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SPATIAL MAPPING IN ASL DISCOURSE

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ABSTRACT

Spatial mapping serves as a foundation for linguistic and conceptual structures in ASL and is an essential feature of discourse in ASL. Signers choose to use spatial strategies to render messages meaningful for the audience. These spatial structures help the audience process the flow of information that they are watching, structuring it into coherent and cohesive chunks of meaningful language. Space is used by signers both for reference and for prosody. Referential mapping results in visual patterns in space, evoking conceptual referents in the mind of the audience. Prosodic mapping of space results in visual patterns that aid the audience in understanding the signer's meaning. These patterns range from basic conversational patterns to the more rhythmic, flowing patterns of poetry and literature in ASL.

Awareness of and fluency with spatial features in ASL are essential tools for interpreters. Interpreters must be able to recognize spatial meanings in ASL source messages and create spatial meanings in ASL target messages. Although research in this area of ASL is just beginning, some spatial structures have been identified and described. In this paper, I discuss some forms of spatial mapping for both referential and prosodic functions in ASL

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I. DISCOURSE COHERENCE AND SPATIAL MAPPING

ASL discourse, like discourse in all languages, is a process of interactive, evolving communication. The meaning of any communication emerges through the interaction of the signer and the watcher. Communication evolves when a signer intricately weaves together a variety of language features in order to guide the watcher to an understanding of the intended meaning. These language features include both the symbols of the language (signs and grammatical features) and the context within which the communication is produced. It is not enough to understand the "frozen" meaning of individual signs; the watcher must understand the "whole" of the message in order to understand the intent of the signer.

During the process of communication, signers have in mind the underlying meaning of their communication - they have a mental image of what they want to communicate. The challenge is to build a similar meaning in the minds of the audience through the limited resources of "language." We have all experienced the sensation of knowing what we mean but of not being able to express it. We struggle with word or sign choice, we try to produce the perfect intonation or inflection, and we are still not sure if we "get the right meaning" across to our audience. This is the limitation of language for communication - it is not always adequate for expressing our thoughts.

As we struggle to communicate, we pick and choose from a variety of language options in order to make our meaning as clear as possible to the audience. We try to guide them in their understanding of our message by providing them with several co-occurring features of language and context. For example, if I want someone to turn down the air conditioner, I might choose to sign, COLD HERE (*It's cold in here*) and look pointedly at the thermostat with a questioning look. In making this "statement of fact" I have in reality used language to make a request. I have used a description of the room temperature in conjunction with facial expression and eye gaze to lead the audience to an understanding that I want the temperature turned down. This is a common example of a

speech act (Austin 1962; Searle 1969) - the use of a variety of linguistic and contextual features to express a meaning that is more than the sum of the individual signs.

Language users employ a variety of features from their languages in order to communicate such broader meanings. In spoken languages these features include word choice; prosodic features such as intonation, pacing and phrasing; sentence structure; pausing; involvement strategies such as repetition, imagery and detail, constructed dialogue; and discourse structures such as narratives, jokes, descriptions, and comparisons. Sign languages use similar features: sign choice; prosodic use of pacing, phrasing, and pausing; sentence structure; involvement strategies; and discourse structures. Many of these are similar in signed and spoken languages. It is not the features of languages that are so different; rather it is the forms that these features take and the combinations of these features that each language uses to express meaning through that language that are different. In comparing ASL and English, for example, it is not that one language has the features of pacing and phrasing while the other does not have those features - it is the forms of the pacing and phrasing that are different. For pacing, English uses a combination of sound and silence; ASL uses a combination of movements and holds (Liddell 1984; Valli 1993b). Likewise, both English and ASL have prosodic features: English uses volume, pitch, and tone to help create prosodic rhythms with sound; ASL uses handshapes, patterned movement contours, and sign size to create the same prosodic features visually. ASL signers shape the visual patterns we perceive in order to build meaning. They mold the signing space in order to create a visual impact for the audience. It is the visual space that we perceive in conjunction with signs that help us interpret a signer's underlying message. It is this overall use of space that I define as spatial mapping.

This definition of spatial mapping is broader than most definitions. Spatial mapping is usually described as the use of space for locating referents in order to create a "picture" of some physical, real-world event (Baker and Cokely 1980; Klima and Bellugi 1979). This is one type of spatial mapping and it is a very important feature in ASL. However, it is only one form of the much larger feature of spatial mapping in ASL. Spatial mapping includes not only the "drawing" of a picture, it also includes the use of space to build relationships between abstract ideas, to compare entities, to add imagery and detail, to

describe both physical attributes such as color, size and shape as well as non-physical attributes such as emotions, attitudes and beliefs, to show the passage of time, and to contribute to the prosody of ASL. The remainder of this paper presents examples of spatial mapping in ASL that illustrate this broader definition.

II. FUNCTIONS OF SPATIAL MAPPING: PROSODY AND REFERENCE

A. PROSODY

Spatial mapping functions prosodically, segmenting discourse into perceivable utterances (Mather and Winston 1995; Valli 1993b). Rather than mapping a specific concept to an area of space, a signer's use of a space can mark the boundaries of utterances. A shifting of the signer's torso in the signing space can mark the shift from one utterance to the next, without assigning a referential meaning to the space itself. Signers shift their location in space between utterances, using the shift to mark utterance boundaries. The locations to which and from which they move are not necessarily locations that refer to entities; they are locations that are simply different from where they were before, indicating a shift in topic, a new thought or utterance, or a shift of frame. Thus, spatial mapping functions to differentiate one chunk from another.

This prosodic function of space is also used for adding stress or emphasis to an utterance, for creating rhyme and rhythm, and for separating larger discourse chunks or structures. Rhythm and rhyme patterns in ASL have not yet been analyzed in great depth, but there is a growing body of research that very clearly demonstrates that both rhyme and rhythm occur in ASL and are achieved through visual strategies. Boundary markers for narratives are analyzed by Bahan and Supalla (Bahan and Supalla 1995), who find that eye gaze is an important feature of boundary marking in ASL. Wilbur (Wilbur 1994) analyzes eye blink as a boundary marker in ASL. In on-going research, Boyes-Braem (Boyes-Braem 1995) analyzes the shifting of signers' bodies for marking discourse chunks. Valli's research (Valli 1993a) on rhyme and meter in ASL poetry is a seminal work on this topic. He identifies several features of ASL that effectively produce rhymes and rhythm in ASL

poetry. These include eye gaze, body shift, head shift, use of handshapes, and use of movement path contours. All of these features shape the space, affecting the visual impact created by the signer during interaction.

B. REFERENCE

The second function of spatial mapping is for reference in discourse and is accomplished by associating a concept with an area located in the signing space. Many researchers have investigated this complex use of space for reference at the morphosyntactic levels of ASL and there is no need for a detailed discussion of the topic here (see Klima and Bellugi 1979; Liddell 1990; Padden 1990; Supalla 1978). Once we begin to expand the size of the analyzed text beyond the utterance level however, the discussion of spatial referencing and mapping becomes even more complex and varied. Use of spatial mapping at the discourse level is one of the underlying linguistic structures of ASL, especially for repeated reference and the building of cohesive, coherent discourse.

Once a signer has pointed to a location in space to refer to an entity in an initial utterance, she can point to this space in subsequent utterances, repeatedly referring to the concept or entity associated with that spatial location. Watchers in turn use the signer's pointing in order to build their own understanding of the signer's meaning, interpreting each subsequent point to a location based on their understanding of the previous references. In this way they interpret spatial mapping, along with the many other cohesive features of ASL, and build their own understanding of the message. Spatial mapping has more than a cohesive function in ASL, however. Spatial mapping plays an essential role in reflecting coherent discourse structures in ASL. Spatial mapping is used by the signer to build specific discourse structures in ASL discourse; these structures are intended to reflect the underlying coherence of the message. Used within these structures, spatial mapping is a powerful feature in ASL discourse.

The prosodic and referential functions of spatial mapping frequently co-occur, serving to build discourse of tremendous visual complexity. The analysis of the forms and functions of spatial mapping at the phonemic and morphosyntactic levels does not fully account for the complexity that occurs in ASL discourse. Studying spatial mapping at the

discourse level of ASL provides insight into the interrelationships of the forms and functions of spatial mapping, providing new understanding into the linguistic complexity of the language.

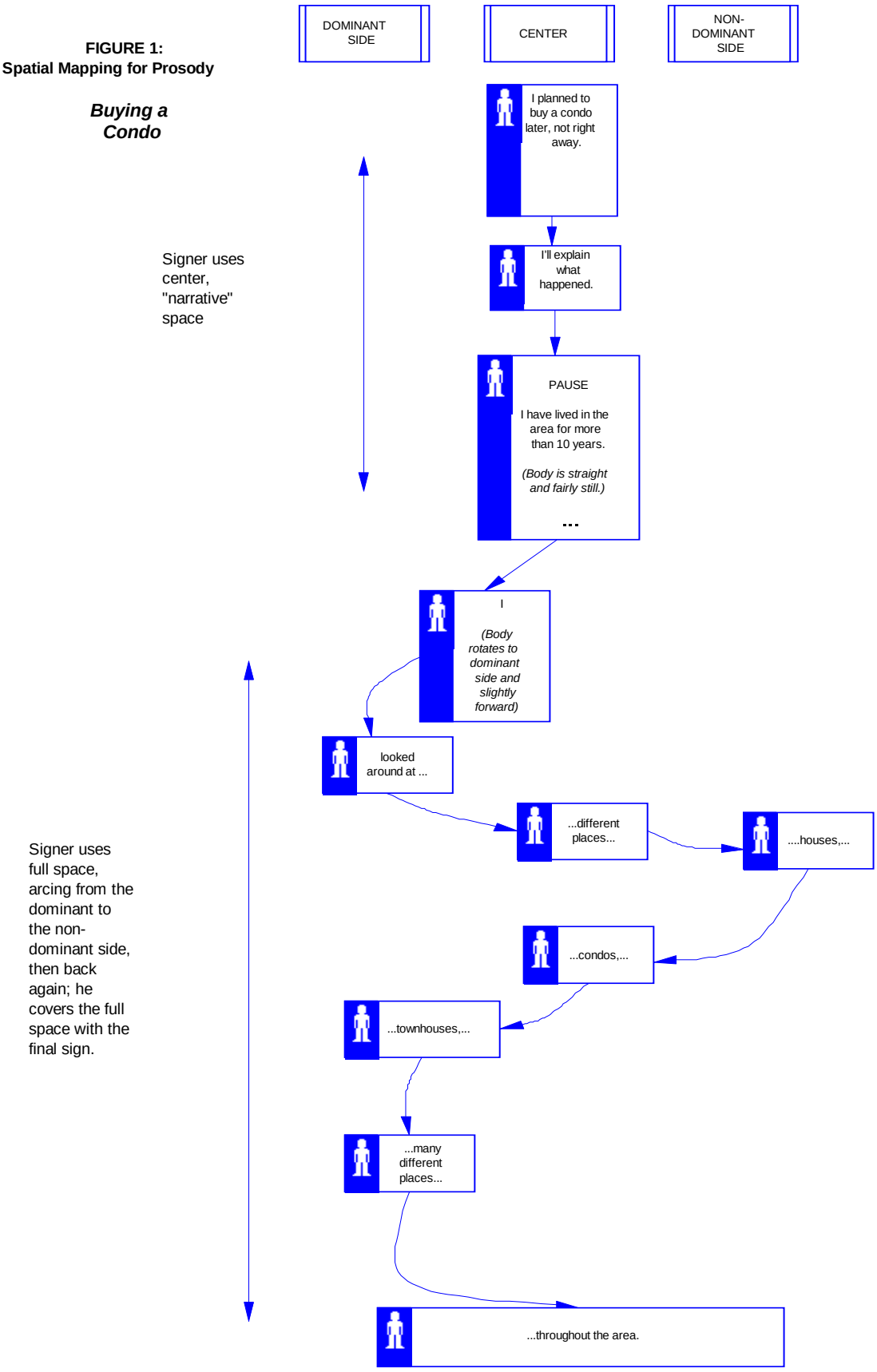
III. FORMS OF SPATIAL MAPPING

A. PROSODY

Spatial mapping is an essential feature of ASL prosody. Without it, signers cannot easily mark their utterances for the watcher, and likewise, watchers could not chunk the utterances in order to understand the coherence of the message. Signers use prosodic spatial mapping both between utterances and within utterances. Prosodic spatial mapping is accomplished by pointing the body, torso, and/or head (including eye gaze) toward an area during signing. It also occurs when a signer articulates signs within an area of space, then shifts to another area to articulate the signs of the next utterance. This shifting marks the boundaries between utterances. Prosodic spatial mapping also occurs within utterances. Signers can use a different location for each sign within an utterance, filling the entire sign space from right to left with a single utterance. The following example demonstrates first, a prosodic mapping of space that marks a distinction between utterances and second, a prosodic pattern that develops within utterances.

FIGURE 1:
Spatial Mapping for Prosody

Buying a Condo



Example: Prosodic Mapping Between Utterances

In the video narrative, "Buying a Condo," (Valli 1993a) the signer is recounting a narrative about his experience buying his condo. At the beginning of this narrative he explains that he had not intended to buy a condo until a much later date. This series of utterances is articulated in the center space, which I call narrative space. The signer is facing forward, and his torso is straight, neither rotated to the sides nor to the front or back. Remaining in this narrative space, he informs the audience that he will explain why he bought his condo sooner rather than later. He pauses, clasps his hands, then begins his story. Still in the narrative center space, he explains that he has lived in the DC area for more than ten years. This discourse chunk ends with the sign, AREA, signed in a constrained manner within the expected narrative space. In Figure 1, the first three text boxes from the top demonstrate the relatively constrained use of space chosen by the signer.

At the end of this section, the signer makes a subtle shift in his use of the signing space. He begins to rotate his torso for the articulation of the subsequent utterance, turning to the right and leaning slightly forward. This shift in space from center to forward right is a clear indication that he has ended the first utterance and started a new one. This shift of the spatial pattern is one of the co-occurring features that helps watchers chunk utterances within discourse; it is shifts of this type that help to distinguish meaning and utterance boundaries while watching a string of signs.

Example: Prosodic Mapping Within Utterances

In order to mark the boundaries of two utterances in the example discussed above, the signer shifted from a constrained use of center, narrative space to a larger, more rhythmic use of space in his next utterance. In this next utterance, he begins by rotating to the right and forward, signing each sign of the utterance in a different place in the overall signing space. He signs the utterance (Figure 1):

PRO.1 LOOK++ DIFFERENT++ HOUSE, 1ST, 2ND, C-O-N-D-O, T-H, DIFFERENT++ AREA.

I looked at several different places, including houses, condos, and townhouses all over the area.

He articulates each sign at a different spot in the signing space, starting on the right, dominant side and moving in a rounded arc to the left, non-dominant side where he names the first housing type, "houses." He then swings back to the right side in another arc as he lists other types of housing (condos and townhouses). He finishes his utterance with the sign, AREA, as he finished the preceding utterance, but the articulation of this second AREA is very different. Instead of being signed on the right side in a constrained manner, it is signed over the entire area from right to left.

The spatial map created by the signer in the second utterance is completely different from the spatial map created by the first utterance. In the first, the visual pattern is a narrow constrained space with all signs articulated in the same space; in the second, it is a wide fluid space with each sign articulated in a different place. Each utterance has a unique, recognizable prosodic pattern that is formed in space, producing a spatial map. This map forms the internal boundaries of each utterance. In addition, the difference between the two spatial maps forms the external boundaries between the two utterances; the shift in spatial maps marks a differentiation between the ideas being expressed.

B. REFERENCE

Spatial mapping functions to provide reference in discourse by assigning a specific meaning to an area on a spatial map. Referential spatial mapping begins very simply when a signer points to an area of space. This "point" can be produced in a variety of ways:

- using the index finger to indicate an area (the honorific handshape and the thumb can be used in variations of this) followed by a label for that space;
- physically stepping into a specific space and producing the sign(s) that label the space.
- pointing to the space and articulating a related sign either in an unmarked space in front of the chest or within the marked space (or vice versa).
- rotating the torso and/or head toward the space.
- directing eye gaze at the space.
- switching hands (from dominant to non-dominant) in order to articulate the sign with the hand on the side nearest the established space.
- using indicating verbs which move toward/away from subjects and/or objects.

Once an initial referential map is established, it is often repeated in the subsequent discourse. This repetition of pointing to the spatial map helps the audience build their understanding of the signer's intention. This cohesive use of spatial mapping is a frequent function of space in ASL.

Repeated references to this type of spatial map in discourse often evolve into larger discourse structures that signers use to help the audience interpret the larger, underlying coherence of the communication. A few examples of such structures are comparative spatial maps, performative spatial maps, temporal maps, and perspective maps. These spatial structures guide the audience to the signer's intended meaning. For example, if a signer wants to emphasize the importance of a particular event in a story, that event may be conveyed with a temporal map to emphasize its importance. A discussion of the advantages and disadvantages of buying a house or a condo can be laid out on a comparative spatial map, leading the audience to an understanding of which type the signer prefers. An important decision that the signer has reached may be communicated through a performative map, "showing" the signer discussing with herself the decision-making process. These structures are the features of language that we use to understand the underlying meaning of communication; they are the scaffolds on which signs are hung so that we can interpret a signer's message. Without these scaffolds, we see a stream of signs that often seem to have no connection, no cohesion, in short, no coherent meaning. The use of such structures guides our understanding. The use of spatial structures in ASL is especially important for understanding a complex, visually-based language such as ASL and for creating an understandable message in ASL. In the following sections, I discuss examples of two comparative spatial maps and one example of a constructed dialogue spatial map to illustrate referential spatial mapping.

1. Comparative Spatial Mapping

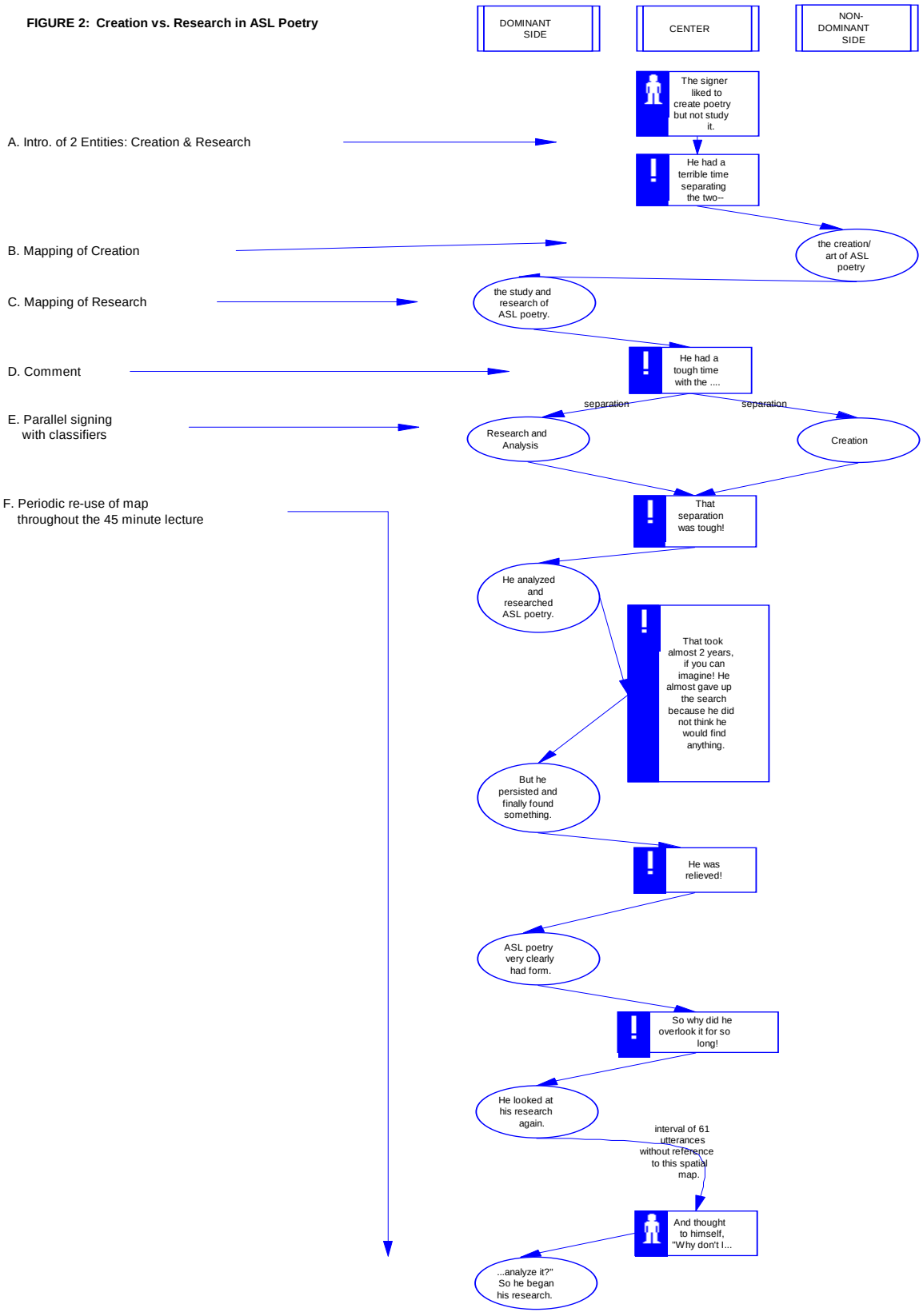
Comparative spatial mapping in ASL comparisons follows a fairly clear pattern. The signer usually introduces the two entities to be compared without using a spatial map,

then proceeds to build a spatial map to make the comparison. The signer accomplishes this by pointing first to the non-dominant side of the signing space to refer to the first entity. She then points to the dominant side to refer to the second entity. The second entity, referred to on the dominant side, is often the focus of the comparison. The signer continues to refer to the two entities by pointing to the two areas on the spatial map, comparing them throughout the discourse. It is also possible for the signer to comment about her feelings towards the entities or her relationship to the entities by returning to the narrative center space. In closing a comparison, a signer has two usual options. Often the signer ends a comparison by pointing to the entity on the dominant side last. This reflects the original establishment of the comparison, where the first entity is mapped on the non-dominant side, and the second entity is mapped on the dominant side second. An alternative way to close a comparison is to use either alternating signing or parallel signing to emphasize the comparison, ending with both hands in space pointing at both sides of the spatial map at the same time. Two examples of comparatives are described in detail below.

Example 1: Creation of ASL Poetry and Research of ASL Poetry

Discussions of this example can be found in previous work (Winston 1992; 1995). This comparative spatial map provides a clear example of the patterns found in ASL spatial comparatives. In this comparison, the signer is discussing some research he conducted about ASL poetry. He begins by saying that he enjoyed creating ASL poetry, but that he did not want to analyze ASL poetry. He introduces the two ideas (Creation and Research) in the center, narrative space, and introduces the idea of a comparison by using the sign BUT when he signs this particular section (See Figure 2:A). He then maps the two entities on a comparative map, starting with the entity, Creation (of ASL poetry), mapping it on the non-dominant side first (Figure 2:B). He then maps the concept, Research (of ASL poetry), on the dominant side second (Figure 2:C).

FIGURE 2: Creation vs. Research in ASL Poetry



This initial mapping is followed by a comment about the difficulty of the process of separating the two concepts in his mind. The signer comments that he had a tough time making the separation. The first segment of this utterance, "I had a tough time..." is signed in the narrative space (Figure 2:D); the second segment is signed by pointing to the map, using classifiers on each hand with parallel signing to show that he succeeded in making the distinction for himself (Figure 2:E).

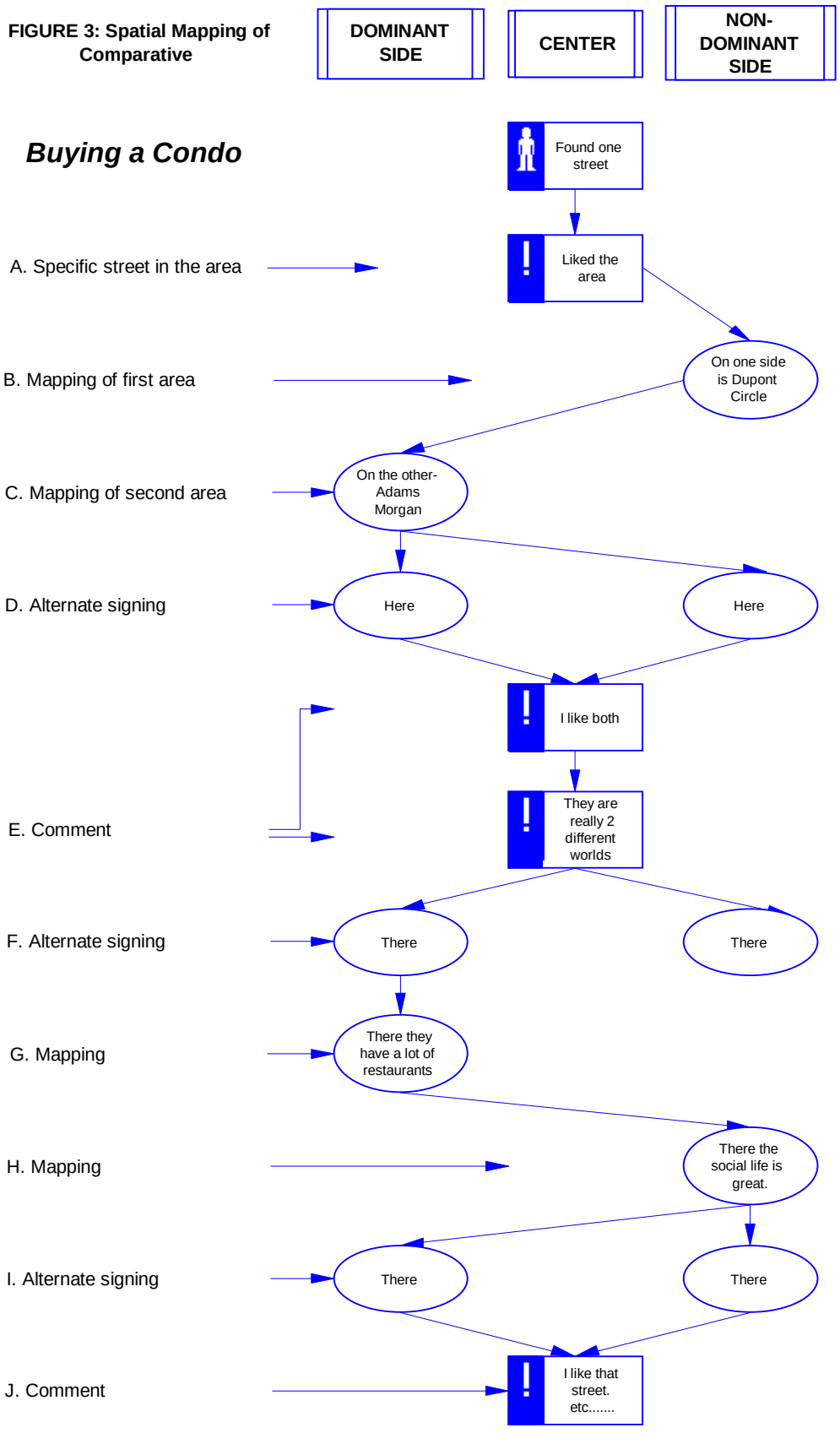
He continues to refer to the two entities by pointing to the two sides of the spatial map, occasionally commenting about his feelings in the narrative space (Figure 2:F). These comments are signed in narrative space, between the areas of the two entities. This particular example recurs several times throughout a 45 minute lecture, always using the same areas for the comparison. He ends the comparison with a final reference to the research and analysis of ASL poetry; this closing reference to the concept is mapped on the dominant side, following the predicted pattern for ASL.

Example 2: Buying a Condo

A second example of a comparative spatial map can be found "Buying a Condo." In the narrative, the signer discusses a location where he would like to live. He describes the location as being between two areas that he liked. In this comparison, he establishes the street he likes in narrative space (Figure 3:A), then he uses a comparative structure to discuss each of the two areas surrounding it. He maps the first area on the non-dominant side of the space, naming the area of the city (Figure 3:B). Following this, he maps the second area on his dominant side, again naming it (Figure 3:C). Then, he uses alternate signing to point to each area (Figure 3:D).

He returns to the narrative space to comment that he likes both areas and that they are both very different (Figure 3:E). He points again to his map with alternate signing (Figure 3:F), then describes each area on the map in more detail - one side has lots of restaurants (Figure 3:G), the other has a great social life (Figure 3:H). He ends his spatial comparison by once again pointing alternately to both sides of the map (Figure 3:I), finally returning to the narrative space for a closing comment about liking the street that is in between (Figure 3:J).

FIGURE 3: Spatial Mapping of Comparative



Although each of the above examples occur in different contexts, the first in a classroom lecture and the second in a story meant for entertainment, both reflect many of the common forms of ASL spatial comparatives: both introduce the entities non-spatially, then proceed to map them in space. Both map the first entity on the non-dominant side and the second entity on the dominant side, both use parallel and/or alternate signing, and both close by naming the second entity last and the dominant side. The characteristics and patterns common to comparatives in ASL are summarized in Figure 4. [1]

FIGURE 4: **COMPARATIVES AND SPATIAL MAPPING**

I. OVERALL STRUCTURE OF COMPARATIVE SPATIAL MAPS

A. INITIAL INTRODUCTION----------NEUTRAL SPACE
   1) entities
   2) comparison

B. MAPPING OF ENTITIES----------SPATIAL MAP
   1)first entity mapped on the non-dominant side
   2)second mapped on the dominant side

C. CONTINUATION OF COMPARATIVE----------SPATIAL MAP
   Use of the two sides plus central space

D. SUSPENSION OF COMPARATIVE----------NEW SPATIAL MAPS MAY BE INTRODUCED

E. REFOCUS ON THE COMPARATIVE----------RETURN TO ORIGINAL SPACES

F. CONCLUDING COMPARATIVE----------SPATIAL MAP
   Option A- Final point is made to the Second entity on the dominant side
   Option B: Use of parallel or alternate signing to both areas of spatial map

II. PATTERNS WITHIN COMPARATIVE FRAMES

A. Signer introduces the first entity on his non-dominant side first; introduces the second entity (often the focus of the comparative) on his dominant side second.

B. Signer's conclusion of the comparative: the last point to the map is either two-handed parallel or alternate signing; or on the dominant side, pointing to the second entity introduced in the comparative.

C. signer uses two-handed, parallel or alternate signing to refer to both sides of the map; this is used in some comparatives to conclude the comparison and in some to emphasize the comparison

D. signer shifts between the spatially mapped entities and narrative space:
   spatial map for facts about the entity (descriptive)
   narrative (center) for feelings or comments about the entities (evaluative)

[1] It can be argued that, because both of these are signed by the same signer, the pattern is idiosyncratic. Observations of a variety of signers in different settings support this as a general pattern used in ASL.

2. Constructed Action and Dialogue Spatial Mapping

Spatial mapping occurs in many different structures in ASL discourse. Performatives, consisting of constructed action, constructed dialogues, and constructed monologues, all make use of spatial structuring to impact the visual patterns of the language.

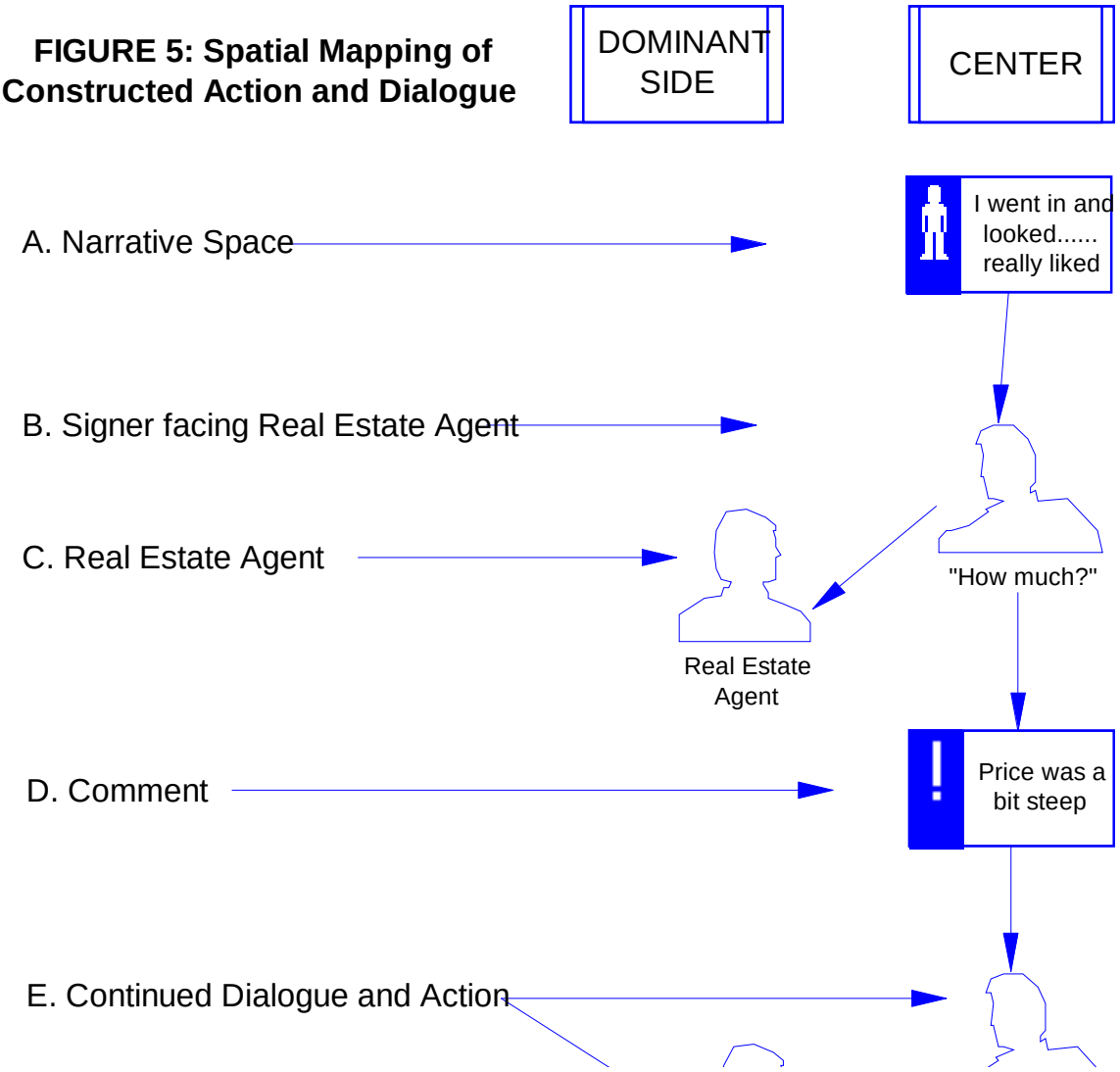
Constructed action and dialogues are often referred to as role-playing in ASL. Signers are said to portray the actions or conversations of one or more signers by playing out their parts. The term "constructed dialogue" has been commonly adopted for this category of language feature in spoken language research because it is recognized that such action or dialogue rarely reflects exact actions or conversations (Schiffrin 1994; Tannen 1989). Most often, it is an interpretation of the speaker's perception of an action or conversation. This is equally true in ASL. For example, direct speech, or role-playing in ASL often represents a conversation with oneself, even though these conversations rarely actually happen. Signers are not showing a real conversation, but rather their own perceived mental processes while making a decision or taking an action. In the following example, the signer (again from "Buying a Condo") uses constructed dialogue and action to illustrate his interactions with a real estate agent.

Example: Constructed Dialogue and Action in "Buying a Condo"

In this example, the signer begins by introducing his interaction with a real estate agent in the center, narrative space (Figure 5:A). Then, he maps space by placing his body in a specific area (Figure 5:B), facing it toward a second, equally specific area on the dominant side that represents the real estate agent (Figure 5:C). Thus, we have two areas on the spatial map, each being used to refer to one of the people - the space in which the signer is standing and the space at which he is pointing with his body, head and eyes. Although the audience knows that there are two people involved in this "conversation," only one of them has a part - the signer. The signer asks the real estate agent, "How much," then returns to the narrative space to comment on the answer - he thought it seemed too high (Figure 5:D). The signer then shifts his point to the dominant side again

and negotiates with the real estate agent (Figure 5:E). The two sides of the spatial map are clear, with the signer pointing toward the dominant side while signing, using directional verbs such as NEGOTIATE between the signer's space and the real estate agent's space.

FIGURE 5: Spatial Mapping of Constructed Action and Dialogue



This spatial map uses two areas of space to create a visual pattern that helps the signer build understanding in the audience, resulting in a spatial map of the conversation. At this time there exists little research on the forms of constructed action or dialogue, especially in regard to its spatial characteristics (Mather 1989; Metzger 1995; Winston 1992). Usually these features appear for very brief segments, typically one to two utterances in length, being interwoven with narrative comments rather than continuing for long sequences of five or six utterances. They are often introduced by signs such as

"HEY", or a shoulder-tapping gesture. And, when using constructed dialogue and action, the signer shifts from third person reference, HE/SHE/IT, to first person reference: PRO.1 (I/me). Further analysis of the spatial characteristics of these performatives needs to be done to understand the patterns of placement on these spatial maps.

IV. CONSEQUENCES FOR TEACHING INTERPRETING

Spatial mapping is an integral part of ASL at all levels of discourse, having both prosodic and referential functions. It serves as the underlying framework for building meaning in ASL discourse. The prosodic and referential functions of spatial mapping in ASL frequently co-occur, serving to build texts containing complex, interwoven visual patterns. The analysis of the forms and functions of spatial mapping at the phonemic and morphosyntactic level does not fully account for the form and meaning relationships that occur in ASL. An analysis that goes beyond these levels to the level of discourse provides insight into the interrelationships of the forms and functions of spatial mapping in ASL. Such analysis in turn provides new insights into the linguistic complexity of the language.

An understanding of the nature of spatial mapping, both the functions and the forms, is essential for any interpretation between ASL and English to be effective. Although much ASL teaching and interpreter education includes discussion of classifiers and role-playing, we know little about the tremendous variety of prosodic and referential functions that spatial mapping performs. When students fail to master these ASL features, we are at a loss, knowing only that their language production does not "look right." And knowing that they often miss the underlying meaning of a message they see in ASL or fail to produce a coherent message when they are interpreting into ASL, our best advice is to "go out and socialize with deaf people." Given enough time and socialization this strategy may eventually succeed. However, it is important to remember that the acquisition of spatial mapping occurs at advanced stages of language learning in native signers; we cannot expect it to develop early on its own in interpreting students who are second language learners of ASL. With an understanding of spatial mapping in ASL, it is possible to encourage the development of both the perceptive and articulatory skills necessary for spatial mapping while students are in the classroom.

Two activities that are often useful for helping students increase their awareness of spatial mapping for both prosody and reference are selective watching and selective shadowing (Nida 1953; Winston 1990). Selective watching focuses the students' awareness on specific features, such as eye gaze shift between utterances, or torso shifting between phrases or larger chunks. Students begin to recognize the minute differences in the shapes of the visual patterns, identifying these differences with changes in meaning and focus. Once students become aware of the impact of spatial mapping, they are able to perform the second exercise, selective shadowing. In this activity, they shadow a model signer for specific features: head nodding, torso shifting, body pointing, etc. They (or the instructor) choose a single feature and shadow a signer through an entire text. It is especially helpful to students to videotape this shadowing, then to watch themselves producing the feature they have shadowed. As students become aware of these features of spatial mapping, they begin to recognize them more frequently in ASL source texts and to produce them more appropriately in ASL target texts. As researchers continue to identify and describe the patterns of ASL, it will be easier to teach these patterns in ASL courses. Until then, we can help students integrate the features by making them aware of them and helping them produce them, in addition to encouraging them to "get out and socialize."

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