Content in Israeli Sign Language. *Sign Language & Linguistics* 2(2). 187–215.

presented by Kie, 29 Jan. 2020 (Nespor & Sandler 1999) (Sandler 1999)

1. Started by asking myself, what do I already know about the prosodic hierarchy from spoken languages?

level	what counts as one?	intra-linguistic variability?	cross-linguistic variability?	observable consequences
syllable	usually, sonority peak (nucleus) and surrounding material	<u>not much</u>	<ul style="list-style-type: none"> lots of variation in what is a permissible syllable some variation in how to divide the same string into syllables <ul style="list-style-type: none"> e.g., <i>a.pla</i> vs. <i>ap.la</i> 	stress rules count syllables <ul style="list-style-type: none"> e.g., stress second-to-last syllable
prosodic word aka phonological word	roughly syntactic word <ul style="list-style-type: none"> could include clitics, exclude some affixes 	<u>not much</u>	<u>yes</u> : what can be a clitic, which affixes can be independent	is domain of stress rules <ul style="list-style-type: none"> stress second-to-last syllable <i>of prosodic word</i>
accentual phrase	one or two content words, plus surrounding function words	<u>yes</u> : size depends on speech rate	<u>yes</u> : languages vary in whether they use AP and/or iP	<ul style="list-style-type: none"> in a pitch-accent language, only one lexical pitch-accent can surface per AP can have a characteristic post-lexical melody <ul style="list-style-type: none"> e.g. Seoul Korean LHLH
intermediate phrase			<u>yes</u> : languages vary in whether they use AP and/or iP	<ul style="list-style-type: none"> can be domain of downstep <ul style="list-style-type: none"> if there is H L H in an iP, second H is lowered one postlexical pitch accent per iP often has a boundary tone at end pitch can be reset at beginning of new iP
phonological phrase (<i>some researchers use AP and iP; others p-phrase</i>)	generally projected in some way from syntactic XPs	<u>some</u> : often there's an option to combine two p-phrases into one	<u>yes</u> : quite different rules across languages <ul style="list-style-type: none"> e.g. is it the beginning or the end of the XP that matters? 	

intonational phrase	roughly a sentence, but a sentence can be broken into multiple IPs <ul style="list-style-type: none"> o parentheticals, lists, long subjects, etc. 	<u>yes</u> : slower speech → more IP boundaries	<u>not so much</u> : the same factors seem to matter cross-linguistically	<ul style="list-style-type: none"> • often has a boundary tone at end • often followed by a pause • pitch can be reset at beginning of new IP
utterance	roughly a sentence, but two short sentences can be joined together if they have a tight relationship <ul style="list-style-type: none"> o e.g. ellipsis, anaphora, implied <i>because</i> 	<u>yes</u> : whether to combine two sentences into a single utterances is very optional	<u>not so much</u> : the same factors seem to matter cross-linguistically	
				<i>most levels:</i> <ul style="list-style-type: none"> • consonants at beginning of domain have stronger articulation <ul style="list-style-type: none"> o e.g., more contact between tongue and palate • sounds at end of domain have longer duration
				<i>most levels:</i> <ul style="list-style-type: none"> • there are phonological rules that apply only at certain domain edges <ul style="list-style-type: none"> o e.g., word-final obstruent devoicing o e.g., English syllable-initial aspiration • there are phonological rules that apply only if their structural description (target+environment) is all contained within a certain domain <ul style="list-style-type: none"> o e.g., assimilate nasal to following stop iff they are in the same intonational phrase

2. Main findings in these two papers for Israeli Sign Language (ISL)

- End of phonological phrase gets prominence
 - expected, given head-complement word order
- There is an assimilation rule whose domain is phonological phrase
- Facial expressions mark intonational phrases

3. Nespor & Sandler's assumption for how phonological phrase is projected from syntax

- lexical head X, plus everything on its nonrecursive side, until you hit another head outside X's maximal projection
 - so in a head-complement language (right-recursive), a **lexical head's** p-phrase includes preceding material

vecchia is inside *sbarra's* maximal projection

- and, the last word of the p-phrase is prominent
[la vecchia **sbarra**] [la **porta**] *Italian*
the old bar it carries 'The old bar carries it'

- in some languages, a non-branching complement can be included in its head's p-phrase

[hanno **parlato**] [**bene**]... ~ [hanno parlato **bene**]...
they.have spoken well

[hanno **parlato**] [molto **bene**]..., *[hanno parlato molto bene]
they.have spoken very well

4. Examples of sentences from their corpus

- a. [[cake there] _P [I bake] _P] _I [[tasty very] _P] _I
'The cake I baked is very tasty.'
- b. [[son-my] _P [dog his] _P] _I [[sleep] _P] _I
'My son's dog is sleeping.'
- c. [[house my] _P [garden down outside area] _P] _I [[burned] _P] _I
'The garden of my house burned.'
- d. [[shop] _P [side corner] _P] _I [[bankrupt] _P] _I
'The shop around the corner went bankrupt.'

basic order is head-complement
each p-phrase should *end* with a head

5. Example of prosodic coding

(24) 'The book he wrote is interesting.'

	[[book-there] _p	[he write] _p] _I	[[interesting] _p] _I
brows	up—————		down————
eyes	squint————		droop————
cheeks			
mouth		'O'————	down————
tongue			
head	tilt—————		
mouthing	'book'————		'interesting'
torso	lean—————		
hold		=	
reduplication	-1	×3	×4
pause			
speed			slow
size		big	big

(N&S p. 161)

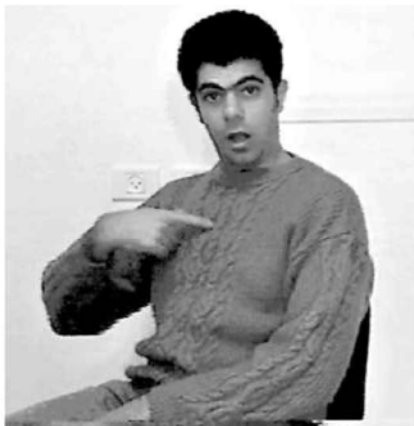
6. Phonetic properties of p-phrase

236/247 p-phrases in corpus had at least one of the following—and usually just one

- Reduplication on last word of p-phrase
 - more repetitions than that word lexically requires
 - suggests that prominence is phrase-final
 - moreover, non-final signs of p-phrase often have fewer repetitions than lexically required
- Hold after last word of p-phrase
 - hands freeze briefly at end of phrase
- Pause after p-phrase
 - hands relax towards neutral configuration and position

7. Spreading rule

- Weak hand's shape and location for head word can spread all across the p-phrase



'I'



'I' with h2 sandhi



'bake'

(N&S p. 163)

- You have to be careful about excluding certain cases:
 - part of a sign can get used as a classifier
 - e.g. 'The street, I crossed' (topicalized)
 - weak hand of street used as classifier for rest of sentence
 - if there's another two-handed sign, it interrupts spreading
 - so there are cases where you can't tell whether it's the p-phrase boundary that stopped spreading, or another two-handed sign
 - also, if there's both a p-phrase boundary and an intonational-phrase boundary in the same place, you can't tell which is responsible
- ⇒ their claim that the domain of spreading is the p-phrase is based on not very many tokens (9!), but exceptionless

another example, Sandler p. 201



a. PERSUADE



b. STUDY

[[[MALE HUMAN-CLASSIFIER THERE]_p]_I

[I PERSUADE STUDY]_p_I

'I persuaded him to study'

Normally STUDY is one-handed

8. Edge-marking in intonational phrases

- head position changes at boundary between two IPs
- facial expression changes at boundary between two IPs
- eye blink usually happens at end of IP rather than elsewhere

	[[cake] _p] _I		[I eat-up deplete] _p] _I
brows	up——		
eyes	squint——	X	X
cheeks			
mouth	O→o		lip sputter
tongue			
head	forward		tilt——
mouthing	'cake'		
hold	=		=

(N&S p. 165)

9. Final prominence in intonational phrase

- last p-phrase of IP can have same facial expression, but intensified
 - e.g. contract bottom eyelids during first p-phrase, add contraction of top eyelids for second and final p-phrase of IP
- longer holds and pauses
- more repetitions in reduplication
- slower rate
- bigger gestures

10. Intonation: facial expression analogous to postlexical melodies in spoken languages

- e.g. English H* L% for declarative sentences, L* H% for yes/no questions
- Facial expression extends over whole IP

examples from N&S p. 170



Figure 4: yes/no questions

brows up
widened eyes
head forward

'Did you eat?'



Figure 5: shared information

contracted eyelids
(raised cheeks)

'That movie that we were talking
about' is now playing in Haifa'



Figure 6

yes/no questions + shared information

brows up
widened (top) eyelids
head forward
contracted (bottom) eyelids
(raised cheeks)

'Have you seen that movie?'
(that we were talking about)

and from Sandler pp. 208-209



Figure 7: *Wh*-question superarticulation

“furrowed brows and a forward head position”
from ‘Where is the house’



Figure 8: Shared information superarticulation

“squinted eyes”
from ‘The house we were talking about is there’



Figure 9: *Wh*-question and shared information superarticulation

from ‘Where is that house we were talking about?’

11. Back down to the level of the prosodic word...

- combination of lexical word and cliticized function word gets reduced to one syllable
 - so it counts as one p-word
- if content word is mouthed, mouthing extends over whole p-word
 - no separate mouthing for clitic

examples from Sandler p. 174



a. SHOP (beginning)



b. SHOP (end)

Figure 1: SHOP, citation form



a. SHOP (beginning)



SHOP-THERE (ending, cliticized form)

Figure 2: SHOP-THERE, cliticized form with h2 coalescence

- though you can't totally see it from just these stills, SHOP-THERE apparently has the mouthing of Hebrew *Xanut* 'shop', not *šam* 'there'
- Clitic also assimilates in handshape
 - because a p-word can only have one group of selected fingers



Figure 3: Pronoun, I (citation form)

(Sandler p 195)



a. I (clitic)

b. READ (beginning)

c. READ (end)

Figure 4: I, cliticized with handshape assimilation from READ

(Sandler p. 196)—in this one, note also the weak hand spreading, since I-READ is also a single p-phrase