

IT JUST DOESN'T LOOK LIKE ASL!
DEFINING, RECOGNIZING AND TEACHING PROSODY IN ASL
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ABSTRACT: Prosody is the combination of features in any language that produces the rhythm, accent, and "feel" of the language. In ASL, prosody is a visual spatial image, created by several features. These features include head and body movements, eyebrow movement, mouth movement, speed of signing, sign formation, pacing, and pausing. These features are often very difficult for students to acquire. As teachers, we can expose students to these features in class through selective watching and shadowing techniques. Once students have overtly learned about prosodic features in ASL, they are more able to recognize and use them when they do go out and mingle with the Deaf community, and when they eventually become interpreters. In this paper, I describe several prosodic features and patterns that appear in ASL discourse.

1.0 DEFINING PROSODY

Prosody is the combination of features that produce the visual, spatial rhythm, accent, and feel of ASL, and that allows signers to reflect their internal focus for any given text (and segment thereof). It also allows watchers to chunk the message into processable chunks that help them interpret the signer's intended meaning. The challenge of defining and analyzing prosody in any language is that it is produced by so many different features in combination over a variety of utterances, and is highly influenced by the speaker's or signer's mental focus at the moment. In spite of the challenge of defining prosody, native users of any language are adept at identifying the visual, spatial nuances of prosody, changes in prosodic stress and emphasis, and, in the case of second language users, the inappropriate use of or entire lack of prosodic features in discourse.

As a second language learner of ASL, as an interpreter, and as a teacher of interpreters, prosody has long been my nemesis. I am told that my signing just "doesn't look right!" As interpreters we often learn that our interpreting is "boring, not life-like, not real ASL". And when I work with interpreters, I find that one of the aspects of interpreting that is so often missing is the elusive "prosody." Beginning signers and interpreters often lack effective prosody-their communications appear to be monotone, lacking interest, and difficult to comprehend. To compare it to spoken language, it often looks like someone reading words from a book without pausing, pacing, emphasis, or variation of pitch. An interpretation that is accepted is one that has appropriate prosodic features, in appropriate combinations over appropriate chunks.

But what is appropriate prosody in ASL? It is an elusive combination of features that have not yet been extensively defined, studied, or taught to learners. This paper is an exploration of the overall prosody that causes watchers to think- “That looks like ASL,” or “That does not look like ASL.” It is the difference between the monotone, unsegmented signing (like someone reading from a book without pausing, stress, intonation, or interest) and a signed message that looks right, that seems natural, that is watched for meaning instead of for mistakes and bad accents.

1.1 Prosodic Features: Researchers in spoken languages have long made the easy distinction between sounds made by the vocal tract and other non-sound features that accompany sound production (Cruttendon, 1986; Gumperz, 1982; Schiffrin, 1994; Tannen, 1989). Sound production is divided into 1) linguistically relevant sounds (words, utterances, etc) and features that co-occur with the linguistic features, features such as intonation, accent, rhythm, tempo, speed; 2) paralinguistic: meaningful sounds like sighs or whistles, that add meaning but are not linguistic. 3) Other features (anything non-vocal) are labeled extralinguistic and are not studied as part of linguistics; generally facial expression and body movement, as well as hand gestures have been excluded from spoken language linguistic study.

In ASL we cannot make such distinctions. It is essential to consider any visual feature as a possible component of prosody. After extensive and detailed analysis it may become clear that certain features are linguistic rather than prosodic, but for now it is too early to exclude any visual feature from analysis and consideration.

1.2 Approaches to Prosody: There have been two opposite approaches to the study of prosody. We can focus on the physical production of prosody, measuring the pitch, the vowel length, the length of pauses, the exact tones of intonation, etc. While very exact descriptions of the sounds of speech are achieved, these descriptions rarely correlate to perceptions of prosodic prominence by native users. In other words, there is no direct correlation between the absolute length of a pause between phrases and the prosodic prominence that pause produces. Likewise, there is no direct correlation between the absolute frequency or volume of a sound and the perceived importance or prominence of that sound in the overall discourse (Cruttendon, 1986; Tannen, 1989).

We can also approach the study of prosody from the perceptual direction-given that native users identify a specific feature or sound as prominent, what does that prominence achieve? And now, many (Chafe, 1980; Gumperz, 1982; Tannen, 1989) are combining the best of both approaches. Using utterances that have been identified as perceptually marked by language users, they try to identify those physical features that produce the given perception. This approach seems the most likely to be effective for ASL as well. It is certainly possible to measure the length of a movement, the exact physical location of a sign, the difference in height between a raised and non-raised eyebrow, and it will be interesting to see what correlations may result. But these measurements will probably not lead to a definition of prosody in ASL; it will be the watchers' perceptions of prominence that help us identify the features that combine in any given utterance to direct our attention to its meaning. For example, the length of a final hold in a sign only focuses attention on that sign in relation to the length of final holds on every other sign in the utterance. If they are all the same, the length of the final hold is unremarkable; if the final hold of the last sign is 1 second, and all the other final holds are 2 seconds, the final sign becomes unstressed; if the final sign is held 1 sec, and every other sign has no hold or a minimal hold in the transition from one sign to the next, then the final sign becomes the focus of the utterance. So, in studying prosody, it is not the actual physical production, but the relative production within a given series of physical productions that creates the perception of stress, prominence, and focus.

2.0 FUNCTIONS OF PROSODY

When prosodic features co-occur over longer sequences of discourse, they tend to focus the audience on the relative prominence of topics, sub-topics, and asides within the overall discourse structure. For example, the prosodic pattern for listing in English has an upward intonation at the end of each utterance except for the last one, which falls. "I bought bread, eggs, cheese, and milk –where the intonation on bread, eggs, and cheese rises, while the intonation on milk falls. This prosodic pattern in English helps the listener predict when and where the list will come to an end. Knowing that the list has ended, the listener will assume that the next utterance moves on to another topic (or sequential topic, such as, " then I went home and ate." If the speaker dropped the intonation on milk, then continued the list, the listener might predict that something out of the ordinary was happening next. Likewise, if the speaker did not drop the intonation on "milk," the

listener would think that the list was unfinished and might ask the speaker what else they bought. Such is the power and function of prosody, to help us chunk discourse, and interpret the prominence and structure intended by the speaker.

Likewise in ASL, prosody provides the watcher with a means of chunking and interpreting the discourse over larger chunks. ASL is comparable to English in its use of prosody for defining listing—each utterance that lists an item tends to end with an upward movement and slightly longer hold on the last sign of the utterance, until the last item in the list, which tends to have a downward movement on the last sign (or signs) of the final utterance.

Another example of ASL prosodic features that mark larger segments of discourse can be seen when signers shift from the naming of an idea to an expansion or explanation of that idea. For example, a signer discussing which breed of dog she bought might sign the first few utterances ("I just bought a dog as a pet, it is a Husky.") in fairly central space with relatively little movement, facial expression, head movement, or use of space. But, if the next few utterances explain to the watcher what a Husky is, the signer's prosody will change to a rhythmic, larger space, often moving from side to side or front to back while signing, ("Those dogs with the big ruff, they are used to pull sleds, and often have one blue eye"). Another choice, if the signer wants to make an aside comment rather than a straightforward expansion, would be to move slightly back and to the non-dominant side for the several utterances needed for the aside, moving back to the center space when the aside is over.

3.0 FEATURES OF PROSODY IN ASL

As you read through this article, I recommend that you choose a 5-10 minute ASL text and use Selective Watching and Selective Shadowing (Nida, 1953; Winston, 1990) to become more aware of each of the prosodic features described here. Once you have watched for a feature, shadow your text for that feature, trying to identify patterns of prosodic use of each feature.

I qualify this discussion of prosodic features by saying that some of these features may have multiple functions, and some may be more effectively analyzed as lexical, syntactic, phonological, or morphological units. However, since current analyses of these features have

limited their scope to the smaller units, I believe it is essential to consider them at the discourse level as well to determine their actual functions.

3.1 Head movement: Head movement (and the lack of it) creates both a visual pattern and a rhythm to signed text. The movements include nodding, shaking, and tilting the head. These movements can be single or multiple, fluid or staccato. Many head nods have been analyzed at the syntactic level (Baker and Cokely, 1980; Liddell, 1980). However, because they produce both rhythm and prominence within discourse, I include head movement as a prosodic feature as well.

Watching the signed text you have chosen, look for different types of head movement-multiple and single nods, shake, lift, and twist. Where do you see the different types of head movements occurring? Do you see any patterns? Are there differences in the categories of narrative, descriptive, and explanatory? What about in conversation?

3.2 Eye brows-raise/lower: As discussed above for head movement, much current research in ASL categorizes eye brow movement as syntactic, marking types of sentences such as Wh-qs. or Yes/No q's. While these markers often co-occur with these types of sentences when produced in isolation, the consistent co-occurrence of these features has not been investigated in on-going natural discourse. It will be interesting to see if and which of these grammatical markers always occurs, sometimes occur, and where within a discourse structure they are more prominent (openings, closings, conversations, lectures?) As syntactic markers, these indicate types of utterances. As prosodic features, they function to mark beginnings and ends of utterances.

In your chosen text, what type of movement do you see and what does it seem to mark? As you did with head movement, watch, then shadow eyebrow movement in this text. Then do the same with other texts. Any patterns?

3.3 Eye gaze: Eye gaze, as a prosodic feature, often marks utterance boundaries. Eye gaze is used to mark prominence in ASL discourse as well (Mather, 1989; Mather and Winston, 1995). Signers look at their hands to direct the watcher to the signing. They look at the audience to indicate that what they just signed was important; the shift from looking at hands to audience marks the boundary between one utterance and the next. Bahan and Supalla describe three types

of eye gaze in their article about narrative structure, gaze to audience, character's gaze, gaze at hands (Bahan and Supalla, 1995). As you watch your chosen text, can you identify these eye gazes? Do they describe all the types of eye gazes that you see? What about in other types of texts? Again, watch then shadow the story, then try it on other texts.

3.4 Eye blink/Eye open: In addition to eye gaze, eyelid movement cues the watcher to utterance boundaries. Eyeblink often occurs at the ends of utterances. The blink is sometimes preceded by a slight widening of the eyelids. This sequence of normal width, brief opening then blink is a salient prosodic feature in ASL. Wilbur (1994) also discusses various eye blink features that mark utterances in ASL. What patterns do you see in your chosen text and other texts?

3.5 Mouth: The mouth can also be considered as a possible prosodic feature in ASL. Of course, signals occur with specific signs, or as meaningful additions to a variety of signs (MMM, TH) (Baker and Cokely, 1980; Bridges and Metzger, 1996). They also mark utterance boundaries by their disappearance. For example, the occurrence of TH with DRIVE happens at the end of a clause; when the TH disappears, the watcher knows that a new utterance is beginning. In addition, mouth configurations that are not signals also may change at utterance boundaries. Do you notice different types of mouth movements occurring with different categories of signs—fingerspelling, nouns, verbs? Are there patterns of mouth movement that tend to mark ends of utterances? Ends of topics?

3.6 Shoulders-up/down: Another feature of ASL that creates patterns in the signer's space is the movement of the shoulders. While signing, the shoulders move in a variety of ways and directions: up and down, forward and back; together and independently. These variations often occur at utterance boundaries and can also signal prominence within utterances and larger chunks of discourse.

Shoulder movement, as with other prosodic features, can be part of an overall style of signing. Each signer will use a variety and combination of features, some more than others. Shoulder movement seems to be one of those features that is very marked in some signers and not in others. What do you see in the text you have chosen to watch? Now that you have looked at several different prosodic features, have you noticed that one person uses particular features more than others? This is common. We each use a particular combination more often, and more

often in specific types of texts. This is what people recognize as our “style” of signing. Have you ever noticed that some students sign like their ASL teachers? Many of the similarities may be prosodic in nature.

3.7 Torso (body): side-to-side, forward/back: Likewise, the movement of the torso in space creates spatial patterns. The torso can move from side to side, forward and back, and it can twist and bend. One interesting observation is that signers tend to lean forward toward their dominant side, and back toward their non-dominant side. A shift in this pattern can mark an utterance as prominent. Also, utterances can be marked for beginning and end by the shifting movement from forward to back, then back to forward in a rhythmic pattern. As you watch your chosen text, do you see any patterns in this shifting? Does the signer shift to the dominant or non-dominant side at the beginnings of utterances? At the ends?

3.8 Sign articulation: In addition to the features discussed above, there are several features of sign articulation that create prosody: sign-internal movements, size of articulation, repetition, length of movements and holds both within and between signs, and height of the signs can all combine to help create the prosody of a text.

3.8.1. Sign internal movements create prosodic patterns. Individual signs, and sequences of signs, can be articulated with more or less tension (and the opposite-more or less fluidity). The relative tension and fluidity of signs can mark utterance boundaries. As you watch your text, focus on a couple of signs that are repeated throughout (perhaps a noun or classifier that is part of the main topic) and look for differences in the ways each sign is signed at different times in the text. Look for each of the features below. The differences will not be large or long- they will be very subtle.

3.8.2. Size of articulation also creates prosody. A sign can be made at the expected size, or it can be made either smaller or larger, creating visual prosodic patterns. Likewise, the speed of the articulation: slow, fast, ordinary-adds to the prosodic visual patterns created in signing space.

3.8.3. The number of times a sign is repeated creates visual, spatial patterns. Certainly, some movements have morphological functions, but single and multiple movements can also indicate

relative prominence of a sign within a sequence. Likewise, the difference in number of movements can mark the end of a topic rather than the middle or beginning.

3.8.4. The lengths of movements and holds within and between signs, as well as the relative tension used to move through the signs also create prosody in signing. A series of signs with relatively fluid transitions followed by a tense, staccato stop on the last sign clearly marks the utterance.

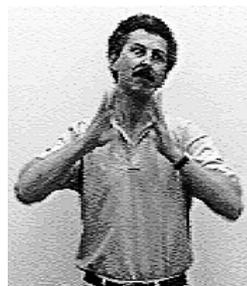
3.8.5. The relative height of signs in discourse also can be prosodic. Signs at the end of utterances may be dropped slightly in comparison to signs at the beginning: signs at the beginning may be raised. Thus, a combination of a raised sign, several middle signs and a dropped sign can cue the watcher that the series is a single utterance. At the discourse level, lists are an example of this. Each element of the list is signed up or level, with the exception of the last. This is often dropped slightly in comparison to the other elements.

3.9 Number of hands: While some signs require the use of both hands in ASL, many do not. The use of both hands to create a sign when both hands are not expected creates emphasis; likewise, using one hand to create a sign when two are expected can focus the audience on the signing. In the example below, the sign FINE is signed in a natural text at one point with a single hand (A) and at another point with both hands for added emphasis at the end of a topic.

ONE AND TWO HANDED FORMS (FINE)



A: FINE



B: FINE

Beyond the domain of a single sign, signers often use two hands to create more complex messages. A signer can use one hand to point, either emphatically or not, to the signing hand, as seen below. Although it appears that the non-dominant hand is just hanging, it is actually pointing. This point continues over specific spans, then disappears, then reappears repeatedly.

LIBRARY #OF CONGRESS



Dom:INDEX(Library)

LIBRARY

N-D: INDEX-----

In an even more complex construction, a signer can end one clause, hold one hand of the last sign, and sign about that last sign with the other hand. Below, the sign FIND is articulated with the dominant hand, held in place at the end, and the sign RELIEVED is articulated by the nondominant hand, producing the meaning "I was relieved to find it."

SIMULTANEOUS SIGNS (FIND/RELIEVED)



FIND-----

RELIEVED!

Holding the dominant hand creates a link between the two sentences, while the shift to a new utterance marks an utterance boundary. The signer can thus use prosodic features to create cohesive links (discussed later in the section on cohesion), helping the audience both chunk utterances and link them simultaneously. There are also examples of this in the River story, while Sarah is describing the tree swing incident.

3.10 Shifting hands: Signers also shift hands to create emphasis or focus prosodically. In setting up a spatial comparison, a signer can point a sign toward each side of the map, articulating the sign normally. However, as can be seen in the two pictures below, the signer can also change the articulating hand in order to point to the spatial map. This prosodic shift creates focus because the unexpectedness of the articulation marks the importance of the topic. Below, in A, the signer articulates the sign SOUND with his dominant hand on his dominant side. Then he switches to his non-dominant, signing SOUND with his left hand on his left side. In this example he is discussing two perspectives of sound - one perspective has been mapped on the right, the other on the left. By switching dominance he switches his pointing from one location to the other.

Hand Shifting (SOUND)



A: SOUND



B: SOUND

Do you find examples of this in the text you have chosen? Watch the text, and if you find this type of shifting, practice shadowing it.

4.0 NON-PROSODIC FEATURES

There is also a category of “features” that do not create prosody in the signed message. These include what might be labeled “extralinguistic” features, features that appear due to particular situations (nervousness, restricted signing space due to video limitations). These “patterns” may overlay and confound the prosodic features that co-occur to mark prominence and utterance boundaries. For example, in addition to torso movement that marks utterance boundaries, a nervous signer may sway back and forth from side to side throughout a lecture. These movements need to be teased apart from the prosodic ones. Likewise, the restrictions of signing on video mean signers may use less spatial patterning and more rhythmic distinctions (more and

longer pauses, more defined and prolonged head nods) rather than shifting from side to side in the signing space.

5.0 PAUSING

When discussing prosody, it is also essential to consider the contribution of the halting or removal of all these features: the pause (Bahan and Supalla, 1995). For spoken languages, the pause may simply be the cessation of sound. But for ASL the pause can be more complex. While it is similar to spoken languages in that there is a cessation (of movement rather than sound), it is different in that the signer can continue to hold the signs in space, keeping the watcher's attention on the sign rather than on the absence of it. I have tentatively identified 3 types of pauses in ASL discourse: the filled pause (where a sign is held while everything else stops), the prosodic pause, which marks boundaries between phrases and utterances; and the extralinguistic pause (used for re-grouping, checking notes, thinking, hesitations for repair/re-thinking). These are only preliminary descriptions. The prosodic pause seems to be the least marked, occurring between and within utterances to chunk idea units. The filled pause seems to be the more marked pause, often occurring at the end of an utterance that ends a topic or point. It focuses attention on the idea just ended, giving the watchers a cue to its prominence in the overall text.

The extralinguistic pause may seem irrelevant to this discussion of prosody. For some signers it can be a brief, practical pause that signals nothing more than a forgetting of the next point, a checking of notes, a repair, or a gathering of thoughts. However, even when a signer pauses for these reasons, the pauses often signal an utterance boundary, and often, a topic or sub-topic boundary. The signer checking notes signals a new topic. Such a pause may also signal a closing of a topic, as when a signer checks to see if they have included all the points before closing the topic.

However, some signers use this pause to mark more than simple structural cues. One signer I have studied used the extralinguistic pause to involve the audience, building suspense. At periodic breaks in his lecture, he stopped signing, looked at his notes, and rubbed his hands together, adding a facial expression of glee. This gesture within the pause implied a sense of anticipation, a sense of "Great, now for the next piece of the puzzle!" And it signaled, each time it appeared, a new revelation in the research the signer was describing.

6.0 PROSODIC DOMAINS

The features described above also co-occur over various lengths or domains. Some tend to occur more often with single signs, often at the end of utterances. Others seem to co-occur more frequently over utterances, while still others are more noticeable over longer discourse chunks.

Single signs: The features that seem to co-occur with single signs are mouth movements, eye open (while a sign is being held), and sign internal movements and holds.

Utterance boundaries: Features that seem to occur most often at the end of an utterance or chunk include pause, eyeblink, long holds, multiple movements of signs, and dropped hands.

Longer spans: Prosodic features that often co-occur over longer spans include eye gaze, shoulders up (dropped at end), rhythm/stillness, high signing/low signing; eye brows, holds (one hand held, other hand signs), staccato/rhythm, and use of space.

7.0 SIGNER STYLES

These features seem to bound both short and long sequences—single signs, phrases, and utterances, as well as longer chunks such as topics and sub-topics. Signers appear to have different personal styles, and also variations of those styles in different settings. For example, in a single setting (formal lectures given at a conference at Gallaudet University) signers incorporate a variety of features to chunk their discourse. One signer used primarily clear pauses between each utterance, with little head movement but large body movement (stepping from one space to another) and fairly tense, precise sign formation with distinctive holds between signs within utterances. Another signer had relatively few clear pauses, frequent head and torso movement, and frequent stepping from space to space, with more relaxed sign production and transitions. A third signer had frequent and large head and torso movement, very tense sign production within signs but transitions between signs were relatively smooth, and stayed in one place for most of the lecture. Thus, each signer incorporates a combination of features for chunking their messages in any particular setting (and the setting certainly impacts these choices.)

Likewise, a study of a single signer across settings reveals that signers incorporate different combinations in different settings. This should not be surprising—levels of formality, distance between signer and audience, familiarity with the audience, number in the audience, as well as such simple features as sitting instead of standing, all influence the features signers choose to produce prosody. The first signer mentioned above, who in the lecture setting used relatively few features other than pausing and stepping from space to space, uses facial expression, head movement, placement of signs in space, and torso and shoulder movement in a commercial tape of story-telling. The large stepping into space is not evident—constrained by the simple factor of videotaping the event. In an interview following the story, yet another combination of prosodic features are seen in the same signer—few pauses and holds between signs, smooth transitions, frequent head movement and facial expression, subtle eye gaze, and relatively more rhythmic tempo in the signing. These differences are not surprising; they are expected. However, these examples should demonstrate the difficulty of pinning down rules of prosody that always occur for chunking specific segments of discourse. Rather than rules, we look for patterns that tend to occur, and combinations of patterns that seem to occur with specific signers in specific settings.

8.0 PROSODIC PATTERNS

It is fascinating to me to study the prosodic patterns that occur within utterances. As a second language learner of ASL, I have had a difficult time learning to appropriately incorporate these patterns. Yet these are the patterns that make signing look natural, and again, help the watcher understand the relative importance of each succeeding chunk. These patterns cue the watcher to the focus of the signer. These patterns signal us to the introduction of new topics, the expansion of given topics, listing, and the shifting from fact to feeling.

8.1 Introduction of new topic: Some of the examples in this section come from the video, *Buying a Condo*, (Valli, 1993). I recommend that you watch it before you read, and again as you read each example. The signer is introducing his story about buying a condo. (I have chosen this text to demonstrate the example; my observations come from natural data collected from various signers, usually presenting more formal lectures.) At the beginning of the narrative, he is introducing a new topic, why he bought a condo. If you refer to the map of the visual patterns in space (below) and then watch the clip, you can see that he introduces this topic by signing

primarily in central space, giving us facts, and using very little complex ASL grammar (no classifiers or role shifting, for example.) His sentences are fairly short and primarily lexical. There is little repetition of signs, except those that require it in articulation. The signing is closer to citation form—more slow and staccato, more clearly distinguished, and the internal boundaries, both between signs and utterances, are fairly clearly defined.

In this introductory section, he signs that he had always planned to buy a place to live, but had intended to buy it later, rather than now.

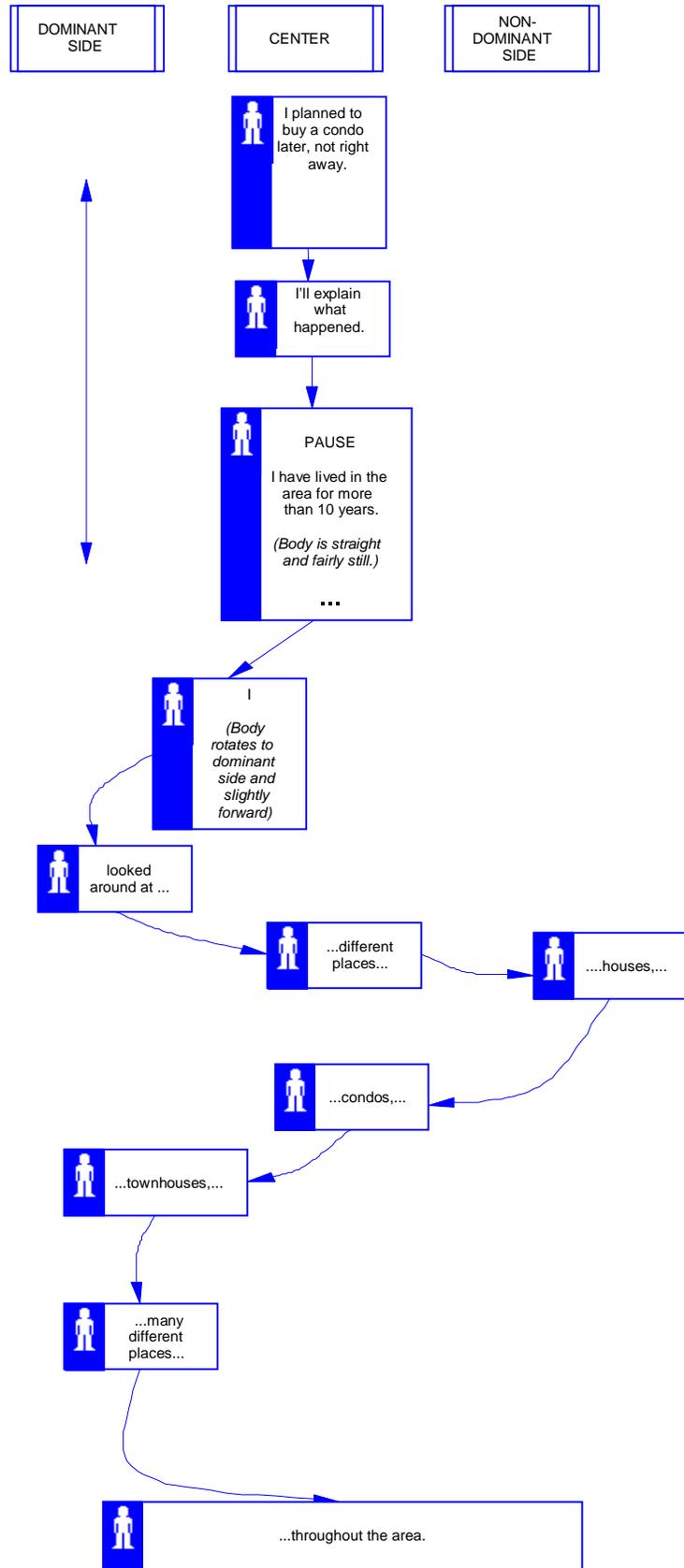
8.2 Expansion of topic: As the signer enters into his explanation, expanding his topic, he signs that he had been looking at various places to live, including houses, condos, and townhouses, several places throughout the area.

As he expands this topic, his prosody shifts. The sign space is widened, deepened, and takes on an “S” pattern. There is more repetition of movement in comparison to the previous section, the signing is more fluid and relaxed, and the internal boundaries are less distinct.

Spatial Mapping for Prosody

Buying a Condo

Signer uses center, "narrative" space



Signer uses full space, arcing from the dominant to the non-dominant side, then back again; he covers the full space with the final sign.

This prosodic shifting is very subtle, yet is a recurrent pattern throughout not only his signing, but throughout a variety of other signers I have analyzed. To date, most of my research has looked at more formal lecture settings. The use of space for prosody in this example, which results in the “S” pattern, is an expansion of the sign space. As the signer begins the pattern, he signs that he looked around at different places, moving from one side to the other, ending with the sign HOUSE on his non-dominant side. There is not a clear utterance boundary but he swings back toward his dominant side, signing CONDO as he reaches the middle, and TOWNHOUSE as he arrives at the dominant side of the “S” pattern. He then continues with the same rhythm, reiterating that it was many different places, ending with a classifier indicating the entire area.

It is interesting to compare the final sign (CL:5around there) with the same sign when it occurs earlier, while he is still in the central space introducing his topic. In the first occurrence, the sign is centralized; in the last occurrence, it covers the wider space covered by the “S” pattern, adding to the visual pattern in the expansion.

These patterns are very subtle! These are not huge shifts in signing size, space, or movement. But, they are visually striking and, as I have been seeing, occur in regular patterns.

This shift between central, clearly articulated signing and broader, more rhythmic signing is a recurrent pattern for signers who are introducing, then expanding on topics. One reason that this is so interesting to me (the second language learner) is that, when I saw a shift to a use of space, I assumed it was a new topic, not realizing it was an expansion. As I learn more about prosody, I see these shifts with new insight.

8.3 Fact to Feeling: The shifting from central to side also shows up in another function. When signing comparisons, signers appear to use the central space for another purpose. Looking at an example of comparing the art and science of ASL poetry, the signer defines art on one side of the spatial map (ln. 52), and science on the other (ln. 53). The placement of the two entities is referential, not prosodic shifting. However, he returns to the center to express his feelings about the struggle he faced in relation to the topics (lns. 54-56). He then uses the two sides of the map to show the separation (ln. 56), returning to the center again to express his feelings about the struggle (ln. 57). This appears to be prosodic. Central space does not MEAN feelings, but the shift back to it in this instance marks a difference between the two chunks.

51 PRO.1 REAL HARD TIME++ SELF.1++++

52 2hCL:CCpush-lt,A-R-Ton lt,...

...2hCL:CCpush-lt

53 SCIENCEon rt, 2hCL:CCmove to rt,...

...ANALYZert.

54 WHEW.

55 PRO.1 STRUGGLE+++ ,over time,

56 PRO.1

2hCL:CC-thbs contact,

CL:Cseparate rt from center

CL:Cseparate lt from center.

_____y

57 TERRIBLE!

Again, this type of shifting appears to be fairly regular throughout signers. As you look at your text, and as you watch other signers, see if you can spot these or other prosodic patterns.

8.4 Additional patterns: A few other patterns that I have begun to identify, but have not yet categorized, clearly occur between unmarked and marked utterances. I don't have much to say about these, but thought I would include them here so you can look for them in your own observations.

In ordinary, **unmarked discourse**, signers tend to:

In contrast, when a signer wants to **mark** something in discourse, for emphasis, focus, or involvement, signers tend to:

Move forward toward the dominant side	Move forward to the non-dominant side;
Move backward toward the non-dominant side	Backward movement may indicate the end of a chunk

Use the dominant hand,	Use the non-dominant hand or both hands
Have more unfilled pauses (no signs are held and the hands are dropped or held in a neutral position.)	Use filled pauses (holding the final hand of a sign, then signing about it with the other)
Continue prosodic features over longer stretches without a great deal of change.	Change many or all of the prosodic features between chunks

9.0 CONCLUSION

The research into discourse level prosody has barely started. The visual patterns we see in space are created through the co-occurrence of the various features we have discussed in this section. They create what we perceive as the rhythm, pacing, and focus that guides us in chunking and understanding the discourse of others. Signing that includes the appropriate combinations of prosodic features looks natural; signing that does not include these features appropriately looks awkward and non-native. Teaching students how to recognize these features and how to incorporate them into their signing is a challenge for ASL and interpreting teachers (Hatch, 1992; Nida, 1953). I have found that a combination of selective watching (Winston, 1990) and selective shadowing enhances students' use of prosody in their signing. Once students are able to recognize and use prosodic features, their signing and interpreting become more intelligible and more acceptable to watchers.

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