

AMERICAN SIGN LANGUAGE VERB CATEGORIES IN CONSTRUCTED
ACTION

by

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Presented to the Faculty of the Graduate School of
The University of Texas at Arlington in Partial Fulfillment
of the Requirements
for the Degree of

DOCTOR OF PHILOSOPHY

THE UNIVERSITY OF TEXAS AT ARLINGTON

May 2012

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ACKNOWLEDGEMENTS

This study owes much appreciation to the Deaf community for their patience and participation with this research. Many thanks goes to the icons of ASL story telling i.e. Ben Behan, Sam Supalla, Keith Cagle and others in the community who have for many years sought to guide and help individuals wanting to study their native language. I am indebted to LaShaundria Lawson who helped collect and analyze this data. In addition, I wish to thank Bryon Bridges and Keith Kilpatrick for their assistance with this study. I especially wish to express my deepest gratitude to the Dr. Susan Mather. Her research inspired me to look deeper into ASL story telling and our many VP conversations working through the various drafts better focused this research.

I want to thank my committee chair Dr. Laurel Stvan. Her insights into the research process gave invaluable aid to complete this study. I am deeply grateful to my other committee members Dr. Colleen Fitzgerald and Dr. Jerold Edmondson for their sacrificial dedication giving suggestions and help to improve and complete this work.

I thank my friend and mentor Dr. John Ross who has graciously encouraged, taught, and supported me from the beginning of my doctoral work.

Finally, I want to thank my wife Debra who helped in the data collection and particularly for her patience during the process.

March 27, 2012

ABSTRACT

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The American Sign Language construction commonly known as "role-shift" superficially resembles mimic forms, however unlike mime, role-shift is a type of depicting construction in ASL discourse (Roy 1989). The signer may use eye gaze, head shift, facial expression, stylistic variation, and use of signing space to convey information (Lee 1997). While this construction may involve a level of gesture, it is linguistic in nature (Padden 1990). "Role-shift may be used to recreate the action in a narrative, thus the term: constructed action" (Metzger 1995). This aspect to depict action is the particular focus of this study.

Participants were videotaped telling one of two narratives in order to analyze these instantiations of the CA framework. Specifically, this study looks at the verb types used in CA. The study then questions the interrelational function(s) between CA

and verb types and posits possible explanations for their patterns. The study concludes with a positive correlation for a specific verb used in ASL constructed action and that a cognitive iconicity principle may license the use of constructed action.

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CHAPTER 1

SIGN LANGUAGE: BACKGROUND

1.1 Introduction: Chapter 1 Summary

This chapter gives a basic foundational background of American Sign Language (ASL). The first section relates a historical summary of sign language in the world followed by a brief synopsis as to how ASL became widespread in North America via the beginning of Deaf education in the United States. Sections 1.3-1.8 relate some ASL linguistic aspects, the basic grammar, and the progress in ASL linguistic research and sociolinguistics respectively. The last section of chapter one describes the focus of this research i.e. constructed action in ASL. Principally, this study focuses on the verbs used for this feature. This final section describes the ASL feature noted as "constructed action", and illustrates the physical characteristics implemented in constructed action use. This research mentions constructed action's basic function and purpose. In addition, it discusses the background of this study i.e. the study looks for verb patterns (this study notes a possible set of presumed connotations understood by using the term "verb" when referring to ASL signs, which may not fully apply).

The research problem or statement is listed in this section as well. To show how the research was tackled, the next chapter gives some background on the concept of constructed action in ASL and how it has been historically identified.

1.2 Sign Language Instances: Historical

Historically, sign languages have a long and rich history. The earliest public record is from a 1521 publication, *De Inventione Dialectica*. This book on education states that deaf people possess the capacity of learning a language, which in this case refers to a spoken language (Gannon 1981). However, evidence from an emerging Nicaraguan Sign Language in the school for the Deaf in Managua, Nicaragua seem to indicate that whenever deaf persons who use indigenous signs and gestures are brought together, a sign language emerged (Lingren, 2008). Thus giving rise to the idea that sign language has existed since ancient times.

It is probable that Deaf people who communicate by gesture or sign have existed as part of humanity from its inception; in the West, the first written evidence of their existence can be found at the dawn of Western literacy itself, with the rise of the Mediterranean societies of the fifth century BC (Ladd 2003 p.108).

Formally, American Sign Language as a wide spread language used for communication is an outcome of Deaf education. The first records indicating a favorable view of any sign language use come from early teachers of Deaf individuals. In the 12th century, various church monastic orders educated the deaf children of wealthy individuals (Ladd 2003). This pursuit of education of the elite helped begin the education of the Deaf in America and, thus, stabilize and proliferate ASL as the language of the Deaf community in America and Canada.

1.3 The Beginnings of ASL

This chapter will present a brief history of American Sign Language. Two factors contributed to the emergence of American Sign Language: the presence of a large population of Deaf people on Martha's Vineyard from the beginning of the 18th century, and the unfolding events that led to the first establishment of a school for the deaf in Hartford, Connecticut.

In America, the education of the Deaf began with Laurent Clerc and Thomas Hopkins Gallaudet. As noted above, a sign language did exist in America prior to Mr. Gallaudet; however, it was not uniform throughout the US (Valli 2005). The process, which created a standard sign language for America, began in the early nineteenth century. Gallaudet graduated from Andover Theological Seminary in 1814 planning to be a Congregationalist minister, but he was too ill to work in a church full time and had to return home to his family in Hartford, Connecticut (Campbell 2001).

While at home, Thomas Gallaudet acquired a new commission that he would spend his entire life pursuing. His neighbor, Dr. Cogswell, had a deaf daughter. The daughter, Alice became deaf at age two. Dr. Cogswell realized that his daughter needed to be educated, so Dr. Cogswell sent Gallaudet in 1815 to Europe in the hopes of learning teaching methods by which to educate Alice. Mr. Gallaudet visited the Paris School for the Deaf and soon agreed that the use of sign language was preferred as the method to teach deaf children.

Mr. Gallaudet returned to the United States in the summer of 1816 having procured the help of Laurent Clerc from the Paris school (Valli ed 2005). Soon afterward, Mr. Gallaudet and Mr. Clerc opened the Connecticut Asylum for the Education and Instruction of the Deaf and Dumb in Hartford in 1817 (now the American School for the Deaf).

At the school, students from other parts of America mixed their own indigenous sign language with the signs imported by Mr. Clerc from France. It was this mixture, which became the modern American Sign Language (ASL). Soon graduates of the American School for the Deaf became teachers. These teachers began teaching at newly established schools for the Deaf in other states. These teachers helped proliferate ASL throughout the US (Lane, 1984).

1.4 The Grammar of ASL: Introduction

ASL linguistic studies, of the 1970's, begun to establish that American Sign Language (and, thus, the sign languages of the world) are among the fully productive human languages. In the past, the grammar of ASL was virtually unknown and consequentially viewed as an arbitrary system of pantomime and gesture (Stewart & Vaillette 2001 p.428). Critics of ASL pointed out that it does not have a writing system, written literature, cultural features such as customs distinct from that of America, or specific types of ethnic foods (Moore 2003). The discovery of the arbitrary nature (as opposed to the view that all signs are basically pantomime) of most signs found in the world's sign languages was the key that led to, research unveiling that ASL has a robust

grammar independent and distinct from its spoken language environment (Rowe & Levine 2006). American Sign Language functions as any spoken language, yet the essential difference between ASL and spoken languages is the medium – signs versus speech. The hands, body, eyes, lips, and tongues are used in production (analogous to the vocal apparatus for spoken languages), and the eyes are the instruments of reception (analogous to the ears for a spoken language) (Stewart & Vaillette 2001).

1.4.1. The structure of American Sign Language: Phonology

Early ASL research attempted to utilize new terminology, since terms such as “phonology” had historically referred to sound and voice (as seen in its derivation from the Greek root “phone”). William Stokoe in his seminal studies, sought to substitute the word phonology with the term *cherology* and the word phoneme, with *chereme*; and allophone with *allocher* following the Greek term for “hand”, etc (Valli 2005). However, the standard terms used in spoken language linguistics have remained in ASL linguistic research, since a phoneme is a mental concept, not a physical unit. The corresponding units in sign languages equate to the same theoretical concept set in spoken languages.

Dr. William Stokoe (1960) understood signs as divisible units making up the lexical system. These divisible parts, analogous to the sounds, termed “parameters”, make up the units of signs (Valli 2005). These parts are: handshape, movement, location, orientation, and nonmanual markers (i.e. specific facial expressions). One way these parameters or parts of signs illustrate this component feature is via minimal pairs.

For example, the sign for “FATHER” (all caps indicates sign glosses) uses an open handshape with extended fingers, palm orientated to the nondominate side and touching the forehead with the thumb. This same sign relocated at the chin, means “MOTHER”. When the same set of parameters are maintained, however, the movement parameter is changed to a distal path movement away from the body, the meaning of the former is “GRANDFATHER” and the latter – “GRANDMOTHER” (Rowe & Levine 2006). Figure 1.1 illustrates the signs “SUMMER”, “DRY”, “RED”, and “CUTE”. These signs show different meanings projected via a change in location for “SUMMER”, “DRY” and a change in handshape for “RED”, and “CUTE”.

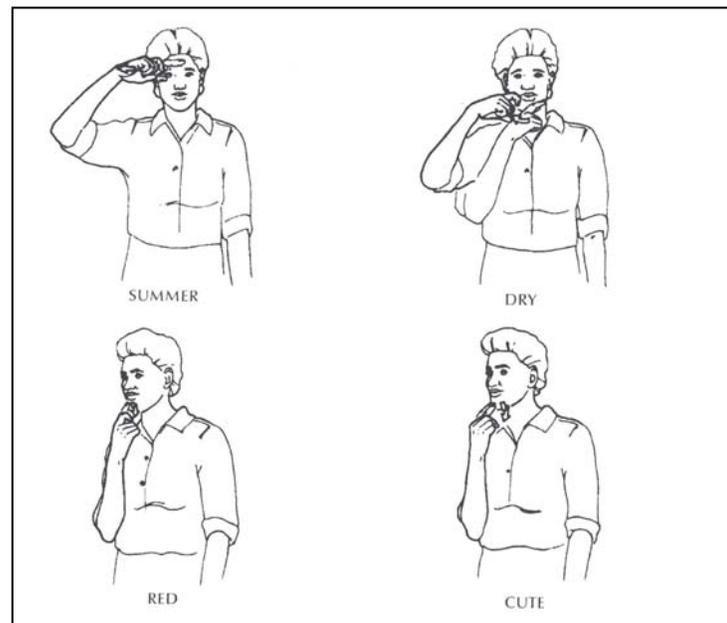


Figure 1.1 Sign examples of minimal pairs (Valli, Lucas & Mulrooney 2005 p.18)

Liddell (1982) developed a segmental ASL system, which aligns spoken language consonants and vowels with a sub-parameter feature set. Unlike earlier understanding, which viewed signs as sets of simultaneous features rather than sequential, Liddell's system understands signs as a set of “movement” and “hold” segments produced sequentially. The parameters compose a set of bundled features whether in steady state (termed “holds”) or in transition (termed “movements”); in addition, multiple sign parameters may change within the segment itself (Valli, 2005). This perspective, at the sub-lexical level, expands the sign “GOOD” cf. figure 1.2 as containing a **hold-movement-hold** segment set (Valli, 2005).

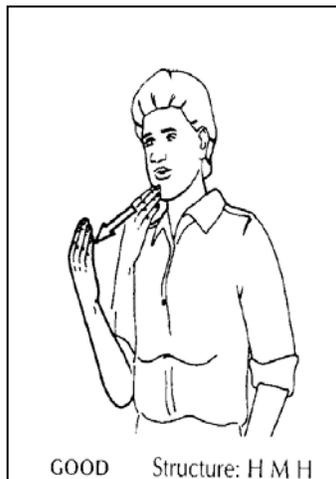


Figure 1.2 The sign “GOOD” (Valli, Lucas & Mulrooney 2005 p.37)

The sign begins at the chin with an open palm facing the signer with fingers closed. Maintaining this handshape, the signer extends the arm to approximately 20 inches directly in front of the chin, at this time the movement ends.

The Movement-Hold model also captures ASL undergoing phonological processes. The parameter units of sign languages subject themselves to basic phonological processes in similar manner as the basic units of spoken languages (Liddell 2003). Valli (2005) demonstrates movement epenthesis by showing the addition of an extra movement when the separate signs "FATHER" and "STUDY" come together in the sentence "FATHER STUDIES" cf. figure 1.3.

Signs occur in sequence, which means that the segments that make up signs occur in sequence. Sometimes a movement segment is added between that last segment of one sign and the first segment of the next sign. (Valli, Lucas & Mulrooney 2005 p.40)

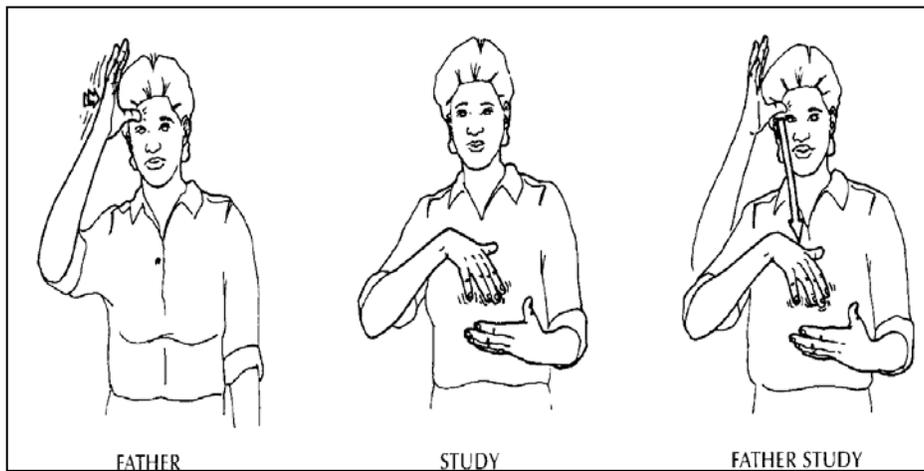


Figure 1.3 Sign example of epenthesis (Valli, , Lucas & Mulrooney 2005 p.41)

In this case, figure 1.3, an additional movement segment inserts itself at the completion of the sign for "FATHER" and prior to the instantiation of the sign "STUDY". Also, ASL possesses hold deletion, metathesis, and assimilation processes

(Valli 2005). Using this model, these ASL visual units demonstrate structural phonological constraints similar to those of spoken languages.

1.4.2 The Structure of American Sign Language Morphology: Inflectional

ASL possesses a rich and highly productive morphology. However the morphology systems found in ASL and sign languages in general ... "do not consist of the linear affixation of concrete morphemes that bear a one-to-one correspondence with a meaning or grammatical function" (Sandler & Lillo-Martin 2006). In other words, ASL tends to utilize its visual modality to express a complex array of inflectional and derivational morphology. For example, ASL tends to utilize three-dimensional space in various ways to indicate an array of inflections. Thus, the (di)transitive verbs GIVE, INFORM, TELL, PICK-ON, SEND, AND PAY inflect for person using visible signing space to indicate the verb inflection (Padden 1983).



Figure 1.4 Inflection for the sign (GIVE) (Stewart & Vaillette (eds.), 2001 p.434)

These verbs, cf. figure 1.4, assign specific agreement markers, via movement within signing space, to the verb form. These agreement markers take the form of movement morphemes identifying the thematic roles. The sign GIVE will therefore “agree” with the functioning subject and or functioning object via its initialing and ending point. For more discussion on verbs, see the section on verb types.

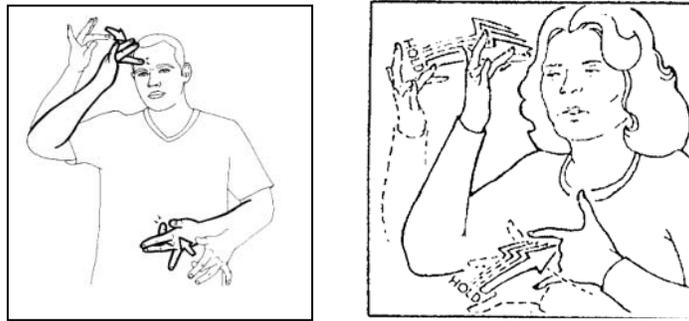


Figure 1.5 Temporal aspect for the sign (SICK) (Valli (ed.) 2005 p.413)

In a similar fashion, temporal aspect inflects via modifying the movement speed, and or path of the verb. Figure 1.5 (left) shows the uninflected sign SICK. Producing this uninflected form requires both hands. The middle fingers of the open hand touch the forehead (dominate hand) and the abdomen (non-dominate hand) respectively. The sign (right) inflected for temporal aspect expresses the concept of becoming sick frequently. The signer has added repeated reproduction movements to “inflect” the form.

The two above examples show that ASL tends to inflect forms via movement sequence modification rather than typically adding various overt morphemes for such

common inflectional aspects as person, tense, or pluralization. The list below designates additional inflectional forms:

- Number – singular, dual, trial (three), and so on;
- Distributional aspect – such things as each, certain ones, and unspecified one;
- Temporal aspect – for example, for a long time, regularly, over and over again;
- Temporal focus – such as starting to, gradually, and progressively;
- Manner – for example, with ease, with difficulty, with enthusiasm, slowly, quickly;
- Degree – for example, a little bit, very, and excessively;
- Reciprocity – indicates mutual relationships or actions;
- Index – changes person references for verbs (Rowe & Levine 2006 p.265).

In a similar study (prompting narrative Frog story) to this present research, Maroney (2004) found iterative, habitual and continuative aspect to be manifested typically via various types of verb reduplication. This study notes various verbs which may manifest modification for aspect and like Maroney (2004) no overt perfective markers were evident in this data (further discussion in chapter 5). The following list show signs found in common with Maroney (2004) which inflicted for aspect

- YELL
- LICK
- LOOK
- BARK
- PICK
- PUT
- CLEAN

In this research, unless the verb type is also changed with aspect change, the citation verb type is maintained.

Tense is conveyed in three ways in ASL (Reagan 2007). The first method is termed the “time line” the second via lexical signs and the last is lexical tense markers. The “time line” runs from behind the signer forward to space in front of the signer. For signs that express past time, movements are back along this time line (Newell, Sanders et.al 2010). Also, ASL uses various lexical signs to indicate tense such as “now”, “yesterday”, “tomorrow, etc. which also may follow the ASL pictorial “time-line” thus the verb itself is typically not modified (inflected) for tense (Valli, Lucas, Mulrooney 2005). Neidle, Kegl, MacLaughlin Bahan & Lee (2001) subdivide these lexical signs in to two categories. The first set is termed “time adverbials”, which include signs such as “now”, “yesterday”, etc., the other lexical tense markers. Lexical tense markers include the signs “past”, “up-to-now”, “future” and others. The two categories are distinguished based upon differences in articulation and distribution (Neidle, Kegl, MacLaughlin Bahan & Lee (2001). Chapter four discusses issues of tense found in this data.

1.4.3 Morphology: Derivational

In addition, ASL derivational morphology manifests itself in the areas of noun development, fingerspelled signs, numeral incorporation, and classifier predicates (Klima and Bellugi 1979), (Padden & Perlmutter 1987), (Valli, Lucas & Mulrooney 2005). Noun development or nominalization may derive nouns from verbs; for

example; the verb SIT if signed protracted with two movements instead of one changes to the noun meaning CHAIR.

Researchers report certain morphemes exist, which find expression through a range of facial expressions. A common term for such morphemes is non-manual signals (i.e. NMS). The NMS can reflect themselves as movements/expressions of the mouth and may denote adjectival, adverbial, or durational aspects (Sandler & Lillo-Martin 2006). For example, the NMS mouth morphemes termed “TH” (similar to an interdental fricative in appearance) when utilized in conjunction with a standard ASL verb, adds to the base verb sense the meaning “lack of control, inattention, unintention and unawareness (Liddell 1980).

Classifier predicates (more currently referred to as polycomponential verbs) perhaps pose the largest example of multi-morphemic structures. This feature type denotes spatial relations, motion events, and characterizes shapes, and or dimensions of objects (Sandler & Lillo-Martin 2006). In classifier predicates, the signer uses specific handshape(s) in which some type of depiction and or description is produced. The handshapes are combined with location, orientation, movement, and nonmanual signals to form a predicate (Valli, Lucas & Mulrooney 2005). Additionally, classifier constructions appear in virtually all the sign languages of the world (Morgan & Woll 2007). The classification of classifier predicates analyzed since the 1970’s, resulted in a variety of terms used to describe them, such as verbs of motion and location, multi-morphemic verbs (Supalla 1978, 1986), (Mandel 1977), (DeMatteo 1977), (Friedman

1975,1977), indicating verbs, (Liddell 2003), and polycomponential forms (Morgan & Woll 2007). Morgan & Woll (2007) describes the various classifiers categories from (Supalla, 1986; Sutton-Spence & Woll 1999). The following list shows the range of classifier concepts.

1. Whole entity classifiers (also known as object classifiers or semantic classifiers) in which the shape of the hand represents the shape of the referent class can represent PERSON, PENCIL, TOOTHBRUSH or TUBE-TRAIN
2. Handling/instrument classifiers show the configuration of the hand as it moves or uses an object or object part can refer to (holding) a sheet of paper.
3. Size and shape specifiers (SASS) (called extension classifiers) trace the shape of an object used to draw a circle.
4. In body and body part classifiers, the hands or other body parts are used to refer to body parts of humans or other animates (Morgan & Woll 2003 p.298).

Typically, the signer utilizes one of the classifier handshapes and overlays it with additional sign parameters to describe objects, depict action, or denote state (Liddell 2003).

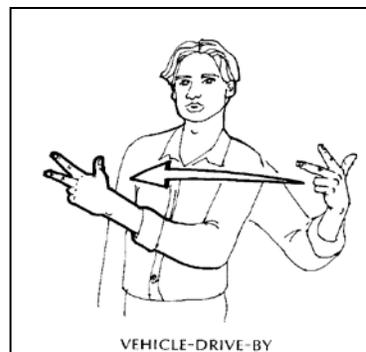


Figure 1.6 A classifier predicate (Valli, Lucas & Mulrooney 2005 p.91)

For example, the signer in figure 1.6, produces the classifier handshape (the "three" handshape turned horizontally) representing a transportation vehicle then

combines this handshape with movement beginning at the signer's epilateral side moving to the contralateral.

Once the signer specifically identifies the classifier handshape (in this case an automobile), the resulting meaning becomes "an automobile went by" (from the designated side to the designated other side). Classifier use poses significant importance to this research since (in this data) constructed action occurs most often (73% of construction action occurrences) within a classifier sequence. For more detail relating to classifiers, see the section on verb types.

1.4.4 ASL Syntax

Researchers have concluded a variety of syntactic orders for ASL including a rather unrestrained word order (Friedman 1976). Fischer (1975) purported the basic ASL word order to be SVO; however, ASL may follow OSV, or VOS structure. For example, Liddell (2003, p. 54) identifies three basic syntactic orders:

a. DOG CHASE CAT (SVO)

_____T* indicates a topicalized construction
b. CAT DOG CHASE (OSV)

c. CHASE CAT PRO (VOS)

In principle, researchers may point to pragmatics to understand the existence of various word orders (Fischer 1975, Valli 2005). This is to say that ASL places a greater dependence upon context than an explicit sign sequence. The above example may rely on the greater likelihood that a dog chases a cat rather than the reverse. This understanding could account for ASL diverse word orders. Liddell (1978) concluded

early in his research the basic ASL word order to be SVO. Other alternative examples incorporate obligatory nonmanual features. In the above example, b would demonstrate nonmanual features articulated simultaneously with the production of the sign CAT (shown in the test with the line over the word and the “T”). These nonmanual features such as eyebrow raise, head tilt and perhaps a slight pause in the sign production mark the sign as the sentence topic giving it predominance (Liddell 2003). This construction referred to as “Topicalization” is combined with these nonmanual features. This predominance aspect results in the meaning: "As far as the cat is concerned, the dog chased it". In the above example, c would incorporate a "subject pronoun tag" along with the last sign PRO designated by a single head nod (Liddell 1977, 1980). Those variant structures (other than SVO) are identified as a marked syntactic category.

In early research of ASL syntax, often specific linguistic information was not understood to be linguistic such as facial expressions, head positions, and head movements which lead researchers to different results (Liddell 2003). Once these seeming non-linguistic features were incorporated into the ASL research, a more consistent syntax was discovered. It is noted that ASL introduces topics with raised eyebrows, a backward tilt of the head and contraction of the muscles that raise both the cheeks and the upper lip (Liddell 2003). These “Non-manual” markers only functioned during the topic portion of a sentence and they mark the direct object of a sentence when it is articulated prior to the predicate (Valli, Lucas & Mulrooney2005). For example:

- (1) _____T
FATHER LOVE CHILD
 _____T
CHILD, FATHER LOVE (Valli, Lucas & Mulrooney 2005 p. 131)
- And
- _____T
MY CAT DOG CHASE (Liddell 2003 p. 55)

In these examples, the functioning object (benefactor/recipient) of the sentence is in bold font since they alone are accompanied with non-manual markers. Thus, in the first sentence the child is stated to love the father. In the second sentence the father loves the child. In the third sentence (both noun phrases together) is clarified with non-manual markers to mean the dog is doing the chasing. This use of non-manual markers accounts for early ASL research arguing for a free word order (Petronio 1993). When the non-manual markers are absent, typically SVO becomes the default understanding.

Padden (1988) examines instances in ASL in which constituents outside that of object may also be marked as topicalized, also found to occur in languages such as Japanese, Chinese and Korean (Huang 1984). This feature is shown in example (2):

- (2)....._____T
FOOD IT ONLY-ONE #V-E-G
When referring to food, I only eat vegetables

Research also finds ASL matches the universal principles of syntactic agreement projections, constraints on phrase structure and the directionality of movement. In more current research, Neidle, Kegl et.al (2001), using a Minimalist Program basis, propose this hierarchical structure for ASL (figure 1.7). In figure 1.7, tense (T) heads the ASL clause, distinct subject and object agreement projections

(Agr_sP and Agr_oP) exists, and *wh*-movement occurs rightward to the specifier of CP. In addition, aspect is placed higher than agreement in this hierarchy. Previous research on ASL syntax provides the precedent that ASL demonstrates an organized phrase structure which is the premise for this research in CA verb sequences. The view that ASL possesses a constrained and patterned verb type sequence in constructed action stems from the phrase structure adhering to universal principles of all languages.

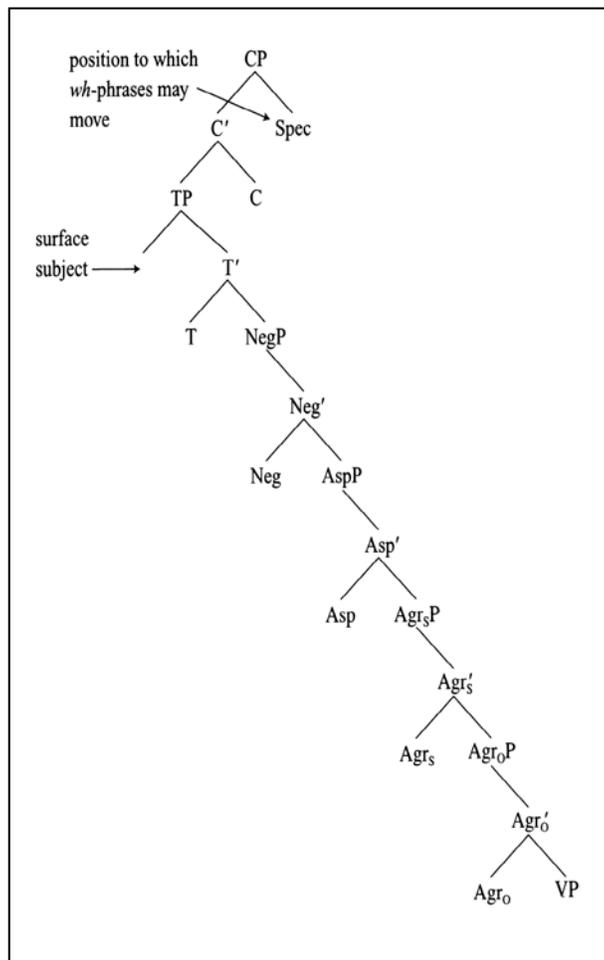


Figure 1.7 The skeletal structure of CP (Neidle, Kegl, et.al.p.3)

Grammatically, ASL nonmanual markers (sometime referred to as nonmanual signals) identifies several sentence types via this feature. Table 1.1 lists the types.

Table 1.1 Various sentence types with the accompanying NMS (Valli, Lucas & Mulrooney 2005 p.133)

Sentence type	Nonmanual Signals	Examples
1. Questions a. Yes-No	Eyebrows raised, eyes widened, head/body tilted, last sign held	_____q MAN HOME
b. Wh	Eyebrows squinted, head tilted, body forward, shoulders raised.	_____wh-q MAN WHERE
c. Question Mark (Wiggle)	Same as yes-no questions	_____q THINK TEST EASY (qm)
d. Rhetorical	Eyebrows raised, head may be tilted or may shake slightly	_____rhet PRO.1 TIRED WHY STUDY ALL-NIGHT
2. Negation	Head shake side to side; may have frown or squint	_____neg MAN HOME
3. Commands	Direct eye contact with addressee, may frown	SIT
4. Topicalization	Eyebrows raised, head tilt, possible a short pause	_____t HOMEWORK, PRO.1 DETEST
5. Conditionals	Eyebrows raised, head tilted; possible a short pause and eye gaze shift	_____cond TOMORROW RAIN, GAME CANCEL

In the case of intransitive sentences, the nonmanual markers are often used to indicate which verbs are actually transitive or intransitive (Liddell 2003). In the

literature, Nonmanual markers for ASL have become a fundament to its structure and have been shown to follow generative grammar principles (Neidle 2000).

1.5. American Sign Language Verbs of Motion and Sequence

Relevant to this research is Supalla's (1978, 1985) analysis of serial verbs of motion. Although Supalla did not study CA specifically, his seminal work outlined various constraints on certain types of ASL verbs found in series. Similarly, this present research (however within the confines of CA) analyzes some of the same verb types. The first aspect is that ASL verbs may combine to show motion events (Supalla 1990). This study adhered to this view and found multiple series types of ASL verbs in CA, however Supalla focused on the simultaneous feature of ASL verbs. Another conclusion from his investigations is that constraints existed for these types of verbs. Along the same idea, this study proposes the concept that ASL CA verbs act in not only constrained series but in controlled sequences. This constraint system forms a foundation to this research.

Supalla's (1990) constraint system referred to verb types illustrated in figure 1.8 and discussed in section 1.4.4 i.e. polycomponential signs. The first type of constraint noted comes from physical limitations placed on the signer by virtue of having two articulators (hands). Complimenting a primary and secondary concept into an utterance requires the signer to add more signs. For example, if the signer wishes to use a sign to represent the ground and simultaneously convey two objects moving upon the ground, the signer would naturally be constrained to end the production of one object to show

the other one. Another constraint is a grammatical limitation to use separate signs (polycomponential verbs) to denote manner of motion and path of motion.

In figure 1.8 the signer is using this verb type to show an owl flying after a boy (the Frog story -- one of the narratives used in this research) upon which the owl flies off.



Figure 1.8 A serial verb of motion (*Owl goes after the boy then flies away*)

The signer must use (as shown in the two pictures) to separate signs. The second picture (right) demonstrates the signer using the index finger to convey the path of the owl flying when in the previous picture (left) both hands are showing the wings of the owl in flight. It can be understood from these examples that American Sign Language exhibits similar properties found in serial verbs of spoken languages (Supalla 1990).

1.6 The Beginnings of Sign Language Linguistic Studies

Linguistic studies on American Sign Language began with William Stokoe's seminal work. His research, while a professor at Gallaudet University, purported ASL signs to be comprised of contrastive units rather than a composite entity of gesture (Stokoe 1960). Stokoe's seminal study states signs have three devisable parts, handshape termed (DEZ) – designator, location termed (TAB) – tabulation and movement termed (SIG) –signation. Stokoe developed an elaborate code system to designate these sign units. Using table Figure 1.9 (Valli, Lucas & Mulrooney 2005), the sign IDEA has the following symbol code.

○ | ^ IDEA:

The first symbol indicates the sign location to be the forehead or brow, upper face. The second symbol represents the "pinkie" handshape, and the last symbol indicates an upward movement. Figure 1.10 illustrates the sign IDEA. Even though Stokoe viewed these units as occurring simultaneously, he began this formal enquiry into the linguistic makeup of sign language. With his publishing of *A Dictionary of American Sign Language on Linguistic Principles* in 1965, other linguists soon followed with additional research into the phonology and morphology of ASL (Battison, 1978, Fischer and Gough 1978, Klima & Bellugi 1979, Liddell 1984). It was

Tab symbols		
1. Ø	zero, the neutral place where the hands move, in contrast with all places below	
2. □	face or whole head	
3. ▭	forehead or brow, upper face	
4. △	mid-face, the eye and nose region	
5. ∪	chin, lower face	
6. 3	cheek, temple, ear, side-face	
7. ∏	neck	
8. []	trunk, body from shoulders to hips	
9. \	upper arm	
10. /	elbow, forearm	
11. Ⓚ	wrist, arm in supinated position (on its back)	
12. Ⓛ	wrist, arm in pronated position (face down)	
Dez symbols, some also used as tab		
13. A	compact hand, fist; may be like 'a', 's', or 't' of manual alphabet	
14. B	flat hand	
15. 5	spread hand; fingers and thumb spread like '5' of manual numeration	
16. C	curved hand; may be like 'c' or more open	
17. E	contracted hand; like 'e' or more claw-like	
18. F	"three-ring" hand; from spread hand, thumb and index finger touch or cross	
19. G	index hand; like 'g' or sometimes like 'd'; index finger points from fist	
20. H	index and second finger, side by side, extended	
21. I	"pinkie" hand; little finger extended from compact hand	
22. K	like G except that thumb touches middle phalanx of second finger; like 'k' and 'p' of manual alphabet	
23. L	angle hand; thumb, index finger in right angle, other fingers usually bent into palm	
24. 3	"cock" hand; thumb and first two fingers spread, like '3' of manual numeration	
25. O	tapered hand; fingers curved and squeezed together over thumb; may be like 'o' of manual alphabet	
26. R	"warding off" hand; second finger crossed over index finger, like 'r' of manual alphabet	
27. V	"victory" hand; index and second fingers extended and spread apart	
28. W	three-finger hand; thumb and little finger touch, others extended spread	
29. X	hook hand; index finger bent in hook from fist, thumb tip may touch fingertip	
30. Y	"horns" hand; thumb and little finger spread out extended from fist; or index finger and little finger extended, parallel (allocheric variant of Y); second finger bent in from spread hand, thumb may touch fingertip	
31. B		
Sig symbols		
32. ^	upward movement	} vertical action
33. v	downward movement	
34. ^v	up-and-down movement	
35. >	rightward movement	} sideways action
36. <	leftward movement	
37. z	side to side movement	
38. τ	movement toward signer	} horizontal action
39. ⊕	movement away from signer	
40. ⊗	to-and-fro movement	
41. Ⓚ	supinating rotation (palm up)	} rotary action
42. Ⓛ	pronating rotation (palm down)	
43. ω	twisting movement	
44. ∩	nodding or bending action	} interaction
45. □	opening action (final dez configuration shown in brackets)	
46. #	closing action (final dez configuration shown in brackets)	
47. w	wiggling action of fingers	
48. ∞	circular action	
49. x	convergent action, approach	
50. ×	contactual action, touch	} interaction
51. ⌘	linking action, grasp	
52. †	crossing action	
53. ⊙	entering action	
54. ⊕	divergent action, separate	
55. ∞	interchanging action	

Figure 1.9 Stokoe's code for sign units (Valli, Lucas & Mulrooney 2005 p.25)

from Stokoe's early work which showed that ASL (like spoken languages) can share a fundamental feature of language i.e. duality of patterning (Wendy Sandler & Diane

Lillo-Martin, 2001). This concept of duality of patterning used in spoken languages to show that individual phonemes, which are in themselves meaningless, may combine to form words with specific meaning could be applied to ASL and thus to all signed languages. The meaningless individual building blocks of signs (parameters) could be subdivided to form meaningful entities – words. Instead of gesture approximations to spoken words, signs are themselves words.



Figure 1.10 The sign for (IDEA) (Valli, ed. 2005 p.228)

1.7 Current Research in ASL

In conjunction with studies in ASL phonology, new research into the morphological and syntactic features of ASL soon followed. This escalation in research interest is demonstrated by the fact that in the years 1983, 1984, 1985, 1986 universities listed fourteen Ph.D. dissertations dealing with various aspects of sign language (Lucas ed.1990). Aspect of ASL grammar developed from the research of individuals such as Bateson (1979) in the area of Lexical borrowing, Baker-Shenk (1983), in the area of

ASL question structures, and Scott Liddell (1980), Padden (1988) in the area of syntax. As new research appeared, spoken language linguists began to work alongside researchers in sign language, thus studies expanding new concepts about human language, as well as potential applications for universal grammar.

1.8 Sign Language and the Brain

Poizner, Klima, and Bellugi (1987) contributed instrumental research, sustaining investigations which supported the legitimacy of sign language as a language. Their research discovered that sign language like spoken language is situated in the left hemisphere of the brain for the vast majority of people. Controversy certainly exists within research on how the brain processes language, however the above research along with others, (Emmorey, Damasio, McCullough, Bellugi 2002), made great strides to further ASL's place in linguistic research. In addition, Newport and Meier (1985), spotlighting sign language acquisition, found that Deaf children learn their native language at the same rate as hearing children learn spoken language.

1.9 The Development of American Sign Language Research

William Stokoe (1999) explained ASL research in three historical phases. The first stage was the foundational stage, which he was instrumental in starting. Within this first phase, circa 1960-1970, Stokoe with a few others confirmed that linguistic analysis of ASL was possible. The second phase, roughly the decade of the 1970's, experienced an explosion of new research outside Gallaudet University. Other universities for the first time began encouraging their linguists to study ASL. The third

phase, (the present phase), started a fine-tuning of previous ASL research. This third phase also initiated a comparison or contrast perspective. In other words, ASL linguistics began to address the issue about their linguistic premise whether ASL is more similar to spoken languages or contrastive. All three phases work together in the field of linguistics at its present stage of development, studying, and preserving languages of the world. The current study fits within this third phase of sign linguistics.

1.10 Sociolinguistics in the Deaf Community

Valli & Lucas (2005) note language variation in ASL such as age, gender, regions and historical change from a sociolinguistic perspective. ASL has experienced, much like spoken languages, the typical sociolinguistic feature e.g. change. Phonological change is one such aspect. Several early sign linguists: Nancy Frishberg (1975), James Woodward, Carol Erting & Oliver (1976) and Woodward & Susan DeSantis (1977b) describe historical phonological change in ASL. Historical change is illustrated by the signs for CAT and COW which changed from a two handed sign into a one handed sign; the sign for HOME has changed, by assimilation of the handshape. The original sign required two different handshapes, but presently uses only one. This change from a two handed sign becoming a one handed sign is common (Stewart & Vaillette 2001).

In 2001, Ceil Lucas, Robert Bayley, and Clayton Valli et al. completed a seven-year sociolinguistic study of language variation in the Deaf community. Their study looked at phonological variation and confirmed that sign variation is taking place and

has done so across the United States. This natural transformation follows geographical location, education, ethnic backgrounds, gender and age. The study notes the following lexical items, which are subject to variation primarily based upon geographical location.

Table 1.2 lists lexical variation from Lucas' study.

Table 1.2 Lexical variation in ASL (Lucas, Bayley, Valli 2003 p.47)

AFRICA	FEAR	SOON
ARREST	GLOVES	SQUIRREL
BANANA	JAPAN	STEAL
CAKE	MICROWAVE	THIEF
CANDY	MITTENS	TOMATO
CEREAL	PANTS (men's)	
CHEAT	PANTS (women's)	
CHERRIES	PERFUME	
CHICKEN	PIZZA	
COMPUTER	RABBIT	
DEER	RELAY	
DELICIOUS	RELAY	
DOG	RUN	
EARLY	SANDWICH	
FAINT	SNOW	

Research into the ASL linguistics began just forty years ago and in this short time, the field of linguistics has experienced a paradigm change by understanding that the sign and spoken language are just two language modes; that signed language has very many of the properties found in spoken language. This perspective views sign language on par with spoken languages which this study seeks to contribute to the blossoming concept of human language.

The present stage of ASL research provides motivation for this study. ASL linguistic research contributes to information relative to how a visual language compares and contrasts with spoken language. This research, presented here, takes a more contrastive perspective. The ASL feature constructed action (explained below) may contrast significantly from any feature possessed by spoken language since this feature depends upon iconic elements in signing. This research focuses on a highly structured pattern attribute of constructed action. Thus, the standpoint of this research emphasizes, in at least one way, ASL as an innately distinctive type of language from spoken languages.

1.11 The ASL Feature of Constructed Action

The American Sign Language construction commonly known as "constructed action" (also referred to as "role shift", among other terms), superficially resembles mimic forms. However, unlike mime, constructed action is a type of depicting construction in ASL discourse and possesses a structured dynamic (Roy 1989). With this feature, the signer may use eye gaze, head shift, facial expression, stylistic variation, and use of signing space to depict information (Lee 1997). Constructed action may use mimic-like or gesture-like verbs (Liddell 1998). Figure 1.9 is one such example of a signer using constructed action. In this example, the signer illustrates the aforementioned features directly conveying action information.

The signer, in this particular example, conveys multilayered verbal information by relaying actions or events via the gesture features mentioned above. In figure 1.11,

the signer relates vital information. This example is taken from a fable which tells the story about how a man learns to make his own common sense decisions rather than just adhering to the haphazard advice of other people.

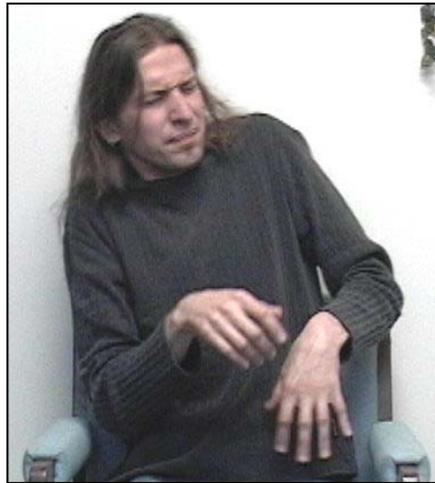


Figure 1.11 Constructed action in ASL

In this scene, a would-be mentor is poking the main character with a cane to emphasize the importance of his unsolicited counsel. With his body, the signer portrays the main character flinching away from the cane; also, the face shows irritation at this experience. Along with these aspects, the signer relates to the audience that the cane poke came from the main character's left side (via the head being turned to the left) and the poke originated at a physically lower location (this is noted by the signer's head and eyegaze slightly lowered). This last feature fits with the context since the main character was riding on a donkey at this time of the story. Note that the signer is not merely dramatizing using gesture emphasis but rather has become the person/entity being

depicted, crucial to this research is the fact that the mimic elements of constructed action most often co-occur with signs to “recreate” the action/events being conveyed. This is the aspect noted by Engberg-Pederson (1993, 1995) as “shifted attribution of expressive elements” in which the signer uses the face/body expressing attitude or emotions.

Figure 1.11 examples constructed action alone without any formal lexical signs. This example shows an ASL constructed action occurrence (notably a marked construction) in that not only, does the signer not use any overt sign(s), but the signer may be constrained to use constructed action to convey the verbal concept (more about this concept in chapter five and six). This is not to say that only ASL mimic-like gesture conveys salient semantic information. The point is that when the gesture elements carry the full communicative load, the gesture elements develop a further/new language features (Padden 1986, Singleton & Golden-Meadow 1995).

This study maintains that while this construction may involve mimic-like elements of gesture, it is included into the linguistic feature of ASL Role Shift (i.e. constructed action) (Padden 1986). Liddell (1980 p.56) observed this mimic-like/gesture feature as a “pantomimic reenactment of an event”. A signer’s gestures in constructed action may indicate specific actions i.e. verbs (Liddell & Metzger 1998). These examples illustrate that constructed action in ASL (i.e. Role Shift) involve gesture elements as well as grammatical elements and they do not conflict with each other (Liddell & Metzger 1998).

Constructed action typically co-occurs with formal lexical signs. This study found the most common co-occurring signs used are verbs since constructed action constitutes a predicate.

In this research and in the literature Depicting verbs commonly termed classifier are the preferred type within constructed action (Padden refers to this as Role shift), (Padden 1986; Roy 1989; Winston, 1995; Mather 1998; Rayman 1999; etc.). Figure 1.12, illustrates constructed action while using this type of verb. In this example, the signer via constructed action primarily conveys the manner in which the protagonist gave mental agreement advice. The head and eyes (in the actual story the head moves from right to left) show that the main character has given agreement to a plurality of people; additionally the head moves up and down –thus the indication of agreement.



Figure 1.12 Constructed action using a classifier sign

As seen in Figure 1.12, the face denotes linguistic expression along with the protruding tongue indicating the careless manner in which the agreement was given.

The Depicting verb is on the signer's dominant hand (right hand). The specific handshape is an "S" handshape and in this example denotes "depicts" a person's head in an affirmative nod. The hand, in this iconic manner, depicts the head nodding by bending at the wrist up and down to mirror the movement of the actual head. Figure 1.12 is another example of multi-levels of information conveyed via constructed action. In this example, action combines facial expression (protruding tongue) with overt signs i.e. handshape representing a head. By virtue of this type of phenomenon, constructed action has an integral place in ASL discourse (Winston 1995).

It should be noted that the same features can be used to reconstruct dialogue which according to Metzger (1995) is a subset of ASL constructed action since constructed dialogue often occurs in conjunction with constructed action in ASL. In figure 1.13, the signer is recreating a scene depicting a group of women discussing the perceived ill manners of one of the fable's characters. The signer visually recreates the discussion scene. The standard lexical signs repeat the words of the women. Also, the signer represents the women as a collective in this example. The signer's body and head indicate the women leaning forward in a type of group huddle. The face indicates a negative affect or attitude toward the boy. The hands begin with the dominant hand pointing to the referent, upon which the hands then repeat the criticism content.



Figure 1.13 Constructed dialogue in ASL

1.11.1 Constructed Action in Spoken Language

Spoken languages share various aspect of this feature. Streek (2002) refers to a constructed action in spoken language as “body quotation” which is a mimetic recreation in which the speaker acts as someone different. Often in the context of quotations, the literature mentions that the speaker includes mimetic features to augment the discourse speech. When referencing spoken language, another term used is reenactments (Sidnell 2006).

During an enactment, the speaker pretends to inhabit another body—human one or that of an alien, perhaps even a machine, or her own body in a different situation—and animates it with her own body, including the voice. (Streek 2002 p.591)

Whether in spoken language or in sign language, the speaker can depict the thoughts, words (as in reported speech i.e. constructed dialogue) or actions of people or events directly. ASL constructed action undoubtedly is related but this research points out various differences for this feature.

This current research project involves analyzing these instantiations of the constructed action framework whether co-occurring with lexical forms or without. This study substantiates the hypothesis that the verb category, or categories used within CA is/are statistically significant, that is to say the sign (verb) itself holds a significant determination whether the signer may use CA.

Chapter 2 begins the literature review relating to the specifics of ASL constructed action as a feature of the language. It discusses the various terms assigned to this feature. The literature approaches the topic in one of three perspectives. The first perspective observes the feature and began align it with spoken language when ASL used this feature as constructed dialogue (Friedman 1975; Mandel 1977; Padden 1986). The second aspect attempted to describe its existence and purpose in ASL narrative (Mather 1996, 1998; Roy 1989; Winston 1992, 1995; Rayman 1999; Metzger 1995; Morgan 2003; Quinto-Pozos 2007). Linguists also worked to describe the syntactic/semantic environment in which ASL constructed action exists (Kegl 1976; Lillo-Martin 1995; Engberg-Pedersen 1993, 1995).

CHAPTER 2

THE BACKGROUND TO THE STUDY

2.1 Introduction

This chapter surveys the previous research on ASL constructed action. Section 2.2 outlines the significance of the concept of constructed actions and the functional definition for the term. Sections 2 and 3 explain how it is linguistically identified. Section 2.4 illustrates the basic function of constructed action, with constraints in section 2.5. Chapter 2 ends discussing the purpose for this study. This section demonstrates the vital importance constructed action possesses as a part of the language use. The importance of this feature is illustrated by the magnitude of previous research, which includes a lengthy list of contrasting perspectives noted in the various terms used to describe it. Chapter 2 consolidates these terms for ASL constructed action, acquiescing to use the more descriptive term “constructed action”. In addition, a large portion of the chapter deals with the function of ASL constructed action as well as its identification features, concluding with the presently known constraints determined for this linguistic feature. The chapter ends by explaining the purpose for this research.

2.2 The Significance of Constructed Action

An important first step in the study of CA is to differentiate it from role-play, role taking, play acting and or simple pantomime. In order to display how ASL CA contrasts from role-play or pantomime, ASL linguists identify the linguistic properties of constructed action (Padden 1987; Poulin and Miller 1995; Engberg-Pederson 1993; Lillo-Martin 1995; Emmorey & Reilly 1998).

Padden (1990) illustrates ASL differences from role-play by emphatically noting that CA has a vital linguistic place in American Sign Language and unlike mere play-acting or role changing that is to change from enacting one character role to another, CA plays a vital role in ASL structure and semantic nuances. In the area of discourse itself, Roy (1989) notes CA is primary in the creating of an "analogous scene through which the information can be understood more completely." (p .454). Working in a similar genre of discourse, Winston (1995) claims CA enhances cohesion and coherence in an ASL lecture: "In addition, the signer maps his mental representation of the discourse structure, the flow of topics and the overall cohesion and coherence of the discourse onto physical sign space" (p.110). The linguistic significance of CA's use of space is essential to the discourse structure of ASL (Mather 1998).

2.3 The Linguistic Identification of Constructed Action

While the importance of CA has long been established, CA as a linguistic term or identity varies among researchers. Sign language researchers have sought to choose a term that contains ample significant meaning to linguists outside the field of sign

language studies. One of the original terms used was “Role Shift” (in more recent literature this term has been divided into two aspects: constructed action and constructed dialogue) which may have had little linguistic meaning to non-ASL researchers. Underscoring a common usage, the most common term for “Role Shift” is ASL “reported speech” (Padden 1986; Roy 1989; Winston 1992; Metzger 1995, Rayman 1999). This feature (Role Shift) of ASL may report the words or actions of someone. Figure 2.1 (figure 1.3 repeated for convenience) is an example of the signer quoting a group of woman criticizing a selfish boy from the fable (noted above).

The signer takes on the "role" of the quoted person or persons conveying (signing) in first person i.e. a direct quote or what are termed in spoken language as direct reported speech (Padden 1990).



Figure 2.1 Role-shift or constructed action in ASL

Metzger (1995) further develops information concerning Role Shift (which includes CA) identification by analyzing characteristics of spoken language along with that of ASL. Using Deborah Tannen's (1989) dialogue constructions, Metzger found a similarity between the two languages. She found that "ASL does make use of the same categories of constructions identified by Tannen" (Metzger 1995 p. 258).

Metzger determined that much of the ASL quoting was done using Role shift and that ASL preferred to "construct" report" or depict actions or events as opposed to words, thoughts or emotions Metzger (1995).

Metzger agreed with Tannen about the inadequacy of the term "reported speech". Tannen preferred to term it "constructed dialogue" since the speaker constructs the quote even in instances when the quote is thought to be verbatim. Metzger, therefore, began using the term constructed dialogue, when ASL quotes or reported words, and constructed action, and when reporting actions. Metzger's accepted terms appear to be some of the most commonly used in the literature (Valli & Lucas 2000; Liddell 2003; Dudis 2004; Quinto-Pozos 2007). Constructed action is to depict or mimic action while constructed dialogue is to construct a dialogue using signs and the gesture features noted above.

The data from this study only analyzed constructed action given the prompting stories; therefore, this research focuses on that aspect. In addition, constructed action and constructed dialogue have primarily been researched as a unit; this conflation may

be unwarranted (Lillo-Martin 1995). This research concentrates on those linguistic features present for constructed action.

More recently, other scholars have applied the terms "Shifted Reference", "Point of View" reference, "Point of View Predicate" and "Shifted Frame of Reference". All of those terms are used when there is sharing of similar or overlapping linguistic events (Engberg-Pedersen 1993, 1995; Emmorey & Reilly 1995; Poulin & Miller 1995; Morgan 2002). Again, these terms stem from the views of the scholars as to how constructed action or constructed dialogue functions (each researcher may not address both aspects, but I couple them for ease of reference --CA/CD). CA/CD is identified as the linguistic feature that changes the primary meaning of pronouns. That is the method by which a signer changes the reference of a specific pronoun in anaphora. Normally, the signer may use the pronoun "I" to refer to him/herself; however in CA/CD, this same pronoun may have shifted its reference to another signer. Shifted Reference merely "shifts" its previous set of pronoun identities to another. Engberg-Pedersen (1995 p.134) states the point simply:

(1) *"The teacher said to the students, "I don't like what you're doing".*

In this example, the "I" of first person quotation or direct speech does not refer to the speaker but to the teacher. In CA/CD, the speaker would take on the spatial position (usually to the left or right of center space) and then use the pronoun "I" to denote the teacher, which shifts the natural reference of the word "I" to someone else (Engberg-Pedersen 1993). Figure 2.1 typifies the "Shifted Reference" type of pronoun

change. In the narrative from which figure 2.1 is taken, the signer might use the standard lexical sign for the pronoun "I", however in CA/CD, the sign would shifted to denote women which are being depicted in this example. Similarly, "Shifted Reference", the "Point of View" term stems from a fundamental change or alteration in the standard "view" or "reference" of the signs.

Figure 2.2 illustrates the "Point of View" term. In this example, the signer is depicting a donkey walking along a pathway. The signer has changed perspective or point of view from that of the narrator to someone or something else as in transformed identity. Included with this shift would be changes to pronoun references and verbs, perhaps in first person form but referencing the donkey.



Figure 2.2 Point of View in ASL

Lillo-Martin (1995) takes a syntactic look at CA/CD at the sentential level terming it a "Point of View" predicate. Morgan (2002) assigned CA/CD the tag

"Shifted Frame of Reference". These last two terms for CA/CD correspond to the above "Point of View" perspective.

One other designation for CA/CD needs to be mentioned. Winston (1991) uses Metzger's term "constructed action", but prefers to call it "action performatives". This expression maintains Winston's perspective for CA's function or purpose in ASL discourse.

Table 2.1 Various terms for the feature Role-Shift

Researcher	Terms Assigned to CONSTRUCTED ACTION
Padden (1986), Roy (1989), Winston (1992), Winston (1992), Metzger (1995), Rayman (1999)	Research which , at least, refers to CONSTRUCTED ACTION as: "Reported Speech" Or the term CONSTRUCTED ACTION
Roy (1989), Winston (1992), Metzger (1995), Wilson (1996), Mather (1998), Valli & Lucas (2000) ,Lucas (2001) Liddell (2003), Dudis (2004), Quinto-Pozos (2007)	Research using the term: "Constructed Dialogue" and or "Constructed Action"
Lillo-Martin (1995), Morgan (1995), Emmorey (1995), Pedersen (1995), Poulin (1995), Morgan (2002), Taub (2004)	Research using the terms: "Point of View" "Point of View Predicate" "Shifted Frame of Reference" "Referential Shift" Shifted Reference" or some equivalent term
Winston (1991)	Research which uses the term: "Action Performatives"

Winston feels that CA/CD or rather ASL constructed action is an involvement strategy as per Tannen (1984, 1989) who feels it corresponds to discourse involvement strategies. Since constructed dialogue is viewed as an involvement strategy, Metzger (1995) also aligns CA as an involvement strategy. Table 2.1 gives an overview of the various terms assigned to CA.

2.4 The Function of Constructed Action

The literature presents CA/CD purpose or function (that is to say what it actually does) from two basic vantage points. The first takes a linguistic standpoint with analysis at the sentential level. The second expands the investigation to look at the narrative level. Metzger (1995) noting that CA/CD frequently corresponds to "constructed speech", researches this aspect basically from the sentence level. Researchers often agree CA/CD is used as a quoting device this is to say, CD use to quote oneself or another person or even the actions of oneself or another person (Padden 1990; Wilson 1996; Rayman 1999). Constructed dialogue, is often used to quote individuals, as many spoken languages (Lillo-Martin 1995; Lee et.al 1997). Constructed dialogue (the congruent feature in ASL) is the most common method to quote in ASL however; the quote is stated by the speaker to take on the actual role of John. In addition, CA is the preferred feature to "quote" action (Padden 1986, 1990; Roy 1989; Winston 1995; Poulin 1995; Engberg-Pedersen 1995; Lillo-Martin 1995; Metzger 1995; Wilson 1996; Liddell 1996; Lee et. al. 1997, etc.).

...reference to reported speech in the ASL literature also coincides with descriptions of reported actions, behaviors, and emotions of narrated characters. (Metzger 1995 p. 256).

This "reporting" of actions appears actually to be the predominant manifestation of CA/CD feature (Metzger 1995) of which figures 2.1 and 2.2 and 2.3 are examples.

Figure 2.3 is another example of constructed action whereby the signer is essentially saying, "*The person walked off scene toward the horizon progressively getting smaller, and smaller as he/she became further and further away*". The sentence contains a "reporting" of the second person's action. In this example, the signer initiates constructed action by breaking eye contact with the viewer. The constructed action sequence primary meaning is conveyed via the handshape representing a walking person on the non-dominant hand and a gesture on the dominant hand depicting the person getting smaller as the person grows more distant.



Figure 2.3 Constructed action with the 2nd person via a classifier sign

Lillo-Martin's (1995) research, which makes use of the "Point of View" term, looks at CA/CD syntactically. She seeks to show the reader of the CA/CD sentence the "Point of View" equates to a predicate which takes an embedded clause as a complement, and that pronouns in this embedded clause, which are co-referential with the subject of the Point of View predicate act as bound pronouns (Lillo-Martin 1995). She gives the following example:

GEORGE PRONOUN (I) WIN WILL

“George, I will win”

In this example the words in capitals represent lexical signs, and the underscored section notes the initiation and end of constructed dialogue (which does extend from the trailing portion of “George” until the end of the sentence), that is the reporting of what "George" said. The analysis seeks to identify for the reader that the pronoun, in this case is "I", cannot refer to the signer but to George—thus the change in the Point of View from the signer to someone else. Many researchers choosing to term CA/CD (perhaps more of a focus on constructed dialogue) "Point of View" or "Shifted Reference", etc. are doing so from the sentential level that is to say the focus is on a semantic “shift” in pronoun semantic referent. Engberg-Pedersen (1995), working on Danish Sign Language, divides CA/CD into a triad of "shifts" noted at the sentential level. The first shift relates to the semantics of pronouns. The first “shift” in her triad division is called "Shifted Reference" repeating the common change of pronoun meaning within constructed dialogue as noted above. "Shifted reference covers well-

known ground from spoken languages, namely the use of pronouns from a quoted person's perspective"(p.135).

The second "shift" is described as "shifted attribution of expressive elements". This second one relates to the gesture or mimic like elements in constructed dialogue and constructed action that shows the "how" a person did, said or thought something. Figure 2.4 illustrates "shifted attribution of expressive elements" via the signer's facial expression. The signer's facial expression reveals the character felt disdain thus the quoted sign sequence was stated with a tone of "disgust".

In summary, shifted attribution of expressive elements may be found in reports of what a person said, did, observed, thought, or felt (might say, do, observe, think, or feel); the expressive elements are certain manual signs and imitative facial expressions and head and body posture. (Engberg-Pedersen 1995 p. 145)

Engberg-Pedersen argues for a third component entitled "shifted locus" for CA/CD. In constructed dialogue, but also in constructed action, the signer may semantically re-assign various spatial loci. For example, a signer may establish a point in space to refer to a third party by pointing and or directing eyegaze toward that point, however, the same locus or point in space could "shift" when the signer uses constructed dialogue to quote the third party. The signer would then use this same space to refer to him/herself.

At the narrative and discourse level, several researchers understand CA/CD to function as a type of enhancer or facilitator by supplying a better channel for vividness, appeal, and even humor (Roy 1989, Mather 1989, Winston 1992, Metzger 1995, Dudis

2002, Liddell 2003). This means that from the viewer's perspective, the narrative, or discourse is visually and perhaps linguistically more pleasing than without it. Roy (1989) describes discourse features in an ASL lecture in which she claims CD, CA (being the channel for reported speech) work is to "create impressions of vividness and interpersonal involvement" (p. 453). She feels that when the reader—listener sees CA/CD used, the discourse is "...interesting and vivid" as opposed to how it would be without it (Roy 1989 p. 453). The specific discourse researched was a five-minute lecture on the mating habits of the stickleback fish. In one section of the lecture, the signer uses constructed dialogue to explain anthropomorphically what the fish were thinking during this time of searching for a mate. The result is an interesting and perhaps humorous variation to what some might find to be a very dry lecture.

"That redness is the fish warning 'Now I'm ready to look for it, it's a fish, it's a female'"
"He begins to flirt, you know, the fish dances and the female say 'How fine!'"
"The fish is guarding the nest 'I cherish this, it is mine, it is mine, and I'll protect it'"
"It protects its home 'get-away, get away'"
"The female will follow; (the male) says 'come here'" (Roy 1989 p. 453)

Figure 2.4 portrays the signer using constructed action. In this example, constructed action is indicated when the signer has broken eye contact with the viewer, he has also changed facial expressions and contextually he is referring to someone other than himself.



Figure 2.4 Constructed Action with the verb (LOOK-AT)

The signer is indicating with a negative expression on the face something is wrong with what he has directed the gaze of his eyes towards. The direction of the gaze also conveys he is directing his attention to his left (non-dominant) side. The signer, via the verb LOOK-AT, points out that the looking is to his left, which semantically also denotes volition. These features of constructed action, according to the above view, merely give the viewer/reader a more vivid and interesting version of the information communicated.

Winston (1995) adds another dimension to constructed action's function at the discourse narrative level.

Applying the notion of cognitive space and mental representations at the level of discourse, the signer has mental representations of events, people, entities, etc., which are subsequently mapped onto physical sign space in order to reflect the signer's mental representations. Likewise, the audience sees this physical mapping in the physical sign space and builds their own mental representation in their own cognitive space. (Winston 1995 p. 109)

From Winston's outlook, ASL spatial usage (included in this use of space is CA\CD) aids the viewer in maintaining discourse cohesion and coherence. The signer utilized space establishes the fundamental instrument by which ASL links and maintains mental constructs created for the audience. Liddell (2003), using the term "blended space" from Fauconnier (1985) which fundamentally means the same as Winston's term "spatial map", mentions this visual aspect of ASL constructed action.

"The use of the configuration of the face or body to signal which blended space is active (*or being used*) is an important part of understating ASL narratives." (Liddell 2003 p. 157) Italics added

It appears, according to Liddell, CA/CD functions merely to facilitate an improved path for viewer comprehension. This is a view that supports Winston's position on constructed action aiding cohesion and coherence.

The purpose or function behind CA/CD and specially constructed action can also be described from the signer's orientation. Roy (1989) mentions this aspect, as viewed from the "teller's" side, "constructed action is one of a range of features of what makes a lecture vivid and involving." (p. 453). Even though Roy does not elaborate on her understating of the term "vivid", she continues-- "Involving is the degree to which the signer makes the listener feel a part of the discourse" (p.453), that is to say CA/CD is a feature of ASL which the signer uses to better enhance or perhaps facilitate the audience's personal contact with the narrator and thus the discourse. Many sign

language linguists (Mather 1989, Winston 1991, 1993 Metzger 1995, Liddell 2003) support CA/CD, as an involvement strategy.

Two research studies Poulin & Miller (1995) and Wilson (1996) speak about CA/CD functioning through the control and direction of the signer. Working with French Sign Language of Quebec, Poulin & Miller (1995) conclude that CA/CD (as a primary function) serves to indicate a signer's personal view within the discourse. It serves "to express the emotional state of mind or the internal feelings of the discourse actant who the signer empathizes with." (Poulin & Miller 1995 p. 123) In other words, the signer by means of CA/CD may express an emotional sense of support or empathy toward a character(s) or event. For example, when a signer invokes CA/CD, it is an indication the signer relates emotionally with the quoted content or the person/entity being quoted. When CA/CD is not used the signer is expressing a neutral "point of view" (Poulin & Miller 1995). Poulin & Miller (1995) confirm CA is an enhancement feature, yet they have expanded its use to indicate signer preference. "constructed action" functions to provide greater precision and more information as to how the event took place" (p.123).

Wilson (1996) reaches a similar conclusion as Poulin & Miller, however using a different research tool. She analyzes an American Sign Language story to determine if ASL narratives matches Labov's narrative matrix. Labov (1972) gives the various parts or features which would perhaps be basic to all narratives:

1. Abstract: A sentence at the beginning, that summaries the story
2. Orientation: Clauses near the beginning that provide a setting
3. Complicating action: The events of the narrative; what happened
4. Evaluation: The point of the story
5. Coda: The narrative is brought back to present time

(Labov 1972 p.363).

Wilson finds a correspondence between Labov's "evaluative" clause type and CA/CD, given that Labov states:

But there is one important aspect of narrative which has not been discussed--perhaps the most important element in addition to the basic narrative clause. That is what we term the evaluation of the narrative: the means used by the narrator to indicate the point of the narrative, its *raison d'etre*: why it was told, and what matters to the narrator. (Labov 1972 p. 366).

Labov lists various subtypes of narrative evaluation, by way of example, but he states:

The first step in embedding the evaluation into the narrative, and preserving dramatic continuity, is for the narrator to quote the sentiment as something occurring to him at the moment rather than addressing it to the listener outside of the narrative. A second step towards embedding evaluation is for the narrator to quote himself as addressing someone else. A further step in dramatizing the evaluation of a narrative is to tell what people did rather than what they said. (pgs. 372-373)

CA/CD fulfilled all these steps. Thus Wilson concludes that CA/CD is the evaluative force in an ASL narrative. In this way, conveying meaning which the signer wants the listener to know that is narrative elements which are most important.

Therefore, the narrator, via CA/CD, is able to give an internal narrative commentary.

Table 2 is a summary of the various functions assigned to CA/CD.

The focus of this research is not to contest the fact that constructed action may function as a resource to the signer to “create”, in striking detail, how an actant (subject of the sentence) may ride a bicycle or pick pears (as in the Pear story narrative). The signer has at his disposal the opportunity to show someone picking pears feverishly or someone as a paranoid person collecting pears yet deadly afraid of touching insects, which may be on the tree branches. In this way, the signer helps the viewer to “re-live” the scene whether actual or imaginary. The point of the research is that signers invariably use constructed action in their depiction of action events. Conceivable, the signer may sign a narrative without the use of constructed action at all, yet this research indicates that the total absence of constructed action does not occur. This study shows that signers may vary the quantity of constructed action occurrences, but never engage in narrative totally without it.

This research exclusively attempts to focus on constructed action over that of constructed dialogue, since historically the two have been researched as a holistic entity (Padden 1986). In addition, this research has the spotlight on constructed action and seeks to develop a better schematic for constructed action grammatical rules as in the obligatory nature of CA (Quinto-Pozos 2007), and its constraints. Table 2.2 shows the various terms used to refer to this ASL feature.

Table 2.2 Various Terms used for Constructed Action in ASL

Researcher (not exhaustive)	Term Assigned to CONSTRUCTED ACTION	Researcher (not exhaustive)	Function Assigned to CONSTRUCTED ACTION
Padden (1986) Roy (1989) Winston (1992) Winston (1992) Metzger (1995) Rayman (1999)	Research which , at least, refers to CONSTRUCTED ACTION as: "Reported Speech" Or merely use the original term CONSTRUCTED ACTION	Padden (1986, 1990) Wilson (1996) Rayman (1999)	Research which at least at one time used: Quoting as in Reported Speech
Roy (1989) Winston (1992) Metzger (1995) Wilson (1996) Mather (1998) Valli & Lucas (2000) Lucas (2001) Liddell (2003) Dudis (2004) Quinto-Pozos (2007)	Research which uses the term: "Constructed Dialogue" / "Constructed Action"	Lillo-Martin (1995) <i>Engberg- Pedersen</i> (1995) Morgan (1999)	Research which looks at the semantic shift in pronouns termed "point of view"
Lillo-Martin (1995) Morgan (1995) Emmorey (1995) Pedersen (1995) Poulin (1995) Morgan (2002) Taub (2004)	Research which uses the terms: "Point of View, Point of View Predicate, Shifted Frame of Reference, Referential Shift Shifted Reference" or some equivalent term	Roy (1989) Winston (1995) Mather(1998) Liddell(2003) Dudis(2002)	Research which looks at CONSTRUCTED ACTION as a narrative or discourse: Enhancer
Winston (1991)	Research which uses the term: "Action Performatives"	Wilson(1996) Poulin & Miller (1995)	Research which looks at CONSTRUCTED ACTION's Signer Expression Mechanism (Internal point of view)

2.5 Constraints on Constructed Action

Investigations into how CA/CD functions frequently state it is a signer-centered and signer-controlled act. The signer uses CA/CD as a discourse strategy to enhance the discourse. "Often referred to as role playing, constructed action is the creative construction of an event described by a signer in ASL discourse" (Metzger 1995). As a discourse strategy, CA/CD is at the signer's complete management. This view may be based upon the alignment of constructed dialogue with constructed direct speech (Engberg-Pedersen 1995). The general view is no linguistic constraint(s) exist for CA/CD usage, as noted by Poulin & Miller (1995), who state it is not obligatory.

Even though the literature has essentially given the signer command over CA/CD, several research studies allude to possible constraints. Wilson (1996) begins this aspect mentioning this feature's comprehensive power over discourse:

It seems that, in relation to stanza (the basic sentence) analysis, constructed dialogue can actually regulate the stanzas, controlling the length of stanzas and thus the rhythm of the story. Constructed dialogue (*Wilson researched the feature CA/CD as a unit*) then may prove to be the factor that controls the form and length of a section in ASL narratives (Wilson 1996 p. 175)

In these short statements, Wilson hints that CA/CD's domain may not be limited to just enhancement properties. This research pursues discovery which ascribes rules to for feature of ASL CA which has yet to be established as noted by Lillo-Martin 1995). Working on British Sign Language, Morgan (1999) hints that sign language's use of space, which includes constructed action, may stem from its modality being visual, and that since sign language is not a written language, the necessity of "face to face"

communication may influence the use or perhaps the need for "shifted reference". One might surmise that constructed action might also exhibit specific constraints.

A second indication relates to verbs used within the context of CA/CD. It has been claimed for various verbs that a link may exist between them and the obligatory nature of CA Dudas (2002, 2004), Pozos (2007).

A first step, then, in searching out possible constraints on CA may arise from the category of verbs associated with it. This study looks at the verbs which occur with CA and which may be found to prompt its use in narrative. The focus on CA's verbs is based on other factors as well. The first stems from the common alignment of it with Reported Dialogue (reported speech). The study of Reported Speech connects to specific verbs (Banfield 1982, Holt 1996). Since CA/CD is commonly referred to as Reported Speech, this study concludes the ASL verbs used may activate it. Also, CA/CD research studies tend to focus on the verbs or verb constructions involved in its production (Roy 1989, Mather 1989, Winston 1992, Johnson 1992, Winston 1995, Lillo-Martin 1995, (Poulin & Miller 1995, Engberg-Pedersen 1995, Metzger 1995, Wilson 1996, Rayman 1999, Morgan 2002, Dudas 2002, 2004, Liddell 2003. Morgan (1999) notes this aspect:

Adult signers choose to construct discourse from a shifted perspective, setting up referential loci on their own bodies rather than in the spatial array in front of them. A series of *shifted verbs* are used to mark perspective as well as maintain reference. (p. 28) (italics added)

Since the verbs or verbal aspect are central in CA/CD research, verb specific research appears to be valid and may prove to have central significance in its construction. Thus the type of verbs used in ASL is the next area to be described.

2.6 The Nature of Verb Categories in American Sign Language

This research explores differences in the following verb categories plain, indicating, depicting and Iconic Gesture verbs. These ASL verb categories divide essentially according to the sign's linguistic use of three-dimensional space. ASL action/event signs (verbs) divide into two very broad sets. The first verb category uses space to encode certain constituents the other type does not. Friedman (1975, 1976) first noted this use of space to denote morphological or referent information. She sought to give labeling to those verbs that use space to indicate source thus designating them "multidirectional".

Friedman's perspective is perhaps best illustrated by the ASL verb GIVE. It falls into the "multidirectional" category because it encodes source, generally an agent, and the goal (a benefactor) via its use of space. The verb GIVE will begin its production at a location associated with the source and then move to a location associated with the goal. This encoding could also be established via the facing direction of the fingertips (Edge & Herrman 1977, Meir 1998a).

The above basic division of ASL verbs is predominant among researchers. Fischer & Gough, (1978, 1980) add a semantic component that may help to predict the propensity of a verb to be 'multi-directional' or 'non-multidirectional'. This feature is

exemplified with the verb LOOK-AT. This verb is produced with the fingertips oriented toward the object NP, thus the back of the hand is said to indicate the subject NP. Since the verb means to "LOOK-AT" the space utilization (as in fingertip direction) is a logical form that is to be "facing" the goal of the construction.

Within the framework of exploiting space, Supalla (1986) first noted signs, which use space to indicate location and or motion. This type of verb is often termed a *classifier verb* or *classifier predicate* (Corazza 1990, Schick 1987, 1990, Smith 1990). This verb subcategory uses specific iconic handshapes to convey a noun's location relative to other nouns and or a noun's action/movement. For example, a classifier handshape for "vehicle" uses the handshape following a path moving across the signer's immediate signer space (from epilateral to contra-lateral sides) to denote a car that had passed in front of the signer moving from right to left. A "flat surface" handshape may be used to denote the location (relative to other entities in space) of said entity. When fixed in space to the signer's epilateral side, it denotes that some type of object with a flat surface is located to the right of the signer.

Padden (1988, 1990) sought to describe this bifurcation (one category of verbs using space, another which does not) system using a morphological framework. She claimed that ASL verbs should be categorized according to the type and number of morphemes (the use or lack of three-dimensional space understood as morphemic) which the verb may take "affixes" (Padden 1998). In Padden's view, signs using space adding semantic information used space to denote source/goal or location. Thus, these

loci constitute 'agreement' (person and or number) or 'location' morphemes. For example, the ASL verb GIVE attaches an agreement morpheme for source (the space near the signer's body), and another agreement morpheme, at the end of its movement path, (which is the loci at the ending point of the movement path) for goal/recipient. This verb type is term an ASL “agreement” verb since the beginning “space” morpheme must agree in person number with the verb semantics (Padden 1998). For example, the sign GIVE signed to mean “(1st person give-to 3rd person)” begins the articulation near the signer completing away to the left of the signer. Figure 2.5 shows in the left plate the beginning locus morpheme which must be produced in this location in order to mean the source/subject is first person. The signer completes the articulation in the right plate indicating something (a pear) was given to someone (3rd person). The loci used must agree with the source/goal intended.



Figure 2.5 Agreement verb for (GIVE Pro.1), (GIVE-to Pro.3)

If the goal/recipient were seeking to convey giving to be 2nd person (you), the sign articulation would complete directly in front of the signer. Thus, this type of verb is termed an “agreement” verb (Padden 1990).

A second type of verb using space as a morpheme is termed spatial which is also subdivided into various sub-categories (Padden 1990). The spatial verb meaning “CARRY” (from one location to a different location) is illustrated in Figure 2.6. Padden views the space locations which begin at the signer's right side and moves, as shown in the picture, to the left side to be locative morphemes thus the two loci are "location" morphemes and therefore define this type of sign (verb).



Figure 2.6 A spatial verb in ASL

Padden’s category system does not change the previously determined divisions of ASL verb categories (those verbs which attach to spatial agreement/location morphemes and those that do not), but rather describes them differently from the

previous literature. Padden assigned the beginning and specific ending space locus to function as “morphemes” rather than as merely iconic or gesture features.

Padden’s (1990) remaining designated verb type is the “plain” verb. This verb is named “plain since it is the only type which does not use space to denote any specific linguistic information; however it may “inflect” for person or aspect. Examples of this type are LOVE, CELEBRATE, LIKE, TASTE, LIKE, WONDER (Padden 1990). Figure 2.7 (left) illustrates a Plain verb meaning WONDER. The sign is articulated by producing a (parallel to the body plane) circular movement near the dominate side of the head. This type of verb does not contain any information relating to source/goal, in that this information must come from additional signs. Also, the Plain verb category is “Plain” any movement produced by these verbs is articulatory only (Wulf, Dudis, Bayley, Lucas 2002). Figure 2.7 (right) is another example of a "Plain" verb. This sign contacts the head on the dominant side and does not encode any information relating to the source (subject) or goal (object) involved. This sign means, “THINK”. The agent/benefactor information tends to come from the context of the narrative or expressly stated via a separate sign(s) to designate the functional subject/object (Thompson 2008).

Thus, Padden developed the following verb types: 1) Plain verbs—verbs, which do not take agreement/location morphemes. 2). Agreement verbs – verbs that take spatial agreement morphemes for source/goal (“subject/object agreement markers”). 3) Spatial verbs – verbs taking locative morphemes (Padden 1990). Her category system

is perhaps the most widely used in the literature. The two-division view of ASL verbs (various verbs using space to encode source and goal and others that do not use space for this purpose) became an accepted understanding, which is reflected in the subsequent literature since it tends to focus upon the essential nature of the morphological components.



Figure 2.7 The Plain verbs (WONDER),(THINK)

For example, Shepard-Kegl (1985) blends the movement morpheme (referred to as the verb stem by Padden 1990) of the spatial and agreement action/event sign (verb) types. Sign movements (understood as a morphemes) used to indicate physical location, as in the sign PUT-ON-OVERHEAD SHELF, and the movement used to encode source and goal are both agreement morphemes thus the same morpheme. Janis (1992, 1995) places the entire lexicon of ASL verbs into one category based upon spatial morphemes alone. The individual verbs are defined by which ones may attach to

spatial morphemes. Thus a new way to determine ASL verb types, which use space alone rather than morpheme categories, appears to be the outcome. Similarly, Engberg-Pedersen (1993, 1996) uses a different term for such ASL verb classes. She claims the categories (those verbs, which use space, and those that do not) are better described as polymorphemic and non-polymorphemic. According to Engberg-Pedersen the term polymorphemic is preferred over the term "agreement", "non-agreement" or "spatial" and "non-spatial" since the "morphemes can be overlapping multiple units difficult to specify. Also, the term non-polymorphemic is to be preferred to the term "plain" verb.

Contrary to the above analysis, Liddell (1990, 1994, 2003), (Taub 1997, 2001) take the view that spatial elements for certain ASL verbs constitute a gesture overlay and therefore are nonlinguistic thus assigning the sign's movement and locus location(s) as non-morphemic. Liddell identifies the attaching morpheme patterns of Padden and others to be auxiliary semantic information provided via a gesture feature of ASL.

Since Padden (1983), it has been widely accepted that the type of verbs I am describing move in space in order to show grammatical agreement with their subjects, objects, or both. Padden argues that a verb capable of agreeing with its subject and object may optionally omit subject agreement (1988:126). In my analysis, however, the directionality of signs has nothing to do with grammatical agreement. Instead, the directionality of the sign provides mapping instructions telling the addressee which mental space to map onto the trajector or landmark in the verb's semantic pole (Liddell 2003 p.110).

Liddell's fundamental contention stems from the view that Padden (and other linguists) understanding of this spatial morphemic identification does not adequately represent actual ASL language practice. Agreement verbs in reality are not directed

toward specific spatial loci, but rather are directed toward the literal referent whether physically present or established via narrative context. For example, if the signer were talking with someone taller the “agreement verb locus” is moved upward (Liddell 2003). In this way, the verb cannot be designating morphemes, but rather is giving a visual (mental space map) clue(s) to its semantics. Using this analysis, Liddell advocates for agreement verbs use a type of pointing gesture to clarify their referent rather than a spatial morpheme to accomplish this purpose.

The most basic requirement of any linguistic analysis is that it be consistent with the data. In linguistics this is called descriptive adequacy. Analyses of directional signs that depend on those sign being directed toward spatial loci do not meet this minimum level of descriptive adequacy. (Liddell 2003 p. 77, 78)

Liddell’s verb system allows for three categories of ASL verbs. The focus of his system deals with the previous research on how ASL verbs use space, therefore he merely mentions the Plain verb since it does not encode a spatial aspect. One main category, according to Liddell, is termed "Indicating verbs" (Figure 2.8). Indicating verbs in Liddell's categorization system are the agreement verbs from Padden's perspective. Since Liddell (in this case) does not view the use of space (used in Padden’s research by this verb category) as morphemic, his term is indicative of the view that these verbs visually point or indicate referents via a visual overlay. The sign sequence in figure 2.8 illustrates the sign for “TELL-ME”. The sign begins production at the chin then moves in the direction of the goal or beneficiary. In this example, the

signer is referring to other individuals telling him something, thus the sign moves from the chin directly to the center of the chest (indicating 1st person).



Figure 2.8 The indicating verbs (TELL-ME)

If the sign were “TELL-non-first person”, the movement production is towards the non-first person location in space (away from the signer). Liddell views this movement and spatial positioning to be gesture rather than a linguistic morpheme component. Space still encodes information relating to the verb (source/goal, etc), yet non-morphemically, thus the definition of an Indicating verb is a verb which is capable of being meaningfully directed in space toward entities, directions, or places (Liddell 2003).

Figure 2.9 shows the signer using the Indicating verb LOOK-AT. In this example, the signer directs the sign upward to indicate looking up at something (from the Pear story -- farmer). The sign employs a type of pointing feature to illustrate this

meaning. As a result, the “agreement” morphemes in Padden’s analysis of the sign GIVE (figure 2.5) are better understood as non-linguistic.



Figure 2.9 The indicating verb (LOOK-AT)

Another category according to Liddell's research is termed "Depicting". This verb type is part of Padden’s spatial verb group requiring locative affixes (often referred to as classifier predicates or polycomponential verbs (Morgan 2007). This verb type involves specific handshapes used to describe action, location or states), (Liddell 2003). The designated handshapes possess an iconic element to that which is depicted. Figure 2.10 (left) demonstrates a "depicting" verb (shown on the right hand). This handshape represents two individuals walking. The handshape shares characteristic(s) with the entity it represents which is a person (standing upright). The handshape(s) combined with specific location, orientation, movement, and nonmanual signals forming a

sentence predicate Valli, Lucas & Mulrooney (2005). Figure 2.10 (right) shows the signer using a Depicting verb on the left hand which “depicts” (in the Frog story) a frog sitting



Figure 2.10 The depicting Verbs (ENTITIES WALK),(ENTITY SITTING)

upon a rock as the boy watches it. The handshape(s) and any movement(s) involved simultaneously encodes (via symbolic features) certain semantic aspects. This attribute is combined with the use of space to visually connect any referent expressed.

This research study finds Liddell's classifications to be preferred because Liddell better explains the use of space in ASL. Padden's view does not adequately capture the use and functions of space since a vast array of signs with different semantic and syntactic characteristics are grouped into common categories. Kegl (1990) notes this objection to the Padden categories.

Although Padden's classification system gives us important information about ASL, it doesn't give us quite the information we need in order to determine the place of ASL agreement in a larger cross-linguistic typology of agreement phenomena. Furthermore, the classification is not designed to capture systematic argument-taking regularities within semantically coherent verb classes (Kegl 1990 pgs.149,150).

Understanding the use of space only as the foundation of categorization seems not to capture adequately linguistic information concerning the sign. Kegl argues a sign's individual semantic and argument information is still left unknown under Padden's system of categorization. Kegl, like Liddell, supports a category system that takes into account the verb's semantic and argument structure. Rather than merely looking at the sign's use of space, a categorization system based upon semantic and argument structure would be preferred (Kegl 1990). She notes that various signs have different argument structure yet are generally termed "plain" verbs. For example, the ASL signs glossed LIKE, LOVE, SEE take two arguments (with these signs core arguments—subject and object), however the ASL signs glossed LAUGH, CAREFUL, LIPREAD take one (subject argument). In addition, Padden's "spatial" verb sign category reflects dissimilar numbers of arguments. The "spatial" verbs glossed FALL, SIT, STAND take a single argument, while the signs glossed INSERT, CARRY-BY-HAND, SCRUB, and PUT take more than one.

Determining with certainty the semantic and argument structure for ASL verbs in a given data set may require extensive corpus research. This type of corpus for ASL does not presently exist. Not all possible ASL verbs appear in ASL dictionaries. For

example, the glossed sign (from the pilot study) "PICK" (pick an object from over head from a tree) cannot be found in Random House Webster's ASL dictionary (1998) or Gallaudet ASL dictionary (2005). Complete semantic and argument structure may need to be determined from the limited data set itself. Even if an action or event sign is found in a dictionary, its corresponding linguistic function is not explained. Therefore, Kegl's view toward action or event sign categorization is not possible to utilize across the full ASL lexicon. Extrapolation as to an action or event sign semantic and argument structure may need to be limited to the immediate data available.

Liddell's understanding of ASL sign categories better captures both the spatial and semantic linguistic features. He views Padden's space and path morphemes as gesture. The use of space as in the sign "I-GIVE-TO-YOU" that moves from the signer's chest toward the goal or "YOU" and which is directly away from the agent is merely, via gesture, visually communicating to the viewer who is "giving" and "to whom" is the giving (Liddell 1994, 2001, 2000a, 2000b). Each sign holds a unique meaning that includes its agent and or goal. The use of space in Liddell's perspective consistently "provides mapping instructions that is indicating three dimensionally the agent and or the goal (Liddell 2003). Morphological information remains consistent since the complete meaning of the verb incorporates all the verbs spatial features. Liddell's system appears better for constructing a sign category system when researching constructed action.

In addition, alternate views regarding sign language use of space have been expressed within the research literature. Dorothea Cogill-Koez (2000) presents the concept that classifier verbs (Depicting verbs in Liddell's categories) demonstrate consistent patterns of non-linguistic forms. In this view, these verbs are a visual representation intended to be understood via standardized iconic forms not a series of decomposable morphemes with the ability to reform to create new meanings, but represent a visual schematic (Cogill-Koez 2000). Also, David Quinto-Pozos (2010) notes that often the intended meaning sought to be conveyed by the signer may rely exclusively upon gesture which does not demonstrate *duality of patterning* needed to be linguistic in nature.

This research adds to the basic tripartite division of ASL verbs. This study initially codes the verbs according to Liddell's categories. Once the basic three-way categorization has been completed, the verbs will be further categorized according to their meaning along with syntactic placement patterns.

2.6.1 The Iconic Gesture Verb

It was the pilot study which first revealed a unique occurrence in ASL CA which needed a designated category which also was not specified in the literature. The pilot study contained a predominance of Depicting verbs. constructed action itself was not designated as a category itself, yet it was used to convey verbal information without lexical support from other signs (figure 2.11).

Figure 2.11 illustrates CA when the primary action or information is conveyed purely via a gesture form. The signer using CA, however expresses no overt lexical sign components. The verb is not merely augmented (affect) via gesture component, but conveys the main verb.

This signer conveys that the character is “constructing” flinched (action). The sequence does not contain any classifiers or other citation sign forms. The literature does not fully recognize this type of communicative event as a separate category of CA.

Liddell (1998, 2003) mentions this type but refers to it as a "gesture sequence" since he views CA/CD as a visual demonstration of a semantic concept -- “grounded blend”. Liddell (1998) notes this type of occurrence in ASL CA, but only to emphasize the grounded blend concept and that ASL CA may use specific signs or gesture to convey meaning.



Figure 2.11 The iconic gesture verb in ASL

In order to fully capture this type for data analysis a designation term needed to be determined. In the study of spoken language and gesture, McNeill (1992) lists different type of gesture. He describes iconic gesture, metaphoric gesture, bests, cohesive gesture, and deictic gesture that accompany speech. The term “iconic gestures” was adopted to indicate when a signer used only gesture to convey a verb in constructed action since it is this type which is pictorial and illustrates concrete actions (McNeill 1992).

2.7 The Purpose of this study

This study investigates which sign patterns and or collocations may lead to constraint mechanisms governing the use of CA, and the semantic domains relevant to it. The dissertation looks at which type of ASL action/event signs occurring with CA. Various sign types are catalogued and noted regarding which either favor CA or which tend not to occur in CA.

Focusing on the sign linguistics of CA is the first step in developing a grammar of this phenomenon. As noted above, the research on CA/CD tends to place it into the category of discourse "involvement" strategies (Roy 1989; Winston 1991, 1992; Metzger 1995; Wilson 1996; Liddell 2003 and Dudis 2004), however more study is apparently needed (Roy 1989). Since the research literature considers CA/CD to be an involvement strategy, its use is completely at the discretion of the signer (Poulin and Miller 1995).

A few research studies allude to the possible existence of obligatory elements for CA/CD. Mather (1989) mentions an apparently unnoticed factor about the use of CA. She compared the way a native signer is taught with that of a non-native signer in a classroom where both signers are (separately) teaching the children's story "Three Little Kittens" to a group of preschool children. Mather makes a point relating to the use of CA and the communication of essential information:

The native signer chose signs that had relevance to the visual background experience of her deaf students. For example, in Signed English (the sign language of the non-native signer) and ASL there is not standard means (except fingerspelling) for recoding the English word meow." (p. 184)

Mather argues that a primary means of expressing information, which does not possess a citation or formal dictionary entry, uses CA (Mather 1989). A central point for this study is to find out, when a signer does not have a formal dictionary sign to use, whether the visual component of ASL will dominate, necessitating ASL constructed action.

Other factors, however, give additional support to this conclusion. CA/CD has been claimed to correspond to reported speech; however, some of the presently known features of reported speech are not in exact congruency with feature of ASL CA/CD. constructed dialogue appears to be unique from reported speech in various ways. It tends not to be preceded with verbs of "saying", that is, overt verbs of "saying" tend not to appear in the narrative. Also, ASL CA/CD does not demonstrate verb tense constraints as the tendency noted for spoken language (Banfield 1982; Holt 1996,

2000). In addition, ASL CA/CD appears to be more closely associated than its counterpart in spoken languages. Metzger (1995) notes that this phenomenon has two closely linked forms perhaps even overlapping. The first form is constructed dialogue, with the second, and perhaps the most dominant, being constructed action. Spoken languages evidently do not share this type of closely associated link. Pozos (2007) argues for another characteristic of ASL CA that makes it even more distinct from spoken language CA. He presents the view that ASL CA may be obligatory, which moves control of CA outside of the signer's full control.

A pilot study (Rogers 2004) provided basic principles for this present study. This pilot study is discussed in detail in the methodology section, but two notable results are apparent. The first is that signers largely agreed with each other in types of action or event signs used and in the sections chosen to be expressed by CA. The second is that, while it is clear that CA/CD is used for reported speech, but it is not clear how CA/CD differs from reported speech. Table 2.3 summarizes the issues surrounding ASL CA.

Table 2.3 lists ASL constructed action issues. Despite significant prior research on the topic of ASL constructed action and constructed dialogue, further research is necessary since issues remain. Aligning this feature of ASL with the term "Constructed action" presumes congruence between Constructed action in spoken language and that of ASL, yet contrastive elements appear to exist.

Additionally, no research to date has addressed how constructed action may differ from constructed dialogue. The final remaining issue relates to constraints of constructed action. The literature appears insufficiently specific about linguistic patterns required for this ASL feature.

Table 2.3 Issues related to constructed action and dialogue

Issue relating to Constructed Action – Constructed Dialogue
A. Incongruence with associated counterpart in spoken language (Reported Speech) (Banfield 1982, Holt 1996, 2000)
B. Constructed Action close association with Constructed Dialogue (Metzger 1995)
C. Potential obligatory nature of Construction Action (Pozos 2007)
D. Potential for verb category constraints in Constructed Action (Mather 1989), (Rogers 2004).

2.8 Summary of chapter two

Chapter two established the background and foundation for this research study in ASL. ASL constructed action, as noted in the literature, is an integral part of ASL narrative as noted even science lectures use the feature (Wilson 1995). The importance of ASL constructed action reflects in the numerous studies in the past and the various terms used to describe it. The array of terms tends to reflect the researcher's linguistic perspective whether syntactic, or through the mind of the signer/interlocutor. The lack

of constraints is noted in the literature, which has yet to be aligned with verb categories in ASL. The last section in chapter two develops the foundation for this research as to its purpose. This research seeks to find any relevant verb pattern(s). Within any possible verb pattern, it may contain insights into possible constraints or verb alignments and thus begin the process for a more complete grammar of ASL constructed action. The design and data collection processes are discussed in chapter three.

CHAPTER 3
THE RESEARCH METHODOLOGY

3.1 Introduction

Chapter 3 explains the design of the study. This research uses two prompting stories, the Pear story and the Frog story to elicit token samples of constructed action. The selection of these stories stems from the fact that neither has specific dialogue but instead show the story plot via action scenes alone.

Logistically, three sites were used to collect the research data and electronic equipment (digital camera) was used to capture the participants signing. Participants filled out the demographic questionnaire along with the standard IRB Informed Consent Letter (appendix G) prior to being videotaped. . The research team used a desktop computer to show the Pear story and a laptop computer to sequence through the still pictures of the Frog story. After a participant viewed one of the stories, he/she was asked to recount the viewed story while being recorded by a digital video camera. Approximately one half of the participants were asked to record the Pear story and one-half the Frog story. 30 participants were recorded relaying one of the stories. The three data collection sites are Tyler, Texas, Austin, Texas and Houston, Texas.

Each constructed action segment of the data was coded into English glosses. The glosses supply constructed action, verb type(s) and sequences.

Originally, this research sought to find controlling patterns for the use of constructed action. This research supports possible patterns implying a system of constraints for Constructed action in ASL. Chapter 3 concludes by describing original proposed expectations for this study as well as potential implications of said results.

3.2 The Design of the Study

This study is designed to capture a collocational link between non-CA signs or event signs (verbs) usage and those used in CA. Two narratives were presented for signers in an attempt to prompt occurrences of CA. The first (group A) uses the "Pear" story (Chafe 1980), and the second (group B), uses "Frog Where Are You?" (Mayer 1969). Deaf participants signing one of the two stories were used to gather CA sequence data.

Both the "Pear" story and the "Frog" story have extensive research histories, which have yielded large numbers of general findings as well as many language specific observations. The Pear story studies (Chafe 1980), note specific cross-linguistic elicitation of narrative. The Frog story (Berman & Slobin 1994), investigate five languages process for expressing motion events The two prompting stories have also been subject to sign language research. The Pear story has been used in research for American Sign Language Maroney (2004), and Brazilian sign language (McCleary & Viotti 2009). Studies using the Frog story have been conducted analyzing British Sign Language (Morgan 1999), American Sign Language (McIntire & Reilly 1996), (Emmorey 1999), and (Taub & Galvan 2004).

The two stories provide multiple possibilities for a variety of action/event sign sequences and thus are deemed appropriate for sign language CA research. In retelling (signing) these stories, a rich array of action/event signs are expected to show up in CA situation. In addition, neither story contains any directly quoted spoken language or written text. This detail of language helps to reduce the risk of outside language influences, which hopefully will result in ASL data which is not skewed.

3.3 Prompting Narratives

The Pear (See Appendix E) story is a silent film lasting eight minutes. The film previously used in other research studies in order to analyze language structures and cognitive language principles in Greek, English, Japanese, Chinese, Malaysian, Thai, Persian, German, Creole, and Mayan (Chafe, 1980). The Pear story was chosen primarily because it is silent, permitting full access to all Deaf participants. In addition, the Pear story does not display any type of language text on screen. Thus for the present study, no written language whether English or any other could interfere with the signer's retelling of the story.

In order to achieve two separate yet similar narrative types, "Frog, Where Are You?" was also chosen for this study. This second narrative, "Frog, Where Are You?", viewed by participants via pictures, lowered the memory burden on the signer as compared to the Pear story (Berman & Slobin 1994). In 24 pictures, the Frog story--a textless picture sequence--depicts the exploits of a boy, and his dog seeking to find a lost pet frog.

3.4 The Pilot Study

The pilot study (mentioned in section 2.7) was a sociolinguistic research project, conducted originally to study pronoun usage in ASL across gender and ethnicity. The pilot study research was conducted in 2005 at a Dallas social service facility for the Deaf community. Deaf participants viewed the Pear story, upon which they were videotaped re-telling the story to a friend. The use of two Deaf persons, one to view and tell the story the other to be the "hearer" of the story, was chosen to help facilitate natural communication. Videotaping was conducted over the course of two consecutive days, resulting in 30 Deaf persons retelling the Pear Story. The raw data of two participants' was reanalyzed with respect to their use of CA. The verb types were categorized in the hope of determining potential trends in the data. Even though no specific statistic was run on the data (since there were not sufficient data points), it appeared there was a pattern governing the use of CA since, the two participant's data revealed a high level of congruence in the lexical action/event signs used in CA as well as the use of the Iconic gesture verb form.

This pilot study clarified several aspects for this present research. The use of a "hearer" to view the participant proved to be statistically and logistically difficult to maintain. With the inclusion of another individual viewing the recalled story, new variables might need to be included, such as type of relationship which may result in a "comfort" level needing to be determined. Also, participants may not have a friend with them to act as "hearer" thus the potential for needing to screen participants based

upon the access of a “hearer”. The pilot study, as noted above, focused this research to analyze constructed action verb patterns because of observed regular examples in two participants.

3.5 Equipment for data collecting

In the actual data collection, each participant was videotaped signing one of the two stories. The Media equipment for recording participants’ discourse consisted of the following: DVD camera, Video camera, and IBM compatible computer. The DVD’s and videos used a code number for identifying participant’s recordings, in order to maintain confidentiality. DVD’s and videos were stored and locked in a fire-safe box in the author’s possession. The camera type is the Canon HG10. The video is viewed and analyzed with Corel Ulead DVD Movie Factory SE 2.0 software.

3.6 Participants

The study was approved and given IRB protocol 08.026s to proceed with the research. Fifty-one Deaf participants from Texas volunteered. The three data collection sites in Texas were Tyler, Austin, and Houston. Invitations to participate in the research were posted with various Deaf community events. Volunteers completed the ASL community orientation and demographic forms with a consent form prior to taking part in the research (see Appendix G). The ASL community orientation questionnaire aided determining the participants’ status within the Deaf community at large. While the sociolinguistic differences have been noted in the literature (Lucas, Bayley, Schartz

2001), the demographic information in this study was used merely to maintain balanced sample of the Deaf population.

3.6.1 Participant language proficiency criteria

The integrity of the language samples is of paramount importance for research, thus native speakers of ASL are always sought. However, most Deaf children are born to hearing parents most of whom do not know nor ever learn American Sign Language. Most Deaf children with hearing parents do not acquire ASL until beginning school (Moore 2003). The percentage of Deaf children born to Deaf parents is less than 10 percent of the population (Janzen 1998), thus using a strict definition of a native signer--that is, one in for whom the language was acquired at home from signing parents--would limit the participant base drastically. Lucas (2001), in her sociolinguist studies, modified the criteria for a "native" signer to include those Deaf persons who have acquired ASL by the age of 5 years of age, thus eliminating only those potential participants who have learned ASL in adolescence. Janzen (1998) further expands Lucas' criteria by adding the following:

1. The Deaf individual considers ASL to be their first language.
2. The Deaf person acquired ASL as an infant or young child.
3. The Deaf person is considered by other members of the deaf community to be generally representative of the community -- typical, culturally appropriate ASL user.
4. The Deaf person identifies themselves as culturally Deaf.

Woodward (1973) further supports the adoption of these criteria and claims that as long as the child acquires ASL early, proficiency is achieved. He notes that hearing children of Deaf parents can achieve 'pure' ASL more closely since they too can be included in the set of individuals acquiring the language at an early age. The demographic survey also contains questions to determine the participant's level of ASL proficiency based using the four criteria noted above. Only data from participants fitting these requirements for native speakers form the basis for this analysis.

3.6.2 Non-English literate participants

Each site had an interpreter (this researcher)--certified as a TCDHH (Texas Commission for the Deaf and Hard of Hearing (now designated as DARS—Department of Assistive and Rehabilitative Services)) Level IV--to translate the procedure and consent form (See Appendix A) into American Sign Language. The interpreter possessed IRB certification and special Legal interpreting certification from TCDHH. The consent form (see Appendix G) gives the participants the option to have the video destroyed after the study analyses are complete; or for secured archiving of the recording for future studies or conferences. Participants were instructed that they may quit at any time during the research study. The consent form was marked with a code identification number indicating the participant's preference as to the destruction or archiving of the recording.

3.7 Procedures

Research participation in the study was solicited via a raffle. The candidate was asked to participate in the study and for doing so, received a chance to win various complimentary gifts. The prizes consisted of gift certificates to local restaurants or theaters. One grand prize was offered. All participants had an equal chance to win any of the raffles prizes. The drawing of the winner's name was selected randomly at the end of the research session. In some circumstances, the research session lasted more than one day; therefore, winning participants were notified by mail. All winning participants were notified so that participants needed not to be present at the drawing in order to win.

3.7.1 Videotaping of Participants

Participants were videotaped in two phases for experiment A and B. Participants were prompted to sign one of the two stories. All attempts were made to limit participants' exposure to written English so as to avoid "code-switching" (changing their natural ASL form to conform to perceived English syntax and structure) which may occur if telling a story to this researcher, a hearing person (Comier 2000). Without realizing it, the Deaf person may attempt to conform his/her ASL structure, grammar to English structure. Approximately one half of the participants were selected to view the Pear story, experiment A, and the other one half the Frog story, experiment B. The second story-teller was given ample time to familiarize him/herself with the picture story line for retelling.

3.7.2 Transcribing the data

The sections of videotaped narrative using constructed action was transcribed into English using a modified glossing system patterned after the Vista American Sign Language Series Transcription (Lentz, Mikos, & Smith 1988). In this system, a citation form overt ASL sign is represented in a gloss using all capitalized letters, for example: "I SEE MOVIE NEAT THERE". This gloss represents five overt ASL signs used in citation form. The English translation is "The movie I saw was neat". In the case of CA, the boundaries are coded within the glossed text itself. For example, gloss #1 below indicates the portion "PICKING" to occur within constructed action via the "@" sign. Gloss #2 indicates the coding specifying each constructed action verb type.

1. "THERE ONE MAN TREE +@*PICKING*-@(ends CA). "
2. THERE ONE MAN TREE *PICKING*_{DV} –the verb "picking" is termed a Depicting verb.
3. MAN moved from right to left *LOOK-AT*_{IV}.....tug to the left. – the sign "look-at" is termed Indicating verb, Liddell (2003).
4.Get on bike.....CL:CC.....*RIDE-BIKE*_{DV} -- the sign "ride-bike" is termed a plain or citation verb form in ASL, however the signer used a classifier to describe it thus it becomes a Depicting sign.

Deaf consultants and a variety of proficient signers observed the raw data in order to prevent experimenter bias in the interpretation of the language structure. The data analysis of each discourse required approximately 3-5 hours. Participants were all debriefed on the details of the study's purpose.

3.7.3 Analysis of the data

SPSS software was used for data input and analysis. Data was coded according to sign type and according to whether the sign is CA. Using an ordinal scale, each type found in CA was coded. The sign types are from Liddell's (2003) three classes: 1). Plain/citation form, 2). Indicating 3). Depicting. 4) Iconic gesture which may be use to convey concepts since citation forms are not found within an ASL dictionary (Vallied.2005) thus creating a need for this new category.

Each sign type was coded as to type appearing in CA. In this study, the independent variables are the two stories. The dependent variables will be the storyteller's usage within CA and the number of each verb used overall. Inferential analysis was used for computations of the use of CA. A simple frequency distribution statistic was run on the data to safeguard against coding errors or sample skewing. A non-parametric statistic -- chi-square was run on the data sample to demonstrate the falsity of the null hypothesis with the α level is set at .05. The non-parametric statistic was used since the data distribution is skewed to one verb type and thus would not present the possibility for a normal distribution. The null hypothesis states that the verb category(s) used in CA is/are not statically significant. Thus meaning that action/event signs used in CA may be from any action/event sign category and also the sign category used is within the full discretion of the signer. This statistic indicates the relative comparisons between the various sign types used within CA. Each story data was run

separately then together as a unit to determine significance within and between the data sets.

3.8 Expectations

This study looked for any statistical significance that might exist between the sign type and CA in ASL narrative. While the signer has discretion regarding which type to use, certain signs are more conducive to CA. Thus, if the null hypothesis is not preferred, a statistical significance does exist between the verb type and constructed action. If statistically significant, then constructed action in ASL may have potential for constraints, meaning that the signer may not have full discretion to use constructed action. If statistically the null hypothesis is preferred, verb used and constructed action have no correlation. The signer's use of certain verb types and constructed action would be attributed to chance. The use of constructed action would therefore not be linked to the verb concept intending to be communicated.

3.9 Summary Chapter Three

This chapter defines the research design. This study requested participants to retell one of two stories for videotaping. The stories are the Pear and Frog story. The Pear story -- a silent 8 minute film that does not use specific dialogue in order to supply an optimum environment for action verbs. The second story—the Frog story, shown to the participants via still pictures. Since both stories had no overt dialogue, they provided a natural means by which participants could retell them using a variety of verbs. The participants' verb use within constructed action is the focus of this study.

The participants demonstrated a diverse demographic background coming from three sites: Tyler, Texas, second Austin, Texas and the last Houston, Texas. Approximately, one half of the participants were male and one half female. The division between participants telling the Pear story and those telling the Frog story was 63% to 37% respectively.

The videotaped data was transcribed into written English form modifying a conventional system used in American Sign Language textbooks (Lentz, Mikos, & Smith 1988). This transcription captured sequences of constructed action and specifically the verbs used were noted.

Lastly, chapter three declared the anticipated outcomes for the research. The intended results asserted that a statistical correlation would be found between the verb types used within the confines of constructed action. Chapter 4 runs through the analysis of the data looking at each verb type and the patterns in which they appear.

CHAPTER 4
DATA ANALYSIS

4.1 Introduction

The demographic information, and statistical and verb pattern results make up chapter four. The chapter begins specifying that from the original 51 individuals 36 provided useable data. Due to issues of memory recall (criteria noted in section 4.2) and equipment logistics, the results in the data from 15 participants could not be used.

The language proficiency criteria further reduced the number of participant's whose data was not used for analysis. Six more data sets could not be used due to language proficiency issues since they did not possess all necessary requirements for language proficiency. The research charted participants according to relative levels of language proficiency.

The statistical results illustrate the verb frequencies, demographic comparisons, and chi-square analysis. Analysis reveals a possible correlation exists between the verb type and the use of constructed action in ASL.

Pattern analysis explains verb propensities displayed in the data. The chapter contrasts the frequencies of each verb type, that is to say, which verb type tends to appear in CA patterns. When differences between each story (Pear story versus Frog story), the data result is described separately.

Next, the chapter provides a description of the signs semantic range demonstrated by the participants. Certain constructed action verbs appear to limit themselves to verbs of movement action.

4.2 Participant Demographic Overview

The total number of participants was 51; however, logistics required the elimination of 15 participants. A few individuals could not significantly remember the story or did not fully understand the task that is to retell the viewed story. Participant's data was only used if they could remember 80% of the story since participants could not remember the story, the data would be disproportionately skewed. Of the remaining 36 participants 19 (52.8%) were male and 17 (47.2%) female; sorted by ethnicity, there were 16 Caucasian males, 9 Caucasian females, one Hispanic male, and five Hispanic females (Hispanic denoting of Mexican or Spanish ancestry). 94.5% of the participants were between the age of 26 to "55 and over", which indicates of the three age categories only 5.6% were younger than 26 years of age. Almost one-half of the participants reported being out-of-work. The survey did not have a category for "looking for work" so those were all placed in the category of "unemployed". 69.4% of the participants had not graduated from college. The demographics, divided somewhat unequally between the questions from the survey, however, proved a little more homogenous as it relates directly to the stories themselves. From the 36 total participants, 23 individuals told the Pear story and 13 told the Frog story.

4.3 Language Proficiencies

As mentioned above, language proficiency remains controversial in ASL research. Because most Deaf individuals are born into families with hearing non-signing parents, early language acquisition does not conform to the experience of all individuals in the Deaf community. Frequently in ASL research, only signers with signing Deaf parents participate in ASL research thus termed a “native” signer. This percentage would constitute less than 10% of the population thus hampering research as locating significant numbers of participants difficult. As noted previously, Lucas (2001) expanded this stringent criterion of a native signer to include those Deaf persons who have acquired ASL by the age of 5 years of age. This research followed Janzen (1998)’s further development of Lucas’ criteria as noted in chapter 3.

The criteria questions were incorporated into the demographic survey to determine language proficiency according to the above requirements. Unfortunately, the literature does not give evidence of the comparative weight for each criterion thus providing no information as to a hierarchy for the above list of criteria. Therefore, it cannot absolutely be determined whether a signer is more proficient possessing the second criterion versus the third or even the fourth. Thus, this study determined a relative set of four language proficiency categories based not upon the individual criterion but on the total number reported.

This research catalogued all 36 participants according to their respective language category proficiency levels. In this research, four participants reported to have

Deaf parents thus placing themselves into the “native” signer category. No singular analysis of native signer data demonstrated significant distinction from other participants reporting all stated language proficiency criteria. Those individuals who reported all four criteria (24) were set at the "proficient" level. Individuals possessing three of the criteria were determined to be at the “high” level and those reporting two criteria indicating a rating of “minimum”. Having only one criterion was set to be the "lowest level". Since no specific ranking could be determined for each criterion, participants reporting all four or all except number #2 of the language, proficiency criteria were used in the analysis. Thus, 6 more participants were added to the 24 giving 30 individuals for analysis.

The reported proficiencies followed a tier format with the most significant being the first criteria (ASL being first language), and following to the second criteria, etc. Those individuals with all four criteria also reported ASL as their first language except one participant. Six participants reporting ASL as their first language scored “high” or three of the four criteria. Apparently, the strongest criterion is the age in which an individual learns ASL. All of the participants reporting to have learned ASL by the age of six possess all four of the language proficiencies. The other two criteria indicate less influence on the total number of proficiencies.

As noted above, this research combines those individuals reported to have three and four levels of proficiency. Since the top two criteria appear to be primary, it seems most efficient to use both sets of participants.

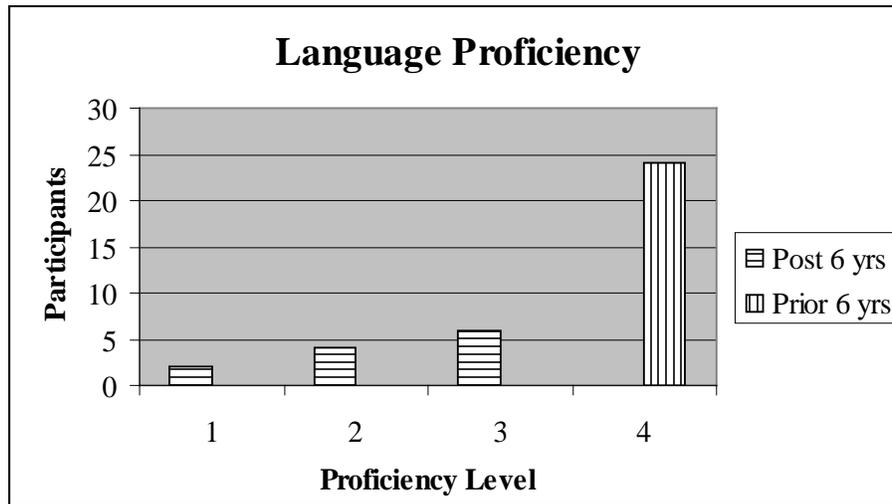


Figure 4.1 The levels of participant language proficiency

Figure 4.1 illustrates the number of participants reporting to be proficient in American Sign Language. 24 participants reported acquiring American Sign Language by the age of 6, with 6 others stating to meeting all the other requirements except for the age requirement.

Table 4.1 shows the breakdown of participants self reporting as not being accepted into the Deaf community. In this table, two members self assessing themselves outside the community also indicated minimum language proficiency. It appears from this result, membership perception links to one's view of their individual ASL language knowledge/skills.

Members establish a personal view of their inclusion into the Deaf community; however, membership into the Deaf community does not occur automatically.

Table 4.1 The participant self-designated language proficiency levels

Count		Accepted member		Total
		Not accepted as a member of the Deaf Community	Accepted as a Member of the Deaf Community	
Lang	Lowest level	2	0	2
Proficiency	Minimum	0	4	4
	High	0	6	6
	Proficient	0	24	24
Total		2	34	36

This inclusion seems not to align with an individual’s level of hearing loss. This membership requires identification with the community of Deaf individuals via shared experiences as a deaf person, participation with the community and primarily one’s use of sign language (Higgins 1989).

For example, a deaf person with well-developed spoken language capability and minimal American Sign Language (ASL) skills will typically not find it easy to feel a strong sense of social competence in gatherings attended by culturally Deaf individuals and will develop a culturally Deaf identity only after having increased positive contact with these individuals and improving his or her facility in the use of ASL (Leigh 2008 p.24).

Also supporting this concept of relative importance depends on language proficiency c.f. Table 4.2. In this table, among those individuals declaring themselves not to be culturally Deaf, one individual also designates not being accepted into the Deaf community. The point of the two tables serves to comment on the criteria relative importance.

Table 4.2 A cross tabulation of participant language proficiency levels

Count		Self Identified		Total
		self identified as not culturally Deaf	Self identified as a culturally Deaf person	
Lang Proficiency	Lowest level	1	1	2
	Minimum	0	4	4
	High	0	6	6
	Proficient	0	24	24
Total		1	35	36

The individuals reporting having not acquired ASL by age 6 still may view themselves as full members of the Deaf community by way of their respective acceptance of the language despite personal proficiency and culture (Gannon 1981), (Leigh 2008). Two participants from the lowest level of language proficiency reported identification with Deaf culture, the other indicated not to be culturally Deaf. Both of these also self reported alienation from the Deaf community (i.e. Table 4.1).

4.4 Verb Types in Constructed Action

Using only the participants having sufficient language proficiency criteria, (refer to section 3) table 4.3 indicates a high propensity for the use of Depicting verbs.

Table 4.3 establishes the relative number of occurrences for each verb type. The high percentage (69% of the total number of verbs used) of Depicting verbs appears

Table 4.3 The frequencies of verb types

Verb Type	N	Minimum	Maximum	Mean
Depicting	1	899	899	.69
Plain	1	182	182	.14
Indicating	1	21	21	.02
Iconic	1	193	193	.15

to be sufficient to determine a significance for this type of verb.

This frequency table (4.3) also indicates the relative percentages for the remaining verb types thus iconic gesture are the next highest at 15% with the lowest percentage for Indicating verbs. The next step is to look at frequencies for each participant.

Table 4.4 A basic statistical description of verb types

	N	Minimum	Maximum	Mean	Std. Deviation
Plain Verbs	30	0	21	6.07	5.458
Indicating Verbs	30	0	5	.70	1.179
Depicting Verbs	30	8	79	29.93	16.869
Iconic Gesture Verbs	30	0	19	6.43	5.104
Valid N (list wise)	30				

Table 4.4 shows participant minimum and maximum use for each verb type used in both prompting narratives. This descriptive table points to which verb should be used in the statistics focus. For example within the first 10 instances of CA, a

participant may use no Plain verbs, but contrastively at least one participant used Plain verbs 21 times. Plain and Iconic Gesture verbs were next in the frequencies being about equal. The standard deviation further points to the Depicting verb as the verb of special interest. The standard deviation for Depicting verbs is 16.869 and the mean is 29.93 therefore 68% of the participants used from 13 to 47 Depicting verbs. The fact that no participant retold the narrative without the use of Depicting verbs confirms that Depicting verbs is the analysis verb type

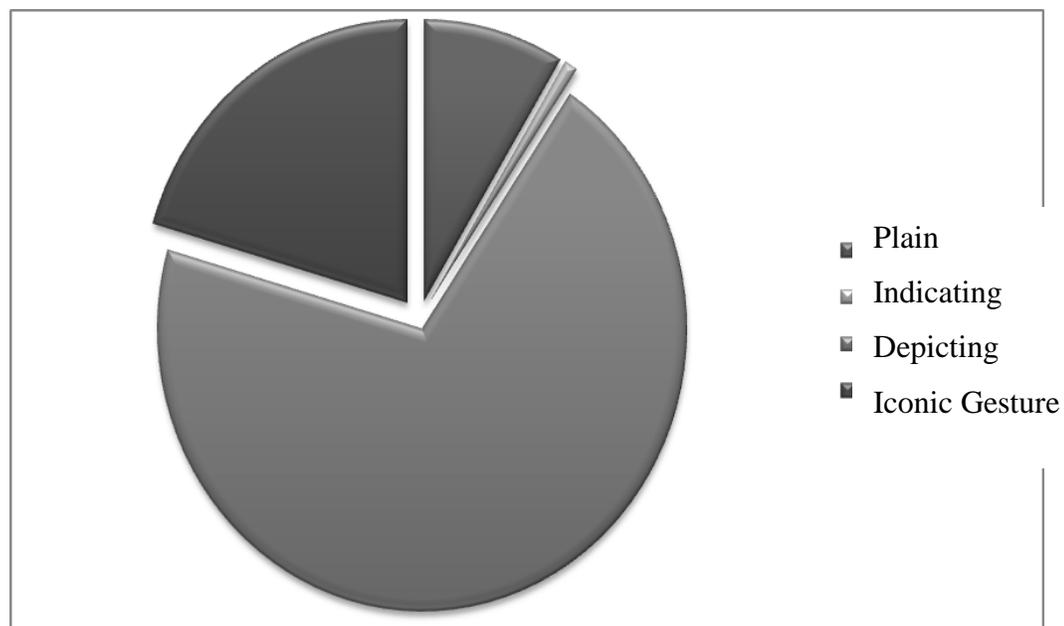


Figure 4.2 The proportions of various verb types

Figure 4.2 illustrates the count frequencies for all levels of language proficiency displaying that each signer consistently uses Depicting verbs more than any other of the

verb types. In addition, the Depicting verb maintains its prevalence across the language proficiency levels as well c.f. figure 4.3.

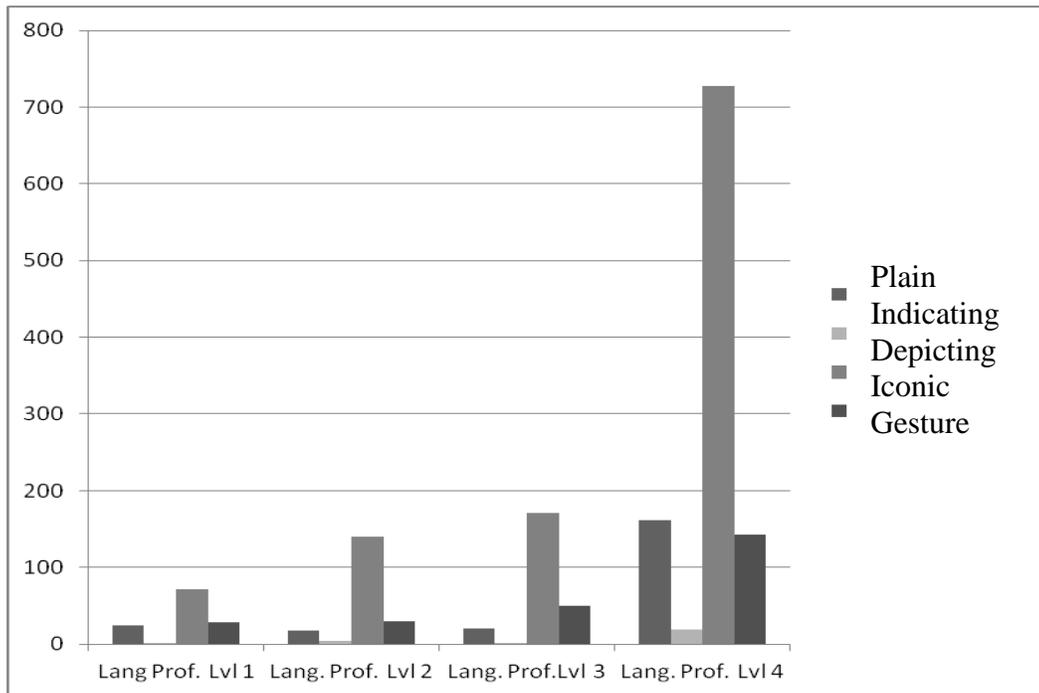


Figure 4.3 A comparison of verb type & language proficiency

Figure 4.3 further captures the relative verb type use as compared to participant language proficiency. Even for participants possessing the lowest proficiency, they consistently used Depicting verbs rather than any other type of verb.

4.5 Verb Type Significance in Constructed Action

The frequency differences in the use of verb types in constructed action do indicate significance. The hypothesis of the research is basic in that it states the disproportions or differences between verb types cannot be attributed to chance, therefore the chi-square statistic was used to determine this accurately. The differences

between verb types within constructed action indeed appear to be significant yet statistics are needed to validate the observed phenomenon.

The objective for the statistics is to show that the verb frequencies are not a result of chance. In other words, the null hypothesis states that the type of verb used is to be attributed to chance. The thesis statement of this research states that the frequencies or use of specific verbs should not be attributed to chance, thus the use of specific verb types in ASL CA is statistically significant. The statistic to support this thesis is the chi-square statistic; it will show a pattern of preference for a specific category (Salkind 2000).

Chi-square is chosen as the statistic to compare the frequency numbers observed with the numbers one would expect and then to see if the contrastive values are large or small on the chi-square distribution (Larson-Hall 2010). Also, the chi-square is the statistic for this research because the data represents one category variable (verb type) with one or more levels of choice and are mutually exclusive (Salkand 2000). The enquiry that is answered via the chi-square is whether each level (verb type) represents a 20% likelihood assuming each type is equally possible. Therefore, (c.f. table 4.5) the expected number of occurrences for each verb type is 323.8. The actual number of occurrences found in the data does not approximate close to the expected number consequently residual numbers are extreme producing the chi-square value at 1421.173. The chi-square value for each verb is added together which generates such a large total value (1421.173). The highest chi-square critical value on a standard chi-square

distribution chart (with 3 degrees of freedom $-df3$) is 16.266 (Hatch & Lazaraton 1991) which represents a “p” value of .001. Thus the computer calculates the significant level at .000. This research concludes that the verb type frequencies should not be ascribed to chance.

Table 4.5 The chi-square statistic

	Observed N	Expected N	Residual
Depicting	899	323.8	575.3
Plain	182	323.8	-141.8
Indicating	20	323.8	-303.8
Iconic	194	323.8	-129.8
Total: 1295			
Chi-Square			1421.173 ^a
df:			3
Asymp			
Sig.			.000

The chi-square statistic (cf. Table 4.5) illustrates within CA the verbs used are not distributed randomly since their respective numbers indicate significant disproportional use. The chi-square demonstrates individual participants at the higher language proficient level. Depicting Verbs and Indicating verbs show themselves to be significant since they are the most divergent. The statistic contributes to an understanding that a structured concept basis exists for ASL CA.

4.6 A Correlation in Constructed Action

Since the Depicting verb is the entity of focus, further analysis confirms greater statistical weight. Comparing the total number of constructed action instances with Depicting verb use results in a significant correlation c.f. Table 4.6. The test statistic shows the correlation coefficient to be .782 ($r=.782$) and significance is shown at $p=.01$ level.

The frequency table (c.f. Table 4.3) parallels the tendency toward Depicting verbs in CA. This statistic is used to establish a possible linguistically influenced resource for the use of specific verb type (Indicating verb) and thus CA itself since the verb types are not randomly distributed throughout CA instances. Noted above, the current research in CA advocates a randomized nature to CA use; however, a statistical correlation contradicts this understanding.

The least affected verb is the Indicating verb since it fluctuates less than any other verb with the increase in constructed action instances. Plain verbs indicate a slight tendency to increase as CA occurrences increase. Other variables, i.e. demographic could not be substantiated to have a significant influence on the signer's choice to use Depicting verbs as the occurrences of constructed action increased.

Table 4.6 shows the Pearson Correlation at $r=1$ signifies a positive correlation exists for the use of Depicting verbs and the occurrences of CA. The Pearson Correlation Coefficient: $r_{\text{depicting verbs-constructed action}}$ is $r=.782$ which displays a high level of correlation possibility. All contrast analysis confirms Depicting verbs dominate

within CA sequences. Proficient signing individuals used Depicting verbs as the most common choice to begin a constructed action occurrence.

Table 4.6 The statistical correlation of depicting verbs

		Total Occurrences	Depicting Verbs
Total Occurrences	Pearson Correlation	1	.782**
	Sig. (2-tailed)		.000
	N	30	30
Depicting Verbs	Pearson Correlation	.782**	1
	Sig. (2-tailed)	.000	
	N	30	30

** . Correlation is significant at the 0.01 level (2-tailed).

The percent of Depicting verb instances to the number of individual occurrences of constructed action reveals a characteristic of signers telling these two narratives—signers use Depicting verbs. Table 4.7 shows the percentage of verb type use in both narratives.

Table 4.7 illustrates the relative verb type frequencies for each story. That is to say, which verb type initiated CA. For example, the Pear story: 86.5% of the time during CA occurrences, the participants used the Depicting verb. The standard deviation as noted above is for all occurrences of CA for both narratives.

Genre apparently does influence the ratio of verb type as noted in the difference between the frequency of Depicting verbs in the Pear story as opposed to the Frog story, yet the over arching Depicting verb tendency remains high.

Table 4.7 The verb type frequencies

Story	Depicting Verb	Plain Verb	Iconic Gesture Verb	Indicating Verb
Pear Story	86.5%	5.3%	7.1%	1.1%
Frog Story	61.3%	6.3%	32.4%	0%

4.7 Verb Pattern Frequencies

The two prompting mediums - the Frog story and the Pear story, as noted above, statistically similarly indicated verb type use. The analysis discusses each of them when relevant. In addition, the two stories are from different genres administered via different mediums which also substantiate the priority of verb type and the Depicting verb in particular. This fact yielded little contrastive results in constructed action verbs use.

The research study of verb patterns in constructed action revealed various patterns. Pear story signers appeared predisposed to use multiple verb strings in each CA instance. This study points out that signers can begin CA maintaining the feature though several verbs. Within each participant's first 10 instances, CA Pear story signers

averaged 23 verbs, or less than 2 verbs per CA instance. With the overwhelming verb frequency, CA establishes itself deep into ASL narrative (Pozos 2007).

As noted in the statistics, the Depicting verb is most common. Signers typically used more than one (as noted above) within each CA instance. Averaging approximately 60%, a participant used more than one verb per instance of CA, however the maximum level reached (one participant) was 90%. As noted above, participants string various verb types in a single CA instance (50% of the CA occurrences). Within the first 10 instances of CA, the largest verb string was seven (4% of CA occurrences). Signers revealed that depicting, or Plain verbs might form string series. Example (1) shows the transcription gloss of this sequence:

(1)

[MAN CLIMB UP TREE]_{DV}, [MAN PICKING PEARS]_{DV}, [ONE PEAR DROPPING (TO THE) GROUND, (LADDER)]_{DV}, [MAN CLIMBING UP TREE]_{DV}, [MAN PICKING PEARS]_{DV}, [MAN PUTTING PEARS(INTO) APRON]_{DV}, [MAN COMING DOWN LADDER]_{DV}. (DV=Depicting verb)*

Translation: *The man climbed up into the tree and (began) to pick pears, but one pear fell to the ground. (Now)-The man was in the tree picking pears, and putting them into an apron (about his waist). He then climbed down the ladder.* (all verbs in this sequence are depicting verbs)

In contrast, Iconic Gesture verbs tend to show up as single verb entities. A few signers did tie Iconic Gesture verbs together, but overall the greater leaning is to use them singularly, in other words, the signers have a tendency to institute one CA instance per Iconic Gesture verb. Somewhat unexpectedly given the available levels of Iconic gesture verb iconicity, signers apparently use Iconic gesture verbs sparingly, but surround them with unmarked verb types. The most common use of Iconic gesture

verbs appeared when relating the farmer cleaning a pear, which had dropped to the ground (see appendix). The farmer while up in the tree picking pears, inadvertently dropped one to the ground. He subsequently climbs down to clean it using his bandana (which tied is around his neck). The signers, who chose to include this detail, invariably used Iconic gesture verbs to convey this scene, represented in merely three instances. A typical example from a male participant is given in (2):

(2)

...[WIPE-OFF (PEAR)]_{IgV}, [BREATH ON PEAR]_{IgV}, [CLEAN]_{PV},
[BREATH ON PEAR]_{IgV}, [WIPE OFF PEAR]_{IgV}, [PUT PEAR INTO
CONTAINER]_{PV}, [RETIE BANDANA ON NECK]_{IgV} (Iconic Gesture
verbs indicated with “_{IgV}”).

Translation: (having picked up the fallen pear)...he wiped it off and breathing on the pear to further clean it, he wiped it again breathing on it once more upon which he put it into the container (on the ground). He then retied the bandana on his neck.

In this section, Indicating verbs appeared infrequently for some unknown reason. The reason for such a low level of Indicating verbs may stem from issues in semantics (see section 6 for another explanation). Signers recreated the Pear story using Indicating verbs in only one section. The Indicating verb emerged in the section of the story in which the fallen boy gives pears out to boys who had helped him gather up the spilled basket of pears after falling off his bike. The boy with the bicycle had placed a basket of pears on his bike, but having hit a rock dumped the basket out on the ground. Three boys came to his aid and helped him gather up the pears. The boy returned with gratitude and gave each one a pear. Signers, demonstrating Indicating verbs for this section, used the typical Indicating verb "give"; however, most signers appeared to

default to using Depicting verbs for the same story section. The point is this; participants seem to refrain from using Indicating verbs altogether when in CA. One signer substituted another Indicating verb i.e. "gift" for "give". This verb means "to-gift-to" as in "give ownership-to". The use of Indicating verbs represents two participants and two instances of CA. The participant in (3) illustrates the sequence:

(3)

...[YELL]_{PV}, [WALK]_{PV}, [GIVE]_{IV}

Translation: (the beginning is outside of CA). (*The three boys walked toward the fallen boy*)...(*one boy yelled out to him –to get his attention*). *He walked to (them) and give each one (a pear)*.

Plain verbs appear less often (c.f. 4.3 21 Plain verb instances compared to Depicting/ Iconic gesture verb 79 instances) than Depicting verbs or Iconic gesture verbs, but more often than Indicating verbs. As stated above, Plain verbs do not inflect for person, like Indicating verbs, and show up most often as single items in CA. Plain verbs regularly are placed between depicting or Iconic gesture verbs (see more about this sequencing in chapter 5). Perhaps Plain verbs, due to their respective semantic force, help a CA sequence clarity because CA itself is used in narrative to aid clarity (Pozos 2007). Plain verbs appear when near Iconic gesture verbs which also leads to clarity as the reason behind its purpose. The example in (2) shown again in (4) is a good one:

(4)

...[WIPE-OFF (PEAR)]_{IgV*}, [BREATH ON PEAR]_{IgV}, [CLEAN]_{PV}, [BREATH ON PEAR]_{IgV}, [WIPE OFF PEAR]_{IgV}, [PUT PEAR INTO CONTAINER]_{PV}, [RETIE BANDANA ON NECK]_{IgV}

Translation: *(having picked up the fallen pear)...he wiped it off and breathing on the pear to further clean it, he wiped it again breathing on it once more upon which he put it into the container (on the ground). He then retied the bandana on his neck.* (*at times, it is difficult to determine if a depicting verb is used or a isomorphic iconic gesture).

The designated Plain verb in this sequence is the verb “clean”. This verb is in the middle of a multiple Iconic gesture verb sequence. Conceivably, the Iconic gesture verb (lacking semantic specificity) blends with the Plain verb in order to build narrative clarity. The Iconic gesture verb in this sequence is semantically weak. The verb has a translation meaning of “wipe-off” which is not the intended meaning. With this in mind, the interlocutor may understand the Iconic gesture verb merely to mean, “wipe-off” unless another verb strengthens the semantic force. The Plain verb refines the nuance to the specific “clean” concept. The Plain verb is a standard unmarked lexical item and may help the sequence avoid any ambiguity imposed by the ad hoc Iconic gesture verbs, (more detail about this matter in chapter five).

The Frog story produced similar frequency results. Participants did string verbs together with their respective instances of CA, yet to a lesser degree. Over all, within the first 10 instances of CA, signers of the Pear story averaged 10.47 verbs and the Frog story participants 9.25 verbs. This number reflects the total number of verbs for the first 10 instances in which CA appeared. However, signers averaged 2.15 and 1.68 verbs respectively for each CA occurrence. This average reflects signer’s propensity toward using CA verbs singularly. An example of a multiple verb sequence is shown in example (5).

(5)

[DOG BARK]_{DV}[BOY CAUGHT IN DEER ANTLERS]_{DV}[DEER
RUNNING]_{DV}

Translation: *The dog barked as the boy (realized) he was caught in deer antlers. The deer (began) to run (with the boy still caught).*

Depicting verbs in the Frog story appeared less often linking together, although a few instances occur broken up with other verbs unlike the Pear story (25 instances of linking compared with 37 instances respectively). The greatest number of linking (as in placing Depicting verbs one after another) is three in a series. Factors that would account for this result are not yet known, however signers were consistent in limiting Depicting verb series. In this light, this data may not support the view that CA is entirely at the discretion of the signer (Roy 1989). If CA acts at the full demand of the signer, structured patterns would tend not to materialize.

Iconic gesture verbs, in the Frog story, regularly emerged in short sequences rather than isolated items (c.f. Table 4.6). This result contrasts the Pear story (noted above) which tended to use Iconic gesture verbs as single items. A few Frog story signers demonstrated combinations that placed the Iconic gesture verbs in sets of two thus signing two Iconic gesture verbs one after the other. Example 6 illustrates a typical example of this type.

(6)

[DOG LICK (BOY)]_{DV}, [BOY'S HEAD MOVE AWAY FROM DOG
LICK]_{IgV}, [BOY CALL OUT (FOR FROG)]_{IgV}

Translation: *As the dog began to lick the boy's face, he moved his head back (in recoil). The boy (then) began to call out (for the frog).*

It seems that signers tended not to use gesture or even Plain verbs as items for clarification, as in the Pear story. This factor could be due to the genre, however more about this issue in Chapter 6.

Indicating-verb scarcity occurred in both stories, but especially in the Frog story. Within in the first ten instances of constructed action, Indicating verbs did not appear in the Frog story. This dearth could indicate that the specific genre may influence verb type (Longacre 1996).

Storytellers produced Plain verbs almost equally in both stories. Storytellers tended to use them infrequently in the entire narrative (within the first 10 instances of CA). When signers used Plain verbs more than twice in one CA instance, a series set could appear. The extreme example (four in a series) follows in example 7:

(7)

[[BOY HOLDS DOG]_{DV}, DOG LICKS BOY]]_{DV}, [WALK]_{PV},
*[SEARCH-FOR]_{PV}, **[FIND]_{PV}, WHERE? CAN'T, [FIND]_{PV} (**often plain verbs are inflected for aspect, however all inflected plain verbs were combined into one verb type in data statistics*) (***linguists may refer to this verb as a “spatial” verb (Padden 1990), however in Liddell’s categories it remains a plain verb*).

Translation: *The dog licks the boy as he is holding it. He walks off in search for (the frog), to find it, but does not know where it is. The boy says to himself, “I can’t find it”.*

Table 4.8 indicates the frequencies in which the respective verbs are found in sequence patterns. That is to say, when a signer begins CA Table 4.8 indicates the percentages when CA verbs were used in various series or patterns for the Pear story. For example, the Indicating verb was never used as a single unit in Pear story CA

instances, but always occurred as a series. Table 4.9 shows the results verb series frequencies for the Frog story. Note in Table 4.9 the inclination for single Depicting verbs dropped which, as stated above, may indicate that genre, story type, and or story medium influences verb types.

Table 4.8 The verb combination frequencies in the Pear story

Frequency	Depicting Verb	Plain Verb	Iconic gesture Verb	Indicating Verb
Single Units	X (55.5%)	X (44.5%)	X (25%)	—
Series strings	X (44.5%)	X (55.5%)	X (75%)	X (100%)

Table 4.9 The verb combination frequencies in the Frog story

Frequency	Depicting Verb	Plain Verb	Iconic gesture Verb	Indicating Verb
Single Units	X (44.5%)	X (100%)	X (50%)	—
Series strings	X (55.5%)	—	X (50%)	—

Table 4.10 lists the relative frequencies along with some pattern types the data demonstrated for both narratives. This table illustrates that constructed action Depicting verbs occurred in series 50% of the time. Thus, 50% of the time constructed action initiated via a Depicting Verb singular instance.

The Plain verbs also emerges in multiple strings, however this use seems to be less marked than Depicting verbs since 72% of the time the verb opens constructed action as a singular unit. Iconic gesture verbs and Indicating verbs appear in limited

numbers, but unlike Indicating verbs, Iconic gesture verb can permit alternation in a Constructed Acton sequence set.

Table 4.10 The summary of the verb frequencies

Frequency	Depicting Verb	Plain Verb	Iconic gesture Verb	Indicating Verb
Series strings	X (50%)	X (77%)	__X (62%)	X (50%)
Alternate per CA set	X (21%)	X (once)	X (once)	—
Limited use	—	—	X (13%)	X (01%)
Specialized placement	—	X (17%)	X (18%)	—

The Plain verb and Iconic gesture verbs share the specialized placement not used by the other verbs, however Plain verbs can be found between Depicting and Iconic gesture verb sequences.

4.8 Verb Pattern: Semantics

The verb pattern semantics (i.e. how CA verbs demonstrated specific meanings) reveals a further structured system. This study will begin with the semantics of the Depicting verbs then address Iconic gesture (gesture), Indicating, and finally Plain verbs. Naturally, since the Pear and Frog stories utilized vastly different verbs as per their respect plots, this discussion separates the two stories in this section. This study will begin with the Pear story verb semantics.

The Depicting verb, (termed classifiers, classifier predicates or polycomponential verbs in this study) is the most widely used verb type in CA. As

noted above, Depicting verbs convey action or states (Liddell 2003). This research demonstrates predominately signers, when employing CA, use Depicting verbs singularly or in a stacked string. The information conveyed via Depicting verbs comes from several sources. The first is the specific handshape, the second any path movement involved, which is then completed via the CA facial, body features.

What distinguish depicting verbs from other verbs is that, in addition to their encoded meanings, these verbs also depict certain aspects of their meaning (Liddell 2003 p.261).

Table 4.11 lists the various concepts displayed via Depicting verbs used in the Pear story. For example, at the opening of the Pear story, a farmer is shown picking pears from within a pear tree. Signers, if including this point, always used Depicting verbs to convey the man picking pears. This classifier verb “depicts” the farmer gathering pears. In CA, the signer becomes (as to reenact from a first person perspective) the farmer picking. The handshape used "depicts" a spherical object identified as a pear in the story. The verb meanings list in table 4.11 also identify when signers use handshapes to “depict” specific aspects of the noun doing the action. In the case of “bicycles crossing paths”, the signer uses the same handshape on both hands which depict a vehicle.

A signer might modulate the handshape to illustrate manner as in carelessly or meticulously picking, but Depicting verbs permeate throughout those sections. A participant illustrates this in example (1):

(1)

[MAN GOES TO TREE]_{DV}, [MAN PICK(PEARS)]_{DV}, [CLIMB UP]_{DV}, [PICK (PEARS)]_{DV}, [HOLD (APRON)]_{DV}, [PUT (PEARS) INTO APRON]_{DV}.

Translation: *The man to the tree and going up into it began to pick pears. He was holding an apron into which he would put the picked pears.*

Table 4.11 The depicting verbs observed in the Pear story

Depicting Verb—Semantic Designations (Pear Story)	
<ul style="list-style-type: none">• Bicycles crossing paths• Climbing (up and down a tree)• Dropping or picking up a pear• Dumping pears (placing) into apron• Eating pear• Emptying out apron into basket• Gathering pears (from the ground)• Getting on/off bicycle• Hat flying from boy's head	<ul style="list-style-type: none">• Holding handlebars of a bicycle• Move object (basket)• (To) notice• Person movement (within, entering, exiting scene)• Picking (pears)• Pickup object (basket)• Playing with a toy (paddle-ball)• Putting bicycle down and picking up bicycle from ground• Riding a bicycle• Walking

This verb i.e. a Depicting verb also "depicted" the meaning "climb". Signers used the Depicting verb whenever conveying about the farmer was going up or down the tree. Storytellers typically displayed, without modification, the same Depicting verb and sequence of Depicting verbs each time communicating about this event. In other words, the signer may use the exact same sequence of signs (Indicating verbs) to mention the farmer climbing up or down to pick pears several times inserting no other

verb types in to the CA sequence. The signer in example (2) demonstrates this characteristic:

(2)

First instance of CA: MAN PICK (PEAR)_{DV1}, CLIMB UP TREE_{DV2}, PICK (PEAR)_{DV1}, CLIMB DOWN TREE_{DV3}, PUT INTO CONTAINER_{DV4}

Second instance of CA: ...PUT (PEAR) INTO CONTAINER_{DV4}

Third instance of CA: MAN CLIMB UP LADDER_{DV2}, PICK PEAR_{DV1}. (*subscript used to indicate repeated depicting verb*).

Pozos (2007) in his insightful work mentions that CA could be obligatory in some contexts. It is apparent, in this study at least, various action/movement concepts characteristically use CA as their preferred method of conveyance. Details of this issue are in the discussion section of this study.

Iconic gesture verbs, refer to stylized actions, random paths or speed of motion (Liddell 2003, Tang 2007). This type of verb, not mentioned frequently in the literature, regularly shows up in ASL CA. As mentioned above, Liddell seems to couple this verb with the Depicting verb, while others refer to it as “becoming the object” (Lillo-Martin 1995, Pozos 2007). The Iconic gesture verb does not use lexical sign forms.

Semantically, signers consistently used depicting/Iconic Gesture verbs combinations to denote four basic concepts. The first is the “taking off” or “untying” of the bandana, which was around the framer's neck. The second obviously is the “retying” of said bandana displayed with a Depicting/Iconic gesture verb. In between

these two verbs, signers typically used an Iconic gesture verb “to clean”. The only other clear example is the concept “to look” (as in a specific direction).

As mentioned above, signers communicated the section about the farmer cleaning a pear, which had dropped to the ground by way of indicating/Iconic gesture verbs mixture. Another example of this is shown in example (3):

(3)

[TAKE OFF BANDANA (with one hand)]_{DV}, [CLEAN (pear)]_{IgV}, [PUT (PEAR) INTO CONTAINER]_{DV}, [RETIE BANDANA]_{DV}.

Translation: *...taking off his bandana (with one hand), he cleaned the pear with it then putting it into the basket, returned the bandana to its original place on his neck.*

In addition, participants used Iconic gesture verbs to indicate the head/eye direction of the boy or farmer faced in attempting to look at specific objects. That is to say, the storyteller conveyed the concept that the protagonist turned to look quickly to one side when using Iconic gesture verbs to represent this scene. In ASL, a classifier sequence (Depicting verb) more commonly expresses this idea. When storytellers produced Depicting verbs for this purpose, they moved the head simultaneously with the verb execution creating a type of concept redundancy. Using the Iconic gesture verb, deletes any overt lexical sign resulting with head movement alone to communicate the concept (further discussion relating to this issue when talking about of CA Plain verbs).

Indicating verbs in this study produced two meaning -- “give” and "help". These two verb meanings represented a marked semantic use. The majority of

participants used Depicting- verbs rather than Indicating-verb to convey these verb meanings. Example (4) serves as the illustration of an Indicating verb meaning, "give"; however, the unmarked form (common form with Indicating verbs) is as follows:

(4)

[BOY HOLD (HANDLEBARS)]_{DV}, [PICK UP PEAR]_{DV}, (THREE PEAR), [GIVE PEAR EACH BOY]_{DV}... (Parenthesis indicates a pause in CA).

Translation: *The boy, while holding the handlebars (with one hand) picked out three pears (from the basket) and gave one to each of the boys (which had helped him).*

As shown in example (5), this participant uses an Indicating verb for the meaning "help" when describing how boys "helped" him to gather up the fallen pears.

(5)

[BOY PUT (PEARS) INTO BUCKET], [HELP]_{IV}, [BOY PUT PEAR INTO BUCKET], [PICK-UP BUCKET], [PUT ONTO BICYCLE], [PICK-UP BICYCLE]

Translation: *The boys were helping the boy (with the bicycle) to gather up the pears and put the bucket back on the bike.*

Plain verbs demonstrate a variety of meanings and lack some types of inflection, yet may inflect for some features (Susan Mather personal communication). Plain verbs, as defined, do not inflect for person or number, yet “may inflect for aspect, including habitual, incessant, continuative, iterative, etc” Padden (1988). This research noted various Plain verbs produced in citation form (without inflection of any form) and those which demonstration temporal aspect. Figure 4.4 illustrates this phenomenon. The signer, within the confines of constructed action, repeats the sign SEARCH-FOR thus

denoting continuative aspect. The signer produces the sign SEARCH-FOR in a movement path beginning on the signer's right moving quickly to the left. This variation semantically convey concept of searching "all-around" a specific area. As noted above, since the modification to the verb does not change its category, the citation type is maintained.



Figure 4.4 An aspect inflected plain verb in ASL

Figure 4.5 also displays this type of location feature found in some Plain CA verbs. In Figure 4.6, (left) the signer clearly initiates CA indicated with a facial expression change coupled with a body shift to the right. Figure 4.6 (right) shows the next sign produced. The signer produces the sign FIND. This verb is "located" to the right yet does not clearly signify additional morphemes for location, (thus denoting "finding a basket of pears there"). The "location" feature is due to the CA rather than the addition of verb morphemes -. Verbs in CA characteristically align themselves with

the direction of the body, specifically the head thus location information (i.e. location morphemes) may not be determinable. The verb follows the definition for Plain verbs in that it does not inflect or convey information relating to person or number yet the sign occurs to the signer's side. In this study, Plain verbs are identified by the absence of morphemes relating to person and number. CA Plain verbs may occur in citation form (produced in neutral signing space in front of the signer), or to the signer's left or right side. In either case, location information is ambiguous.



Figures 4.5 A non-inflected plain verb in ASL

The verb illustrated in Figure 4.5 remains designated as a Plain verb since it does not inflect for person or number and cannot “inflect” for location (Padden personal communication).

Signers may insert Plain verbs as a standard or perhaps unmarked repetition when used in conjunction with indicating or Iconic gesture verbs. Plain verbs appear to

be the unmarked substitute for Depicting verbs in other words many signers tend to use Depicting verbs to express the same or similar concepts that other storytellers use Plain verbs to communicate. The distinction may involve the signer’s chosen level of detail via reenactment within constructed action. Table 4.12 shows the semantic designations for Plain verbs found in the Pear story:

Table 4.12 The plain verbs observed in the Pear story

Plain Verbs—Semantic Designations (Pear Story)	
<ul style="list-style-type: none"> • Control • Decide • Fall • Find • Gather • Go-ahead • Pick-up • See 	<ul style="list-style-type: none"> • Stand • Stop • Think-about • Walk • Want • Wash • Yell

Table 4.13 The indicating observed in the Pear story

Indicating Verbs—Semantic Designations (Pear Story)
<ul style="list-style-type: none"> • Give • Look-at*(Liddell 2003) • Help

Table 4.13 reflects the limited use of Indicating Verbs within the Pear story CA occurrences and table 4.14 the Iconic Gesture verbs.

The Frog story expresses a slightly restricted range of meanings with its set of verbs. The Depicting verbs correspond to action or movement concepts. Table 4.15 demonstrates the meanings associated:

Table 4.14 The iconic gesture verbs observed in the Pear story

Iconic gesture Verbs—Semantic Designations (Pear Story)	
<ul style="list-style-type: none"> • Untie • Count • Tie • Wash (clean off) • Look-at • Surprise • Pain • Be-quiet 	<ul style="list-style-type: none"> • Frustration • Look-around • Confusion • Dust-off

Table 4.15 The depicting verbs observed in the Frog story

*Depicting Verbs—Semantic designations (Frog Story)	
<ul style="list-style-type: none"> • Bark • Climb-up • Dog sniffing ground • Fall down • Fly (bird) • Get-on-a bicycle • Hold (various type of objects) • Jump (animal) • Dog Lick • Open window 	<ul style="list-style-type: none"> • Pick up (object) • Put object down • Run* (animal and human) • Stand • Sitting (animal) • Stick head out of a window • Struggle • Stuck (dog's muzzle in the jar) • Appear on the scene (animal) • "Wag" tongue • Walk

*Various verbs may fall into other categories given aspects of inflection, but this set adheres to Liddell (2003) definition of depicting verbs

Participants again manifested an inclination to use Depicting verbs in certain sections of the story. Signers most regularly used Indicating verbs in describing the opening scene (describing the room layout, time of day, etc.) of the boy and dog in the room with the frog in the jar. In addition to this section, the escape and the subsequent initial in room search for the frog, communicate much of this via Depicting verbs. This is an example of a Depicting verb section in the Frog story.

- First CA instance:** *LOOK DOWN_{IV}, FROG JUMP_{DV} OUT-OF-JAR
 - Second CA instance:** HOLD UP BOOT_{DV}, LOOK-IN_{IV}
 - Third CA instance:** DOG LOOK INSIDE JAR_{IV} (FOR FROG)
 - Fourth CA instance:** OPEN WINDOW_{DV}, LOOK OUT_{IV}, SEARCH_{PV}
- *Padden (1990) designates this verb as a spatial verb.

Iconic gesture verbs in the Frog story appeared expressing a variety of meanings somewhat more expansive than in the Pear story. Iconic gesture verbs are most restricted to concepts of action, but not so much for general concepts of movement. Table 4.16 shows the Frog story Iconic gesture verbs meanings:

Table 4.16 Iconic gesture verbs observed in the Frog story

Iconic gesture Verbs—Semantic designations (Frog Story)	
<ul style="list-style-type: none"> • Calling/shouting out • Come • Crawl • Look around • Pet (an animal) • Protect head 	<ul style="list-style-type: none"> • Reprimand/scold • Search-for • Surprise (body recoil) • Quiet

On the other hand, in the Frog story, Iconic gesture verbs showed more meaning diversity than the Pear story. As noted above, Iconic gesture verbs may appear in longer string sets, however Iconic gesture then not to begin a CA sequence. A signer apparently had the option to use Depicting verbs or allow Iconic gesture verbs to depict the plot action. This chaining typically shows up when natural gesture forms collocate with them. That is to say, when a signer used Iconic gesture verbs, natural gestures also entered the CA sequence. For example, one participant placed his hand above his eyes (to shield from the sun) then moved the head (Iconic gesture verb) to communicate searching. This signer in example (6) points out this feature (the italics are natural gesture forms, actual Iconic gesture verbs are in bold):

(6)

First CA instance: FROG JUMP FROM JAR

Second CA instance: *YAWN*

Third CA instance: (hands slap face) *OH' MY GOSH*, SEARCH

Fourth CA instance: **DOG STRUGGLE** (JAR ON HEAD), FALL (dog)

Fifth CA instance: (hands slap face)-*SURPRISE*

Sixth CA instance: **CALL/SHOUT OUT**

Seventh CA instance: **CALL/SHOUT OUT, SURPRISE**

Eighth CA instance: (hands up over head) *PROTECT HEAD*

None of the participants telling the Frog story used Indicating verbs within the first ten instances of CA.

Table 4.17 demonstrates the meanings expressed with Plain verbs in the Frog story.

Signers in the Frog story allowed Plain verbs to stand alone semantically rather than using them in conjunction with Depicting verbs. Semantically, Plain verb appear

to have more force or clarity since being full lexical items. Frog story signers, if using a Plain verb might use more than one in a CA sequence. This is shown in example (7) with Plain verbs in bold:

(7)

First instance of CA: LOOK AROUND, **DISAPPEAR**
 Second instance of CA: BOY LOOK IN SHOE, **EMPTY, CAN'T FIND, DO?, YELL**
 Third instance of CA: **SHOUT**
 Fourth instance of CA: BOY HOLD DOG, DOG LICK BOY, **WALK, SEARCH-FOR, FIND, WHERE? CAN'T FIND**

Table 4.17 The plain verbs observed in the Frog story

Plain Verbs (Frog Story)	
<ul style="list-style-type: none"> • Disappear • Do • Find • Search-for • Walk • Yell/shout 	<ul style="list-style-type: none"> • Find • Perplexed • Walk • Yell/shout

Specific sections of the Frog story gave way to the use of Plain verbs. For example, signers used the Plain verb "yell/shout out" (instead of communicating it via a Iconic gesture verb which is a common option) at every point in which the story line calls for the boy to be calling out in search for the frog. This data suggests that signers have options of which type of CA verb to use, however the options are restricted more than previously understood.

Signer A: SEARCH FOR_{PV}, YELL_{PV}, YELL_{PV}
Signer B: *FIND_{PV}, YELL_{PV}, YELL_{PV}
Signer C: SEARCH-FOR_{PV}, YELL_{PV}, YELL_{PV}
(*Note: Participants tended to inflect plain verbs for aspect)

The signer may “inflect” a Plain verb for aspect thus indicating continued action or a hurried action thus indicated by the repeated sign for YELL. Each series set is from the same section of the Frog story plot. These sequences convey the section about when the boy and dog begin their search for the frog.

4.9 Chapter Summary

Chapter 4 presents the statistical and pattern data analysis thus substantiated that the types of verbs used in constructed action appear not to be a product of random chance. The first section of the chapter mentions that due to logistics and language proficiency requirements 30 data sets were used out of the original 51 participants. The demographics distributed almost equally with 52% male participants. Individuals of minority status were 20% of the participant total data set. Noted above the demographic information was not used as an analysis criteria, nevertheless no overt differences in CA use were found between due to ethnicity or gender. This unofficial finding correlates outside research (Braga, Talbot 2009 unpublished). More individual's data retelling the Frog story (for reasons noted above), had to be deleted from the final analysis than those telling the Pear story resulting in 76% of the data coming from the Pear story.

The statistical analysis supplied a correlation between the types of verb used and the use of ASL constructed action. Beginning with the verb frequencies to the actual chi-square statistic, outcomes appear to favor a rejection of the null hypothesis. Depicting verbs for both narratives averaged 74% by participants during constructed action versus the next highest percentage being merely 20%. The chi-square statistic reported indicated statistical significance for Depicting verbs.

The next chapter section discussed prominent verb semantic patterns. Participants favor overwhelmingly the use of Depicting verb when using constructed action. Signers may differ as to the number of different Depicting verbs within one instance of constructed action, but almost universally, participants used them to initiate a sequence. The percentage of specific verb types signifies that some type of rule-governed system applies to CA. For example the Indicating, Plain verbs found relative little use in constructed action, (cf. section 4.3). Indicating verbs are only found in three different sequence types. Plain verbs lead sequences in merely 16 types and are only found in 32 combinations of any type. Depicting verbs and Plain verbs preferred to appear together in strings. Plain verbs and Iconic gesture verbs may appear in an alternating pattern. In addition, the Iconic gesture verb found in one constructed action instance tended not to sequence (or be in sequence) with Indicating verb.

Semantically, verbs in constructed action tended to be verbs of motion or movement. For example, the most common meaning used is "picking" as in picking the pear from a tree in the Pear story and the often (all signers used this form if the signer

included this scene), used Iconic gesture verb meaning was the "untying and retying" of the farmer's bandana in the Pear story.

Results from the Frog story patterned similarly as the Pear story thus, participants favored Depicting verbs with parallel sequence models. Iconic gesture verbs expanded their use in the Frog story with a greater variety of different meanings.

In chapter five, the functions and sequencing of verb patterns are discussed in more detail. The first pattern detail is termed the Lexical Verb Sandwich, which is a type of repeated sequence in which the verb is restated at or near the end of the sentence (Fischer & Janis 1992). The second verb pattern, although used infrequently, repeats certain verbs, but converts them to alternate verb category types.

CHAPTER 5

PATTERN DISCUSSION

5.1 Introduction

Chapter five states the initial pattern analysis. It is noted that the verbs used in constructed action tend to not use overt signs to indicate the functioning subject or object. The Depicting and Iconic gesture verb blend the information about the subject or object within the visual reenactment itself. The Indicating verb uses movement to indicate the subject or the object licensed by the verb.

The last section of chapter five mentions two specific alternating (non-colligating) verb patterns occurring in constructed action. The first alternating pattern is the Lexical Verb Sandwich (Fischer & Janis 1992). This pattern has been noted in the literature. The second is a type of verb nesting in which verb types are converted to alternate verb types.

5.2 Verb Analysis Patterns: Function

The assigned functions for verbs within CA suggest a reliable structure system. CA Indicating verbs by their very nature include information about the functioning subject and or object of a sentence. Noted in the example (1):

(1)

[CLIMB UP]_{DV} #PEARS,[HOLD CONTAINER]_{DV}, [PUT INTO CONTAINER]_{DV}, [FILLUP]_{DV}, [PICK (PEAR)]_{DV}, [CLIMB DOWN]_{DV},[MAN WALK]_{DV}

Translation: *(The farmer) climbed up and holding the container, put the pears into it until it was full upon which he climbed down....*

This signer begins the sentence with the Depicting verb for “climb-up”. In this example by virtue of the signer portraying (reenacting) the action (CA by definition) of the farmer picking pears, and the functioning subject of the sentence (farmer) embeds or superimposes itself onto the Depicting verb itself. If the functioning subject is not overtly stated, the interlocutor understands it to be “someone”.

The above example illustrates two main concepts consistently expressed via Depicting verbs i.e. “pick” and “climb”. Both verbs incorporate the functioning subject. Depicting verbs tend to be the primary verb (indicated through its volume of use alone), which embeds the subject, and or object. This factor allows Depicting verbs to be “stacked”, that is, placed in series thus occurring one after another with no other sign(s) between them. Once the specific identify of the subject emerges, the Depicting verb will carry this concept throughout the remainder of the narrative.

Depicting verbs may also embed the functioning object of a sentence. The above example demonstrates the functioning object of the verb i.e. “pears” of the phrase -- “put into container”. The signer does not sign any overt noun phrase for this sequence. In the above example, the “#” symbol codes for American Sign Language

manual fingerspelling. This example shows the more common occurrence for object coding:

(2)

[PICK-UP]_{DV} [ONE DECIDE?... [ALL] [PICK-UP (the basket)]_{DV},
[PUT (basket) ON BIKE]_{DV}embedded object, [BOY RIDE BIKE]_{DV}

Translation: [*The boy thought to himself*] “*what should I do? I’ll take them all*], *so he picked up the basket and placed it on the bike and rode off with it.*

This signer demonstrated the boy picking up (shown by the specific handshape changing to a fist), then the signer bends the elbows, raises the hands. The signer makes a slight dropping movement at chest level. This movement sequence indicates the picking up of some type of container, which requires two hands. The specific type of container never comes up in the context presumably because the storyteller deems it not particularly significant. The signer expresses sufficient information via the CA reenactment of the scene. In this example, the participant with one continuous movement, beginning low in front then rising straight up completing with the movement secession mid-way between the signer waist and head creates two functioning verb concepts with one Depicting verb. The concept “pick-up” does not actually cease to move i.e. articulation, but transitions to the movement expressing “put-on the bike”.

Depicting verbs may also function in an adjectival way or perhaps as adverb phrases. In this example, the signer has come to the point in the story in which the boy has put the basket of pears on his bike and has ridden away. The signer then mentions

that the farmer, during this previous scene was busy picking pears oblivious to the antics of the boy. Note the gloss:

(3)

First CA instance: [PUT (BASKET) ONTO BIKE]_{DV}, [RIDE-BIKE (away from scene)]_{DV}

Second CA instance: [MAN]_{Overt noun phrase}, [PICK (PEAR)]_{DV}, [CLUELESS]_{DV}

Translation: *(He) put the basket on the bike and rode away.*

Translation: *(The man) was picking pears, but clueless (to what the boy had done).*

Another example:

[RIDE BIKE]_{DV}, [(BOY) LOOK-AT]_{IV}, [(BOY) LOOK-AT]_{IV}, [(MAN) PICK PEARS]_{DV}, [(BOY) LOOK-AT BASKET]_{IV}, [(BOY) OH-WELL]_{IgV}, [(BOY) PICK-UP BASKET]_{DV}.

Translation: *The boy looked up while riding his bike, the man was (still) picking pears, then the boy shrugged “oh well” and picked up the basket.*

In the first example, the signer continues with a further description of the farmer and his continued activity. The above examples touch on the ASL controversy about adjectives. In personal communication, Dr. Valerie Dively purports ASL does not have “true” adjectives as in the translation “picking man” or “climbing man”, but rather should be understood as “...the man is picking” and “...the man is climbing” thus effecting the English translation. This issue is beyond this research; however it is apparent that Depicting verbs can function in a adjectival manner.

ASL adjectives have the property of being placed before a noun. Both physical characteristics and colors often function as adjectives, but they can become predicates when they appear after nouns.” (Valli, Lucas 2005 p.116).

Indicating verbs may contain a vast array of information though their movement. In the case of the sign “to-pick”, its semantic field implies the following: (a). someone is doing the picking i.e. subject or perhaps agent; (b). something picked i.e. object; and (c). change of location or rather some type of prepositional phrase of location. Signers in this study indicated the subject through reenacting the action. The movement displayed the action of picking thus the main verb concept. The handshape itself is the Indicating verbs main element – spherical object. The spherical handshape expresses the object as in some type of “round” object. The signer may leave the specific type of “round” object generic throughout the narrative. In addition to these visual factors, these storytellers begin the picking movement from a position over their heads thus expressing the type of location of the object. This total packet of visual imagery tends to communicate the signer picked the pear “from” overhead. The signer has the option to state this location prepositional phrase outside of CA.

4)

[TREE]_{Overt noun phrase}, [MAN GO-TO TREE]_{DV}, [MAN PICK (PEARS)]_{DV}, [MAN CLIMB-UP TREE]_{DV}, [PICK PEARS]_{DV}, [HOLD APRON OPEN]_{DV}, [PUT PEARS INTO APRON]_{DV}

Translation: *[There was a tree there] The man went to this tree and climbed it. He picked pears from this tree and put the pears into an apron, which he held open.*

Iconic gesture verbs are used sparingly in this study, but share these two main traits with Depicting verbs. Iconic gesture verbs also embed the subject and or the

object within the verb movement. The signer may overtly state the subject or object but it is not obligatory. Note example (5):

(5)

[RED #SCARF]_{Overt noun phrase}, [TIED AROUND NECK]_{DV}, [TAKE SCARF OFF]_{DV}, [USE SCARF]_{IgV}, [CLEAN-OFF PEAR]_{IgV}, [PUT PEAR INTO BASKET]_{DV}, [RETIE SCARF ON NECK]_{DV} .

Translation: *A red scarf which was tied around his neck, he took off and used it to clean the pear. (After cleaning it), he put the pear into the basket and retied the scarf back on his neck.*

The signer began the sentence outside of CA overtly stating the functioning object via fingerspelling, upon which the signer used an Iconic gesture verb to communicate the placement as well as the use of the scarf/bandana. In example (6), the signer reveals this overlapping subject/object concept. The subject of the sequence is the boy because the signer has reproduced the action. The storyteller, by turning the head to communicate, “look right” indicates the main verb concept. The object/beneficiary understood from this Iconic gesture verb -- “looked right to see” (the other bike rider), overtly appears in the previous context. In this sequence, the Iconic gesture verb unexpectedly appears since signers tend to use Depicting verbs for this type of expression, which allows a certain degree of overlap between Depicting verbs and Iconic gesture verbs (more in section 6). This signer illustrates this concept:

(6)

[MOUNT-BICYCLE]_{DV}, [**LOOK RIGHT**]_{IgV}, [SEE]_{IV}, [TWO BIKES CONVERGING]_{DV}, [FALL]_{PV}

Translation: *He got on the bike, and then looked to the right as the bike began to converge.*

In this example, the signer merely moves the head to the right, indicating that the boy looked to the right to see the other bike as the two of them began to cross paths. The signer did not use any lexical sign to communicate the verb. The more common method for stating this concept is to use a Depicting verb or Indicating verb.

Apparently, Iconic gesture verbs allow for greater clarity of manner. The following example shows the signer using a series of Depicting verbs to describe the scene when the boy steals the basket of pears. The storyteller uses an Iconic gesture verb to indicate the manner in which he rode away with the basket of fruit.

(7)

...[BOY PUT-DOWN BIKE]_{DV}, [BOY LOOK-AT (MAN)]_{IV}, [(BOY) PICK-UP PEAR (FROM GROUND)]_{DV}, [DO?] [PICK-UP (BASKET)]_{DV}, [PUT-ON BIKE]_{DV}, [**STRUGGLE RIDE BIKE**]_{IgV}

Translation: He put down the bicycle. After looking upward (at the tree), he picked up a pear and thought to himself "should I, or not?" He picked up the basket putting it on the bike. The boy struggled to ride the bike (with the basket of pears).

The signer does not use a lexical sign to indicate the struggle; instead, the body and hand movements along with facial expression amplify how the boy is struggling under the load of pears on the bike. In this example, again all components subject, actions overlay within the reenactment movement of the verb.

Plain verbs may function as main verbs and may combine with Depicting verbs to express a compound verb sequence. The Plain verb does not embed any information

as to functioning subject or object. In this example, the signer explains what happened when the boy was riding his bike:

(8)

[BOY RIDE-BIKE]_{DV}, [**FIND**]_{PV}, [PICK-UP CONTAINER]_{DV},
[**MOUNT-BIKE**]_{DV}

Translation: *The boy found a container (of pears) when riding his bicycle. He picked it up and got back on his bike...*

The next example (9) shows a compound construction with Plain verbs and a Depicting verb:

(9)

...[**WASH**]_{PV}, [PICK-UP PEAR]_{DV}, [**WASH**]_{PV}

Translation: *The boy picked up a pear and washed it.*

Example (8) illustrates the Plain verb working in basic isolation compared with the Depicting verb. This verb does not carry information relating to the subject/object. Like the other two verbs, the Plain verb serves as the verb for the understood subject. The Plain verb represents the subject “he” as in “He washed (the pear), having picked it up.” Note the translation must extrapolate the specific subject from surrounding verbs.

This study contained only one example of an Indicating verb. The verb does serve as the main verb of the sentence, but unlike the Plain verb, the subject embeds itself within the verb movement. Indicating verbs inflect through a change of the movement path. This Indicating verb begins its production in close to the subject, and then moves toward the object. The movement path signifies the designed subject and or object. In this case, the sign originates at the signer (while portraying the boy),

therefore the subject is the boy. The sign ends at a spatial locus in front of the signer signifying third person.

The Frog story Depicting verbs align in the same manner with those in the Pear story. Depicting verbs are main verbs and link with the functioning subjects of sentences. The following example shows how the Depicting verb expresses the main subject with an overtly expressed subject.

(10)

[BOY SEE]_{IV}, [BOY]_{Overt noun phrase} [LOOK AT FROG]_{IV}, [PET FROG]_{DV}, [DOG]_{Overt noun phrase}, [DOG SNIFF AROUND JAR]_{DV}, [DOG PLACES PAWS ON JAR]_{DV}, [DOG LOOKS INTO JAR]_{IV}

Translation: *The boy petted the frog after he looked at it. The dog then sniffed around the jar. The dog places its paws on the (rim) of the jar and looked inside it.*

Congruent with the use of Depicting verbs, the Frog story embeds the sentence functioning subject. The Depicting verb may also embed the functioning object of the sentence. As in the above example, the dog placed its paws on the jar thus creating a location concept within the sentence (prepositional phrase). Signers maintained this kind of function throughout the Frog story.

Iconic gesture verbs, found more commonly in the Frog story than the Pear story, held consistent in their function patterns. As in the Pear story, subject information and or object information mapped itself primarily via sign movement. Iconic gesture verbs as subject verbs tended to depend more on surrounding Depicting verbs or added movement apparently to avoid ambiguity. In the following example, the signer begins this sequence with a Depicting verb then raises his hand as to shield his

eyes from the sun, moves the head as looking off at the horizon and ends with the question word "where":

(11)

[OPEN WINDOW]_{DV} [LOOK OUTSIDE (SHIELD EYES WITH HAND)]_{IgV} [WHERE?]

Translation: *The boy opened the window. Raising his hands to cover his eyes, he looked out (in search of the frog). He questioned; where (is that frog)?*

Another example:

[DOG LICK BOY FACE]_{DV}, [BOY JERKS AWAY (FROM DOG)], [BOY CALLS OUT (HANDS COME TO SIDE OF MOUTH – BODY MOVEMENT AS IN CALLING OUT)]_{IgV}

Translation: *The boy moved back away from the dog as it licked him, then raising his hand to the corners of his mouth, he calls out (for the frog).*

Plain verbs, in the Frog story, indicate functionality similarity as the Pear story.

This feature is clear from sentences (example 12), in which the signer chooses to use a

Plain verb which other signers may use a Depicting verb:

(12)

[BOY HOLD DOG], *[DOG LICK BOY]_{DV}, [(BOY) WALK]_{PV}, [SEARCH-FOR]_{PV}, [FIND]_{PV}, WHERE? [CAN'T], [FIND]_{PV}
(*The sign LICK can be understood as a plain verb)

Translation: *The boy was holding the dog when it licked him. The boy walked in search to find (the frog). (He thought to himself "where is the frog"); He could not find (it).*

5.2.1 Verb Patterns and Iconicity

The verb patterns may be guided via some type of iconicity balance. The feature of iconicity or various levels of iconicity has been the area of various research endeavors (Hoemann 1975, Klima & Bellugi 1979, Lloyd et al. 1985, Taub 2001). In this research a basic definition applies i.e. "...their forms in some way resemble their meanings (Taub 2001 p. 31). The fact that Iconic Gesture verbs as well as Depicting verbs "resemble" their respective meanings forms the basis for an iconicity balance concept. This principle stems from the reality that all verb types are not equally iconic that is to say Plain verbs do not share an obvious level of iconicity with that of Depicting verbs. The verbs used in ASL CA definitely skew toward Depicting verbs, yet consistently lack iconic gesture verbs which could be used throughout the narrative in a pantomime form. The consistent lack of Iconic Gesture verbs suggest that the patterns are not governed by how well the narrative is conveyed "visually". ASL never extends itself to the highest iconic potential.

The predominance of Depicting verbs allows ASL to use iconicity yet remain linguistically controlled. ASL takes advantage of its visual mode to relate concepts iconically, via a dynamic yet constrained linguistic system i.e. Depicting verbs (Johnston & Schembri 1999, Taub 1999). Thus the dominate use of Depicting verbs in ASL narrative, however such constraints of ASL linguistics do not apply to Iconic Gesture verbs. This type of communication "... is constrained by the imitator's conceptualizing power and physical skills" (Taub 2000 p. 37).

CA verb patterns demonstrate iconicity under linguistic controls thus the use of Depicting verbs rather than other types. Russo (2004) also notes this interrelation between iconicity and discourse.

In addition, from this corpus it appears that polymorphemic productive forms (*depicting verbs*) are creative forms that signers use to fill lexical gaps in a stretch of discourse.” (Russo 2004 p. 16 *italics inserted*)

In addition, this controlled iconicity concept is exemplified when Plain verbs tend to appear in a depicting or Iconic Gesture verb sequence. This insertion of Plain verbs diminishes the overall iconicity of previous verbs because Plain verbs tend to possess less iconicity features. Thus, Plain verbs provide a visually/semantically unobstructed meaning. Since depicting and especially Iconic Gesture verbs are representations, thus less overt, Plain verbs help to "clear" up any perceived misunderstanding from the visual replay of the story having extended controls upon them. Example (13) demonstrates this feature:

(13)

[BOY CALL OUT (FOR THE FROG)]_{IgV} [**SEARCH**]_{PV}, [**YELL**]_{PV}

Translation *The boy called out for the frog. He was searching for it and yelled calling out to the frog.*

In example 13, the signer repeats the main verb which is an Iconic Gesture verb meaning “call out”. The next verb is a Plain verb clarifying the “gesture” just produced. This avoids ambiguity since the gesture also could mean “shout” rather than the specific semantic meaning “call-out”. The signer wants the interlocutor to understand “better”

the Iconic Gesture verb. Controlling the amount of conceptual information forms a consistent pattern in ASL (Taub & Galvan 2001)

5.3 Verb Analysis Patterns: Colligations

The Depicting verbs in the Pear and Frog stories possess a consistent assortment of sequence patterns. This section will combine the data from the two stories, as no significant differences between the stories are present.

Typically, CA initializes with a Depicting verb. Basically, CAs tend to begin one of three difference sequences using Depicting verbs. The first possibility: the sentence begins with an overt subject or overt object noun phrase upon which the next sign starts a CA with a Depicting verb. This construction is perhaps the most common. When a new subject is introduced, into the context, the overt subject noun phrase appears first. The next type reduplicates the starting Depicting verb. In this structure, the first Depicting verb may even execute outside CA immediately followed by the same Depicting verb within a CA. The last form takes two different main verbs, connected with an "and". The first verb will be signed just prior to beginning CA and the other signed at CA initialization. These three types are illustrated in Table 4.18.

After CA begins, a series of Depicting verb may occur. In this pattern, the series of verbs is most often limited to one or just two Depicting verbs (72% of CA occurrences, 3% of these occurrences inserted a Plain verb into the series).

This type of pattern, which inserts a Plain verb into a series of Depicting verb, supports the conclusion that the sequence, reflects the signer's attempt to assure

sentence clarity since the Plain verb is an unmarked standard lexical item and takes place immediately subsequent to the starting Depicting verb. Example (14) shows this series sequence of Depicting verbs.

(14)

[SPOT]_{PV}, [NOTHING AROUND]_{n/a}, [WHATEVER]_{IgV}, [SCOOP-UP PEARS]_{DV}, [LOOK-AT PEAR]_{IgV}, [WHATEVER]_{IgV}, [PICK-UP BAKSET]_{DV}

Translation: *(He) could see nothing, and scooped up a pear. He looked at it, and then picked up the (entire) basket.*

Table 4.18 Typical sentence types used in constructed action

Type A:	[MAN] _{overt subject noun no CA} , [MAN COMES ON THE SCENE] _{Depicting verb within CA...}
Type B:	[ANIMAL SHOW-UP] _{outside CA} [ANIMAL SHOW-UP] _{within CA...}
Type C:	[MOVE BIKE FROM LEFT TO RIGHT] _{{MV1}outside CA} [PICK UP BASKET] _{{MV2}within CA...}

Specific to Depicting verbs, collocating verbs appear to be other Depicting verbs. The most common environment for a Depicting verb is another Depicting verbs. As mentioned above, signers can string several Depicting verbs together; however, the tendency is not more than two in a series as seen in example (15).

(15)

[HOLD BASKET]_{DV}, [MOUNT-BIKE]_{PV}, [PUT-BASKET ON BIKE]_{DV}

Translation: *He held the basket (of pears), got on the bike, and placed the basket on the bike.*

Several examples found in the data demonstrated overt noun phrases immediately prior to their respective verb, (Depicting verb). This over noun phrase functioned as an object to the transitive verb. The data concurs with previous ASL syntactic findings showing a signer may construct the sentence in a O(SV) type structure (Fischer 1975, Valli 2005). In addition, the overt object phrase tends to be just prior to the onset of a CA sequence as shown in (16).

(16)

[[APRON]_{Object noun phrase}, [PUT PEARS IN APRON]_{DV}], [MAN CLIMB-DOWN LADDER]_{DV}, [[APRON-CONTAINER]_{Object noun phrase}, [PUT (take) PEARS from APRON]_{DV}], [PUT (PEARS) INTO (other—ground level) CONTAINER]

Translation: *The man placed the pears into the apron, then climbed down the ladder and took the pears from the apron into another container.*

5.4 Lexical Verb Sandwich

Another pattern noted in the literature is similar to the Lexical Verb Sandwich (Fischer & Janis 1992). Typically, this construction, repeats, or copies the main verb immediately after the object, thus SV_1OV_1 where V_1 is the repeated verb. This study found, if beginning the sequence with the Depicting verb, the sequence would repeat the Depicting verb separating these two with a third Depicting verb. Other verb types are available for this construction, but this is the most sequence. The verb sequence appears in example (16):

(1)

[BOY LOOK DOWN]_{Depicting verb}, [RIDE-BIKE]_{Depicting verb}, [BOY LOOK DOWN]_{Depicting verb}

Pattern: DV₁----DV₂----DV₁ (DV=Depicting verb)

Or

[GOAT STRUGGLE]_{Depicting verb}, [CONTROL]_{Plain verb}, [GOAT STRUGGLE]_{Depicting verb}

Pattern: DV₁----PV₁----DV₁ (DV=Depicting verb, PV=Plain verb)

5.5 Verb Nesting

In addition to this construction, examples of a type of nesting within a Lexical Verb Sandwich exist. Nesting occurs primarily with Depicting verbs, but Iconic gesture verbs subject themselves as well. This type of nesting may convert one type verb into another type; however, the meaning of the converted verbs will be semantically the same. The converted verb becomes less marked. For example, the storyteller example (6) initiated CA with an overt object noun phrase beginning with a Depicting verb. This overt object repeats two Depicting verbs later. The signer demonstrates in example (2):

(2)

Verb Nesting:

[LADDER]_{Obj.np}, [MAN CLIMB TREE]_{DV}, [MAN PICK (PEARS)]_{DV}, [ONE PEAR DROP]_{DV}, [LADDER]_{Obj.np}, [MAN CLIMB TREE]_{DV}, [MAN PICK (PEARS)]_{DV}

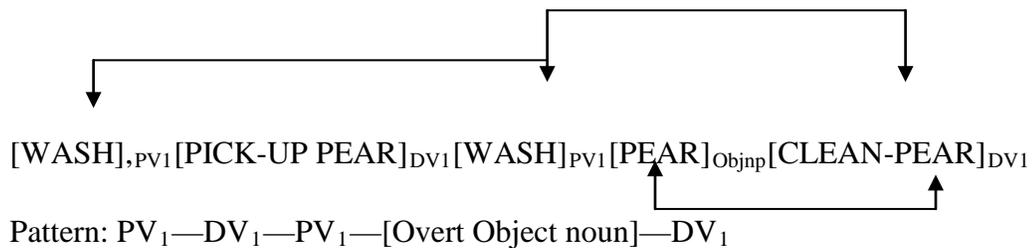
Pattern: [Overt Object]--DV₁--DV₂--DV₃ -- [Overt Object] -- DV₁ -- DV₂



5.6 Verb Embedded Nesting

Example (1) below illustrates double nesting. In this type of nesting, the signer begins with the Plain verb "wash". This sign repeats after the Depicting verb—PICK-UP PEAR. From this sign, the storyteller states the lexical sign for "pear" which is overlaid upon the movement of the subsequent Depicting verb.

(1)



Iconic gesture verbs starting a CA cycle is a marked construction. In this rare occasion, the Plain verb will tend to follow near to the leading Iconic gesture verb. The Iconic gesture verb, on occasion, may start CA just prior to a Depicting verb or they may start a CA construction if preceded by an overt noun phrase.

The Iconic gesture verbs may collocate within a series of Depicting verbs as shown in example (2).

(2)

[RIDE-BIKE]_{DV} [BOY ENTERS SCENE]_{DV} **LOOK LEFT TO RIGHT**_{IV} [BOY REACHES CENTER SCENE]_{DV} [BOY LOOK DOWN]_{IV}

Translation: *The boy was riding he bike when he entered the scene upon which he looked to his left then to his right. The boy reaches the center (where the baskets were) and looked down.*

Indicating verbs are sparsely used in this study. Indicating verbs represent a relatively small subset of the ASL lexicon. The Pear story contained only three

concepts, articulated via Indicating verbs most of which occurred subsequent to the first 10 CA occurrences. The concepts "help", and "give" represent a minuscule instances of theses Indicating verbs. With a small sample, collocation tendencies is difficult to establish, however the Indicating verb found itself produced near, or next to Plain verbs (50% of the CA Indicating verb sequences). No evident series patterns could be determined. This study produced insufficient data to determine definitive Indicating verb patterns.

Plain verbs like Indicating verbs tend not to lead a CA episode. If this is occurs, the next verb placement is either a Depicting verb or an Iconic gesture verb, additionally an overt noun phrase may immediately precede the Plain verb. Table 4.18 illustrates the various types of verb alignments. Depicting verbs, the most common type, dominate in other ways beside frequency.

Table 4.19 Various verb sequence patterns

Sequence Patterns	Depicting Verbs	Plain Verbs	Iconic gesture Verbs	Indicating Verbs
May Start CA	X	X	X	—
May series (repeated)	X	—	—	—
May stand alone	X	X	X	—
Insert into series	X	X	X	X
Found near/next	DV-PV	PV-DV	GV-DV	PV-IV

For example, they are more likely to initialize a constructed action sequence and are common in a series. Depicting verbs, when not manifesting a reduplicating string, predominately colligate with Plain verbs. The Plain verb tends not to be found in a repeated series but prefers to colligate with Depicting verbs. All verb types may find themselves inserted into a series of one type of dominate verb.

5.7 The Pear Story Patterns: ASL and Spoken Languages

Comparisons with ASL can be made with Tannen (1980) in her analysis of American English and Athenian Greek using the Pear story. The first comparison is in reference to the film itself.

“In fact, fifteen Greeks (as opposed to four Americans) never mention the word movie or film (Greek tenia or film at all.” (Tannen 1980 p.58)

It is Tannen’s observation that American speakers of English consistently reference the concept that the story is via a film and often mention “cinema-associated” jargon throughout the retelling of the Pear story.

The ASL participants retelling the Pear story compared similarly to Athenian Greek speakers. This study found few direct references to “cinema-associated” jargon of which the sign “movie” is the only example. Signers typically opened the story with a brief description of the scenery or directly begin describing the farmer picking pears. Example (1) illustrates this point:

(1)

TREE... MAN [CA[TREE_{DV}, COME-TO (tree)_{DV}, MAN PICKS (pears)_{DV}]CA]

Translation: *There was a tree and man. The man comes to the tree and picks pears (from it).*

And

HILLS, GRASS, TREE...MAN[CA[MAN PICKS (pears)_{DV}]CA]

Translation: *There were hills, grass, trees and a man. The man picks pears from the tree.*

And

[CA[PERSON PICKING (pears)]_{DV}]CA]

Translation: *There was a person picking pears...*

The ASL signers focused more on the actual plot and characters as opposed to the referencing the story medium.

Also, Greek speakers contrasted with American English speakers in that they tended to evaluate characters' motives or feelings (Tannen 1980). In her analysis, Tannen found Greek speakers often interpreted characters' motives for actions; however, this feature is minimal in ASL. Participants rarely inserted overt comments into the narrative; however, evaluative elements did occur by way of facial expression or gesture. One example of both types of comments takes place when the boy on the bicycle decides to take the basket of pears. Two participants use the sign "steal" when speaking of this event: Example (2) shows this aspect with the gesture example using "oh-well" to mean something like "I might as well go ahead and take the basket".

(2) (Overt sign)

...[_{CA}[LOOK-AT_{IV}(man)], [NOW, GO-AHEAD],[_{CA}[PICK-UP(pears)], TRY
STEAL PEAR...

Translation: *He looked at the man (saying to himself); “I will just go ahead”. He picked up the basket; (saying to himself) “I will try and steal the pears...”*

Or (gesture)

...[_{CA}[RIDE-BIKE_{DV},LOOK-AT(baskets of pears)_{IV},LOOK-AT (man picking pears)_{IV}, LOOK-AT(around again at the baskets)_{IV}, **gesture –OH-WELL,**
PICK-UP BASKET_{DV}]

Translation: *He rode up on his bike. He looked at the pears; looked at the man picking pears; looked again at the basket. “oh-well” (he said to himself). He picked up the basket of pears.”*

Based on Labov’s (1972) narrative sections, Wilson (1996) viewed constructed action itself as a type of evaluative feature. In this way the story-teller ...”expresses his/her opinion or judgments about participants in events and give each participant a more individualistic quality.“ (Wilson 1996 p. 164). This data confirmed that signers focused on specifics via constructed action. For example, when using Depicting verbs to show the farmer picking pears, signers might modify the sign production as well as the facial expression to indicate attributes such as picking “diligently”. The speed of

the sign movement may be increased coupled with a facial expression incorporating the narrowing of the eyes and or pursed lips.

Participants stating overt evaluation comments are rare but it does occur. The Pear story shows a scene in which the boy on the bicycle has his hat returned to him. In exchange for the hat, he gives each of the three boys a pear that had also helped him pick up the spilled pears. Athenian Greek speakers interpreted (evaluative force) this event with the boy on the bicycle saying “thank you”. Signers typically added this interpretation even though any audio dialogue (had it occurred) would be unavailable to the Deaf participants. Participants characteristically added this dialogue twice, the first when the boys helped gather up the fallen pears and again at the exchange. This feature of adding or “constructing” dialogue is consistent with spoken other spoken languages (Tannen 1986). Example (3) demonstrates this phenomenon:

(3)

[CA[PUT-PEARS-IN-BASKET]_{DV}],[CA[BASKET FULL]_{DV}],[HELP],[CD[PICK UP BASKET],THANK-YOU]](CD is used to denote constructed dialogue)

Translation: *He put the pears in the basket, it was full, (the boys helped him pick up the basket. He said to them; thanks...*”

And

[HAT BOY],[CA[WALK]_{PV}],[GIVE (hat)],[CD[THANKS]]

Translation: *The boy with the hat gave it to the other boy. The (other) boy said to him 'thanks'.*

The literature lacks substantial research studies using the Pear story and signed languages; yet one such study, Maroney (2004) uses the Pear story in her research of aspect in ASL. In this study, she sets out to explain that aspect in ASL is better described as periphrastic, inflectional, derivational, and/or lexical as opposed to merely inflectional. Although her research did not involve constructed action, similar findings were found. As noted above, aspect is predominately indicated through verb reduplication or lexically. This research did not specifically analyze for aspect however reduplication was noted for iterative meanings. In addition, completive aspect is expressed lexically by the use of the sign “FINISH”. Example (4) shows a completive meaning:

(4)
...[CA[PUT PEAR BACK(into the basket)_{DV}], [LOOK-AT
(pears)_{DV}],[**FINISH**],[CLIMB-UP(tree)_{DV}],[AGAIN]

Translation: *After he put the pears back into the basket, upon looking at them; he climbed back up into the tree.*

With the studies of Tannen (1980), Maroney (2004) and others, this research corroborates that ASL shares patterns of narrative found in many spoken languages (more about this correlation in section 5.8.

5.8 The Frog Story Patterns: ASL and Spoken Languages

Spoken language research, using the Frog story, analyzed various languages using Talmy (1985, 1991) typological as a backdrop Berman & Slobin (1994). This typological area centers on how language displays motion events. The motion event is an event described in which some type of entity moves from place to place or is placed in a location (Taub & Galvan 2001). The basic conceptual parts to this concept are Figure (moving or placed entity), Ground (landscape), Motion (motion or location), and Path (along which the entity moves). The original study analyzed how 5 different languages (English, German, Spanish, Hebrew, and Turkish) express these features (Berman & Slobin 1994). Taub & Galvan (2001) added ASL to this language pool. In certain ways ASL compared to languages such as Spanish and other Romance languages in that they tend to incorporate Path into the verb root (similar findings for Hong Kong Sign Language Tang & Yang 2005). Taub & Galvan (2001), noted that ASL ...”encodes a great deal of conceptual information about motion events, significantly more than English and presumably more than most spoken languages” (p.196). Their study adds that this encoding is essentially through “referential shift (*constructed action*) and iconic classifier (*depicting verbs*) forms” italics added (Taub & Galvan 2004 p. 196). How ASL expresses Figure, Ground, Motion, and Path was not specific to this present study; however the use of Depicting verbs to denote motion and path along with figure together is substantiated. For example in figure 5.1 the signer is conveying (right hand) with the one Depicting verb the dog falling out of the window,

yet moreover the verb denotes the Motion of the fall and the Path (downward) as well as the Figure (dog itself).

This research analysis of verb sequences in constructed action is consistent with the findings of Taub and Galvan (2004) in that Depicting verbs are the primary verb used in ASL narrative.



Figure 5.1 An illustration of ASL & motion, path, and figure combined

Morgan (1999), in research of British Sign Language, concludes that constructed action (his term is “shifted reference”) for an integral part of the narrative.

5.9 Chapter Summary

This chapter begins the discussion of the emerging verb patterns. The propensity for Depicting verb necessitated a discussion of their respective sentential function. Typically, the Depicting and Iconic gesture verbs blend the functioning subject or object in a sentence. These verbs do not need overt signs to convey these semantic roles taken by the subject or object. The Indicating verb uses morphology to indicate inflection for the subject or object and behaves in the same manner in

constructed action. The Plain verb, uses relatively infrequently in constructed action, requires an overt subject or object.

The chapter lists various types of colligations found in the data. The Depicting verb tends to appear in multiple strings. The Plain verb tends to be the only verb that may alternate with a string of Depicting verbs. This study found examples of a type of nesting system. This nesting appears to manifest itself in two forms. The first form repeats the main verb, termed Lexical Verb Sandwich, previously noted in the literature. The second form allows for verb nesting. The chapter concludes referring to studies in spoken languages using the Pear and the Frog stories and how they compare or contrast to ASL. Chapter 6 discusses possible conclusions and applications to the findings of this research as seen in linguistic studies of ASL as well as sign language interpreter education.

CHAPTER 6

CONCLUSION AND APPLICATIONS

6.1 Introduction

This chapter presents conclusions and applications to this research. Linguistic research of ASL is new, and thus one is likely to encounter many new challenges but, at the same time, there are many discoveries to make by its study. This research concludes that these findings benefit users of ASL and those individuals seeking to understand and use the language whether in teaching or interpreting. Consumers i.e. Deaf persons using ASL are also benefited since interpreters can better use constructed action to communicate clearly.

The chapter also notes possible applications to the data result patterns. The first pattern implication is a type of Verb Hierarchy found within constructed action. Due to the consistent patterns found, constructed action appears to follow a hierarchy of verb types. In addition, it can be deduced that a potential reason for this hierarchy, along with noted patterns, is due to a formal structured system which controls verb patterns. This verb pattern system appears to be naturally dependent upon verb semantics, but verb iconicity as well. It appears that each constructed action verb applies a certain semantic or iconicity weight to the sentence. The ASL user seeks to

maintain a balance between the signs with arbitrary meaning and those assigned meaning via their respective iconicity. The chapter ends with suggestions for further research in the area of constructed action. The literature offers little to suggest any other controls for constructed action such as various types of genre, or non-linguistic visual elements. ASL uses constructed action, but the current research has yet to study its use in narrative or discourse.

6.2 Verb Pattern Summary

This study analyzed the verb types used in CA and found significant patterns. While the literature does not agree as to how to categorize ASL verbs, this research followed the basic verb sets outlined by Scott Liddell (2003). ASL verbs divide into four categories. The first is the *depicting verb*. This verb utilizes space in a unique way to convey semantic and grammatical information (Supalla 1986). The second is the *plain verb*, which is that type which does not relay information relating to the subject or object of the sentence. The Plain verb does not "inflect" morphemically (via movement) to indicate subject (agent) and or object (recipient/benefactor) information. The third verb type is the '*Iconic gesture*' verb which is more aligned with gesture elements. This verb type uses the body, hands, or head without lexical forms to communicate verbal information. The '*Iconic gesture*' verb remains the least analyzed subcategory of ASL verbs. The fourth type of ASL verb is the *Indicating verb*. The Indicating verb uses path movement (viewed as containing specific agreement

morphemes) in three-dimensional space to "inflect" to show verb agreement (Padden 1990).

While not noted in previous literature, this research suggests that the principal verb used in CA is the Depicting verb. Congruent with this finding, this study advocates that CA also tends to initialize with a Depicting verb. In other words, CA starts most often with a Depicting verb (73.5% of the CA occurrences).

Propensities to collocate verb types within CA emerge from the results. Depicting verbs gather with other Depicting verbs. When the Plain verb inserts itself into this series, Depicting verbs will complete the sequence (90% of the CA occurrences). The Iconic gesture verb is far less frequent than first expected as compared with the Depicting verb. The Iconic gesture verb prefers to follow a Depicting verb. Thus, this research concludes that CA may possess a formal structured system with concrete linguistic restrictions and licenses for its verb type patterns.

6.3 Constructed Action Verb Hierarchy

This array of verb patterns suggests a basic hierarchy of CA verbs. The following example denotes that the Depicting verb is the leading type of verb in CA with the next in line being the Plain verb and the indicting verb being the least commonly used verb to lead a CA sequence.

CA verb hierarchy: DV—PV—GV—IV

One may extrapolate a type of verb sequence tendencies and a verb hierarchy from the CA verb patterns. In other words, the verb patterns found in the data suggest both a sequence tendency as well as which patterns are marked/unmarked. The following is such a list (the parenthesis indicates an optional verb type):

If CA starts with a Depicting Verb: (overt NP)--DV—PV—DV—(DV)

If CA starts with a Iconic gesture Verb: (overt NP)--GV—GV—(DV)
(PV)

If CA starts with a Plain Verb: (overt NP)—PV--DV

If CA starts with an Indicating Verb: (DV)—(IV)—(DV)**

*The overt noun phrases actually occur prior to the beginning of CA.

**The exact pattern lacks sufficient data samples in order to make a clear determination.

This data concurs with the literature that CA is indispensable in ASL narrative. Wilson (1996) points out that Constructed Dialogue –CA's counterpart may actually control elements within an ASL narrative. The consistent use of CA by all the participants in this study supports the understanding that CA is a fundamental component of ASL narrative.

6.4 Constructed Action Potential

Two alluding overlapping aspects about CA remain. Since many ASL researchers deem CAs to be non-obligatory, they hunt for the matrix which motivates the signer to use CA.

At the same time, a goal is to describe them in sufficient detail that the facts of their forms (*speaking of constructed action depicting verbs*) and execution are available for consideration in relation to different analytic and theoretical motivations.” *Italics added* (Duncan 2005 pgs.298,299).

When mentioned, the literature tends to advocate that a CA is a "reporting" or quoting feature for ASL similar to quoting in spoken language (Padden 1986, 1990; Roy 1989; Winston 1995; Poulin 1995; Engberg-Pedersen 1995; Lillo-Martin 1995; Metzger 1995; Wilson 1996; Liddell 1996; Lee et.al 1997,etc). In this view, the prompt is a need to quote someone.

Along the same lines, other linguists point to CAs as a signer's technique to make the narrative interesting, vivid, and more understandable (Roy 1989; Metzger 1995; Engberg-Pedersen 1995; Rayman 1999; Emmorey 2004; Dudis 2004). Yet still another understanding views CA as a method by which the signer merely describes the verb manner as in "how" the verb took place (Engberg-Pedersen 1995).

Fundamentally, in all these views, the signer him/herself primarily motivates CA use. In other words, according to the perspectives above, CA will initialize from internal stimuli originating within the signer's style or desired level of imagery. The signer makes the decision to inaugurate CA or not. One might then conclude that the signer is free not to use CA at all or to use it for every verb in a narrative. The data does not support this type of flexibility with CA. This data and other ASL research support the predominance of CA in narrative (McIntire & Reilly 1996, Liddell 1996, Liddell & Metzger 1998).

The consistent and structured verb patterns do not corroborate a totally random account for CA initiation. This view is supported with research suggesting obligatory

elements related to CA. Quinto-Pozos (2007) presents the theory that CA could be considered a semantically required construction;

Polycomponential signs, following the reasoning given above, may be less clear if used without constructed action, but the forms of polycomponential signs can be used to describe more contexts and their ability to co-occur with a larger number of signs (and co-occur with constructed action). (Quinto-Pozos 2007 p. 1303)

To begin with, it appears CA is evoked, at least in part, on the lexical level. Susan Mather (1989) noted this concept in her study on ASL storytelling to Deaf children. She mentioned that some English words do not have designated signs. The signer therefore uses CA to communicate these "non-lexicalized" concepts. This quality of ASL allows the language the advantage to "create" as needed in order to communicate various thoughts. If the motivation to use CA is merely a stylistic feature, such a structured verb pattern system need not exist.

In an earlier work Mather (1996), this lexical requirement view notes that the most common verb i.e. "pick" (Pear story) as in "pick" a pear from a tree is not in any ASL dictionary. The signs for "pick-up" as in "pick up" a key or "pick-up" the dry cleaning have assigned signs, but in this case, the signer is constrained to use an alternate structure. It is true the signer may use a Depicting verb outside of CA, however, all participants in this study used a Depicting verbs within CA. The data substantiates this aspect since every participant used CA to convey the concept "pick-pears-from-a-tree".

Another motivation behind CA instantiation relates to iconicity. CA under the constraints of a hierarchy generates a possible unification concept of its linguistic and

iconic elements. The term “*icon*” is used to mean a sign that represents an object through similarity with that object such as pictures or diagrams (Peirce 1960). The visual medium of ASL lends itself to utilize this aspect to its fullest (Aronoff, Meir, and Sandler 2000). This visual correlation is not a separate component (considered non-linguistic) in ASL but an integral part of the grammar.

My claim is that when viewed from a cognitive perspective, grammatical iconicity is revealed to be just as ubiquitous among signed languages as it is among spoken languages—indeed, because visible movements of hands have even more semiotic potential than the predominantly invisible movement of vocal tract articulators, signed languages are even more richly iconic than spoken languages. (Wilcox 2004 p.135).

Building from a Cognitive Grammar (Langacker 1987, 1991a, 1991b, 2000) perspective, Wilcox (2004) contends that the articulators of ASL (hands and their respective movements) provide the essential elements necessary for the conceptual constructs for cognitive grammar. His “cognitive iconicity” theory shows that polymorphemic forms (*depicting verbs*) use iconicity in the grammar of ASL. The process of iconicity ...”exhibit a systematic pattern of iconic relations in which semantic objects, the things of cognitive grammar, are mapped onto handshape, and process is mapped onto phonological movement.” (Wilcox 2004).

The CA patterns found in this study substantiate the cognitive array governing the iconic elements present in *Depicting verbs*. In referencing this aspect (McCleary and Viotti 2009) noted consistent patterns in their Pear story research in Brazilian Sign Language. These patterns, in turn, denote upward limits to the number of iconic

elements which also suggest cognitive factors are present in CA Depicting verbs (Taub & Galvan 2001).

This idea promotes a viewpoint that ASL structures its iconicity toward a cognitive/visual equilibrium. The level of mental image-correspondence between the actual and the "arbitrary" is controlled along specific system constraints. The data alleges the CA hierarchy is Depicting Verb – Plain Verb – Gesture Verb – Indicating Verb. This framework represents the order of frequency, but might also infer an order of iconicity exists as well. That is to say within this language each verb (within CA) represent an established level and its affect on the visually analogous to arbitrary outcome i.e. iconicity equilibrium. This concept explains the reason that no example of ASL narrative escalating into higher and higher levels of iconicity exist, thus suggesting it has restraints. The data bear out these restraints are systematic.

The restriction on the iconic gesture supports this view. Note the perceived greatest level of iconicity is the Iconic gesture verb; however, ASL (in CA) places the greatest restrictions on this verb. This verb conceivable would begin CA sequences and or permeate the CA phenomenon yet this syntactic arrangement is rare and only occurs when overt noun phrases accompany it. Perhaps CA selects Depicting verbs to lead the construction, since it lends itself best to reenactment of the action, but the next most common second verb in the hierarchy is the Plain verb. This verb tends to possess the greatest level of semantic force, but the least iconicity, which would account for the contention that the Plain verb frequently clarifies the depicting or Iconic gesture verbs

in a CA sequence. As noted above, the Plain verb may implicitly restate, by way of a lexical sign, a verb either preceding or subsequent to it. The Plain verb would, in effect, lower the iconicity level and at the same time lower the "arbitrary" level of the verb sequence. This CA system structures itself to maintain equilibrium between the levels of semantic clarity i.e. low level of arbitrary to that of iconicity. For example, when the gesture features of Iconic gesture verbs raise the level of "semantic" arbitrariness, but increase iconicity, the system licenses a verb type to enter the sequence in order to lower this feature while still maintaining a natural level of iconicity innate to a visual language. With increased iconicity, the arbitrary level also increases and ambiguity or miscommunication may occur. Within this framework, the following binary set emerges:

Table 6.1 The characteristics ASL constructed action verbs

Verbs	Arbitrary/less iconic	Iconic
Depicting	--	+
Plain	--	--
Iconic gesture (gesture)	+	+
Indicating	--	---

6.5 Importance/Significance of the Study

This study is significant because even though CA's use and its importance have been fully documented, its conditions and constraints have been the subject of little substantive research (Meurant 2004). ASL scholars have noted (e.g. Roy 1989, Wilson

1996), that further studies into the linguistics of CA may fill a research need. The current study seeks to help fill this literature and knowledge vacuum. New information on the use of CA in ASL and its constraints may open up new insights and avenues for further research such as additional constraints or licensing needs.

Linguistically, this research contributes in several areas. The first deals with the growing support to view certain aspects of CA as obligatory (Quinto-Pozos 2004). This research supports this new research noting unique comparisons with spoken language but also contrasts previously unmentioned. This research adds to this growing awareness that ASL CA presents new avenues of research exploration. Spoken languages researchers have embarked upon noting possible structural role(s) that CA may employ (Sidnell 2006) which this present research supports and extends. Also, this research displays results which lead away from the concept that iconicity is only gesture thus not linguistic. Previous research viewed that acknowledging the fact of iconic elements diminished the credibility of ASL as a language (Wilcox 2004). The two elements of gesture and CA iconicity are supported to be fully functioning in the language (Liddell & Metzger 1998). This research suggests that not only does CA have structure but a grammar for this feature exists.

In addition, we have suggested that we can find grammar in the very gestuality that seemed to be such a threat, if by grammar we understand patterning like those found in other visual and spatial semiotic systems.” (McCleary & Viotti 2009 p.18, 19).

An increased understanding of the possible structures and uses of linguistic information in ASL will greatly benefit on a practical level current and future users of the language. Since a linguistic minority using the services of sign language interpreters uses ASL, an ever-growing population of users seeks to serve better their "consumers". The indirect consumers of this research are Deaf persons seeking open and full access to the "hearing" world via interpreters, and ultimately to contribute to general knowledge. The direct consumer of ASL research is the interpreter and the interpreter-in-training. Interpreter educators in colleges and universities across America will benefit from this research. With better information, interpreter educators can better educate their students who will improve effective communication for Deaf "consumers".

American Sign Language programs at the university level will also benefit from this research. In most states, ASL is offered to students seeking foreign language credit. In these classes, ASL educators benefit from this research in that they can help students better communicate with the Deaf community and therefore build a better bridge between the "hearing" world and that of the "Deaf" world. Sign language interpreter training programs must educate new interpreters in complex aspects of language, yet interpreters may not understand the CA matrix particularly as it relates to the various age groups of school age Deaf children. Emmorey & Reilly (1998) found that children at seven years old had not perfected CA production. In addition CA appeared to vary depending on the audience, that is to say a register variation (Quinto-Pozos 2010, 2012).

Researchers of foreign sign languages will also benefit from this study. Cross-linguistic studies of sign languages are just beginning to be conducted and published (Emmorey 1995). This research, along with other fresh investigations (Weast 2008) from the University of Texas at Arlington, adds to a growing body of sign language research investigating new and previously held theories. This study contributes to the growing corpus of sign language in ASL and foreign sign languages since CA research has been conducted on Swedish (Ahlgren 1990), Danish (Engberg-Pedersen 1995), and French Canadian (Poulin & Miller 1995), sign language among others.

6.6 Implications

Two basic outcomes were expected to result from this study. The first is further support for the notion that ASL, like spoken languages, manifest similar patterns of communication (Chambers 1995), such as those shown by the different parts of speech of nouns, verbs, etc. Secondly, insights into ASL discourse structure greatly benefit the learner of American Sign Language, but the consumer as well. The professional learner is the licensed interpreter. Interpreter training programs benefit by every facet of ASL linguistic research and both the consumer and the Deaf person may experience better services through better communication. The teaching of ASL to the non-professional may also be helped by giving a more accurate picture of ASL thus aiding communication between the non-professional hearing individual that the Deaf community.

Some linguists understand gesture to be an integral part of the language message (McNeill 1991, 2000). The gesture-linguistic link, which is clearly present in ASL, may prove to add valuable information to the gesture – linguistic debate, to which this study may add.

The local level benefits by this study. ASL is taught in many colleges and universities using a functional notional approach for teaching. This approach emphasizes story-telling in its curriculum. None of the textbooks in ASL explains ASL narrative structure in relation to CA, merely its visual description. Further information could be of benefit to ASL teaching curriculum development. Along with college courses, interpreter training programs will benefit. Since quality service to the Deaf community is a constant pursuit. Quality of service is directly related to the ASL mastery level of community interpreters. Thus, with interpreters who are more linguistically knowledgeable in ASL, communication between the Deaf community and hearing community may improve.

6.7 Further Research

This study opens the CA discussion, expanding it into new facets of research. The first area of research investigates other possible causes that may lead the signer to use CA. To date no research has analyzed whether various narrative genre influence the verb types used in CA or CA frequency. The Pear story as well as the Frog story possessed narratives soliciting action/ movement verbs, which necessitated Depicting verbs, which may have an influence on the proliferation of CA instances. Research is

needed which uses narratives containing multiple lexical sign options. In addition, grammatical, prosodic element may affect the use of CA. The signer's target audience may also change the use of CA i.e. narrative for a child audience versus adults.

Comparative and contrastive areas of research may uncover new knowledge about other aspects of ASL narrative. A pilot study prior to this research noted that frequently CA accompanied Constructed Dialogue. Hence, Constructed Dialogue, while not a specific topic in this study, needs greater depth of research possibly determining contrasts and or comparisons.

Researchers have claimed that ASL narrative possesses iconic features compared to that of motion picture films. ASL linguistics needs studies which analyze ASL not just from a narrative matrix, (Wilson 1996), but from a view that examines whether ASL may structure narrative ironically/visually as compared to an actual motion picture. How ASL develops a narrative plot visually has yet to be analyzed. ASL affords linguists a chance to delve into how language universals work in a visual medium. This visual medium in narrative, procedural expository discourse, (Longacre 1996) etc. will no doubt reveal much about how human language works.

APPENDIX A

GLOSS PEAR STORY (SAMPLE)

Chapter Five: Analysis

Participants #_12_____

Numbers: 17 occurrences, 32 DV, 10 GV, 4 PV, 5 IV.

1. SNVP:DV:CL:CLIMBUP (using a ladder), #PEARS, SNVP:DV:CV:HOLDING A

CONTAINER, SNVP:DV:CL:PUT INTO CONTAINER, VP:PV:FILLUP,

SNVP:DV:CL:PICK (pear), SNVP:DV:CL:CLIMB DOWN (using a ladder),

SNVP:DV:CL:MAN WALKING.

2. SNVP:DV:CL:TAKE (pears) PLACE INTO CONTAINER (basket). Ends with

comment: EMPTY

3. SNVP:DV:CL:CLIMB UP (using a ladder), Obj. noun phrase: TREE,

SNVP:DV:CL:PICK (pears). Ends with subject noun phrase for next sentence: OTHER

BOY.

4. Prior to CA, subject noun phrase: OTHER BOY/SNVP:DV:CL:RIDE BIKE. Ends

with description using classifier for: BIKE MOVE FROM LEFT TO RIGHT (across

stage).

5. Scene change with sandwich: SNVP:DV:CL:PICK (pears). Ends with sandwich

from #4 as in bike moving across stage.

6. Scene focus on boy: SNVP:PV:SEE (looking left down), SNVP:DV:CL:BIKE,

#PEARS, SNVP:DV:CL:LOOK AWAY (to the right), SNVP:PV:THINK-ABOUT.

Ends with comment: #BACK PEARS\FINISH

7. SNVP:DV:CL:LOOK-UP, (cd-boy is thinking):MAN,SEE, ME,

SNVP:DV:CL:LOOK-UP++, NOTHING (with gesture head looking up and boy

moving to ND side, FINE(back to sandwich:cd-thinking), SNVP: DV: CL: PICKUP
(basket), SNVP:GV:LOOKUP. Ends with obj. phrase: BICYCLE.

8. (while holding the basket):SNVP:DV:CL:PICKUP (bike), SNVP:DV:CL:PICKUP
(basket) PLACE ONTO (bike), SNVP:PV:MOUNT, SNVP:DV:CL:RIDE-BIKE.

Ends with comment: THERE GIRL

9. SNVP:DV:CL:RIDE-BIKE, SNVP:DV:BIKES GET CLOSER TO EACH OTHER,
SNVP:DV:CL:BIKES CONVERGING. Ends with the sandwich of the bikes coming
together.

10. Prior to the CA, sub.noun phrase:BOYS/SNVP:GV:HIT BALL WITH PADDLE.

Ends with the fs: #PING PONG.

APPENDIX B

GLOSS FROG STORY (SAMPLE)

#_31_____

Numbers: 11 occurrences, 13 DV, 3 GV, 13 PV, 0 IV.

(object noun phrase=onp), (subject noun/verb phrase=snvp), (subject noun phrase-no verb element=snp), (Description adjective phrase=dap).

1. Prior to the CA, narrator comment: WHAT BOY DO?, Sub noun: DOG/ OBJ PHR. DV:CL: JAR, SNVP:DV:CL: DOG LOOGIN IN EXCITEMENT AT THE FROG IN THE JAR, SNVP:GV: HAND HOLDING UP HEAD (leaning on hands). Ends with comment:DO++?
2. SNVP:GV: (sandwich-=SNVP:GV: HANDS HOLD UP HEAD, SNVP:DV:CL: BOY AND DOG LOOKING AT THE FROG. Ends with a comment: NOTHING
3. Prior to CA, SNVP:DV:CL: FROG WALKING AWAY FR. JAR/ (sandwich— SNVP:DV:CL: FROG WAKING AWAY FR. JAR, SNVP:DV:CL: LOOKING TO RIGHT. Ends with scene end: LEAVE SCENE (main verb).
4. Prior to CA, main verb: GET-UP/ SNVP:GV: LOOKING AROUND, PV:DISSAPPEAR.
5. OBJ.PHR.CL: JAR, SNVP:DV:CL: DOG WAGGING TONGUE FR. INSIDE JAR, SNVP:DV:CL: DOG BARKINIG FR. INSIDE JAR.
6. Prior to CA, obj. phrase: SHOES/ SNVP:DV:CL: BOY LOOKING INSIDE OF SHOES, EMPTY, NOTHING, CAN'T FIND, DO++?, YELL (narrator mode).

7. Prior to CA, comment—THERE OPEN WINDOW—obj. phrase/ (sandwich—
SNVP:PV: YELL. Ends with sub. For next sentence: DOG...
8. Obj. phrase: DV:CL: JAR, SNVP:DV:CL: DOG BARKING FR. INSIDE JAR.
9. SNVP:DV:CL: BOY HOLDING DOG, SNVP:DV:CL: DOG LICKING BOY,
SNVP:PV: WALK, SNVP:PV: SEARCH-FOR, SNVP:PV: FIND, WHERE?,
CAN'T SNVP:PV: FIND.
10. Prior to CA, sub. Noun: DOG/ SNVP:DV:CL: DOG BARKING,
SNVP:DV:CL: BOY CAUGHT IN DEER ANTLERS, SNVP:DV:CL: DEER
RUNNING. Ends with narrator comment verb: DO++?.

APPENDIX C

GLOSS FROG STORY (PILOT STUDY)

Gloss: Verb type: Pear Story Pilot study (summary) con't	
9.GLOSS: NDH Gloss	<p>Picking (fruit)</p> <p>LEFT (or toss there?) (huh) #<u>BACK</u> (up)</p> <p><u>to right)</u> TO (tree)</p> <p style="text-align: right;">Indicating</p>
Verb type:	Depicting:D3
10.GLOSS: NDH Gloss	<p>MAN GOAT(finding sign) <u>KNOW?</u> GOAT</p> <p><u>KNOW?</u> GOAT</p> <p>That there ++</p> <p style="text-align: right;">Plain</p>
Verb type:	Plain
11.CL: R.S. DH GLOSS: NDH Gloss Verb type:	<p>CL:1 (bent) right to left</p> <p>Man/goat <u>moved</u> MAN NOT <u>SEE</u> (right</p> <p>to left down) UP (tree)</p> <hr/> <p style="text-align: center;">Depicting:D3 Plain</p>
12. GLOSS: NDH Gloss	<p>CL:1 (right to left) CL:2</p> <p>left LOOK-AT tug to</p> <hr/> <p>(Man?) <u>moved</u> from right to left (Looking at apples)</p> <p><u>LEAVE</u> <u>DROOL</u> (goat?)</p> <p>["drool" may have been in RS]</p>
Verb type:	Depicting:D3 Depicting:D3 Plain
13.GLOSS: NDH Gloss	<p>I UP <u>Picking (fruit)</u></p> <p>MAN MAN</p> <p style="text-align: center;">Ges(whatever)</p>
Verb type:	Depicting:D3
14.GLOSS: NDH Gloss	<p>Riding bike (hs/move alter)</p> <p>BOY SHORT KID BOY SHORT <u>RIDE-</u></p> <p><u>BIKE</u></p>
Verb type:	Plain Depicting:D3

Gloss: Verb type: Pear Story Pilot study (summary) con't	
15. GLOSS: NDH Gloss	<p>CL:3/b (coming fr. Right) (the boy <u>comes</u> fr right) NOT <u>SEE</u> MAN NONE</p> <p style="text-align: right;">pt. (up</p> <p>right) not <u>see</u></p> <p>Verb type: Depicting:D3 Plain Plain</p>
16. GLOSS: NDH Gloss	<p style="text-align: right;"><u>Picking (fruit)</u></p> <p>Well Pt.(up right)</p> <p>Verb type: Depicting:D3</p>
17. GLOSS: NDH Gloss	<p>CL:3 (forward)</p> <p style="text-align: center;">Surprise look around</p> <p>Bike (placed on scene) <u>SPOT</u> COOL</p> <p>APPLE COOL</p> <p>pt center</p> <p>Verb type: Depicting:D1 Indicating Depicting:D3 (Iconic gesture)</p>
18.GLOSS: NDH Gloss	<p>CL:3/b CL:3/b (lay dwn) CL:C Pull apple out(think what to do)</p> <p>ALL ONE #BASKET Bike (on scene) <u>change mind</u> ominous</p> <p>Verb type: Depicting:D1 Depicting:D1 Depicting:D3 Plain</p>
19. GLOSS: NDH Gloss	<p>CL:2/b CL:CC Grab basket place on bike ride bike</p> <p style="text-align: center;"><u>Get on bike</u></p> <p>(feet sticking out)</p> <p>Verb type: Depicting:D3 Depicting:D3 Depicting:D3 Plain/Depicting:D3</p>

Gloss: Verb type: Pear Story Pilot study (summary) con't	
20. GLOSS: NDH Gloss Verb type:	<p>CL:3/b CL:3/b (bike wobbling) (bike wobbling)? Bike wobbling feet sticking out Bike wobbling</p> <p style="text-align: center;">Depicting:D3 Depicting:D3</p>
21. GLOSS: NDH Gloss Verb type:	<p>CL:2/2 (cl:3) 2 LOOK-AT GIRL GIRL #AGE SAME cl:3 (from far left)..... Indicating Depicting:D1</p>
22. GLOSS: NDH Gloss Verb type:	<p>CL:3/3 CL:2 CL:L CL:L/1 Boy looking at girl as passed (hat blowing off) 2 bike approach CL:L Hat blow off Depicting:D3 Indicating Depicting:D1—D3</p>
23. GLOSS: NDH Gloss Verb type:	<p>CL:3/b CL:3/b..... Bewildered CARELESS (bike on scene) #ROCK (hit rock) fall to right Depicting:D3 Depicting:D1 Depicting:D3</p>
24. GLOSS: NDH Gloss Verb type:	<p>CL:3/b (bike fallen) SPREAD-OUT OTHER 3 BOY ominous Pt. (distal) Depicting:D3 Depicting:D3</p>

Gloss: Verb type: Pear Story Pilot study (summary) con't	
5. GLOSS: NDH Gloss	<p style="text-align: center;">Other boys look at the bike boy</p> <p>gather pears toss into basket</p> <p style="text-align: right;"><u>HELP</u></p> <p>Three cl:1(boy fr. Left) cl:c</p> <p>Verb type: Depicting:D3 (Iconic gesture) Indicating</p>
26. GLOSS: NDH Gloss	<p style="text-align: center;">Fallen boy hurting boys helping boy w/hurting knee</p> <p>hurting boy hold knee</p> <p style="text-align: center;"><u>HELP</u></p> <p>HURT (knee)</p> <p>Verb type: Plain Depicting:D3(Iconic gesture) Iconic gesture Depicting:D3 (ges.)</p>
27. GLOSS: NDH Gloss	<p style="text-align: right;">CL:3/b</p> <p style="text-align: center;">Boys helping "OK, OK" pick up basket</p> <p>boys looking see ok (ges) "OK"</p> <p style="text-align: right;"><u>Upright</u></p> <p>bike</p> <p>Verb type: Depicting:D3(Iconic gesture) Depicting:D1 Depicting:D3 (Iconic gesture)</p>
28. GLOSS: NDH Gloss	<p style="text-align: center;">Put pears in basket nd=("ok") put basket</p> <p>up_ "thanks ++"</p> <p style="text-align: center;">FULL APPLE</p> <p style="text-align: right;">Ok?</p> <p>(thanks)</p> <p>Verb type: Depicting:D3 Depicting:D3</p>
29. GLOSS: NDH Gloss	<p style="text-align: center;">CL:3/b</p> <p style="text-align: center;">"OK?" boy walk bike</p> <p style="text-align: center;">(bike upright) <u>WALK</u></p> <p><u>SPOT</u> (right)</p> <p style="text-align: right;">cl:3</p> <p>(far left to right)</p> <p>Verb type: Depicting:D1 Plain Depicting:D3(Iconic gesture) Depicting:D3 Indicating</p>

APPENDIX D

SIGN CATEGORY CHART (PILOT STUDY)

CONSTRUCTED ACTION Verb Patterns

Line #	Meaning	Verb type	Phrase/verb type	<u>CA verb type</u>	Phrase/verb type	Phrase/verb type	
4	Picking	NP-[overt]	PP-[overt]	<u>ICL: DGV</u>			
5		VP-[overt]	NP-[overt]	<u>ICL: DGV</u>			
9		VP-[overt]	PP-[overt]	<u>ICL: DGV</u>			
13		PP-[overt]	NP-[overt]	<u>ICL: DGV</u>	NP-[overt]		
16		(comment)	VP-[overt]	VP(adj p)- <u>ICL: DGV</u>			
38		NP-[overt]	PP-[overt]	<u>ICL: DGV</u>	VP	VP	
4	Empty-into	PP-[overt]	VP-GV	<u>ICL: DGV</u>			
5			VP-GV	<u>ICL: DGV</u>			
7	Throw-into	VP-[CL:]	NP-[overt]	<u>ICL: DGV</u>			
12	Look-at		VP:CL:	<u>CL:</u>	<u>GV</u>	<u>GV</u>	
22			VP/CL:	<u>CL:</u>	<u>CL:</u>	<u>CL:</u>	
35		Two verbs		<u>GV</u>	<u>CL:2/2</u>	<u>GV</u>	<u>GV</u>
40				CONSTRUCTED ACTION prior	<u>CL:/CL:</u>	<u>CL:</u>	<u>GV</u>
41				CONSTRUCTED ACTION prior	<u>CL:</u>	VP[overt]	

CONSTRUCTED ACTION Verb Patterns (con't)						
Line#	Meaning	Verb type	Phrase/verb type	<u>CA verb type</u>	Phrase type	verb type
19	Grab-pickup			<u>ICL: DGV</u>	CL:	GV
27			GV	<u>ICL: DGV</u>	CL:	GV
19	Place-on	GV	CL:	<u>ICL: DGV</u>	Overt + GV	
22	X fly-off	CL:	CL:	<u>CL:</u>	CL:	
14	Ride-Bike	AdjP-[overt]	VP-[overt]	<u>Overt-IC L: DGV</u>	/CL:	
19		CL:	GV	<u>Overt-IC L: DGV</u>	/CL:	
18	Take-out of	CL:	CL:	<u>CL:</u>	GV	
29	Walk by bike	CL:	VP-[overt]	<u>ICL: DGV</u> <u>**</u>	CL:	
38	Come-down	GV	VP-[overt]	<u>CL:</u>	CL:	
38	Sit-down	VP-[overt]	CL:	<u>CL:</u>		
40				<u>CL:</u>	CL:	CL:

CONSTRUCTED ACTION Verb Patterns (con't)						
14	Ride-Bike	AdjP [overt]	VP [overt]	<u>Overt+</u> <u>ICL: DGV</u>	/CL:	
17	Surprise		CL:	<u>ICL: DGV</u>	VP [overt]	
17	Look-around		VP [overt]	<u>ICL: DGV</u>	Quote in RS	
19	Ride-Bike	CL:	CL:	<u>Overt+IC</u> <u>L: DGV</u>	/CL:	
23	Caught off guard		CL:	<u>ICL: DGV</u>	CL:	
25	Look-at (with interest)	NP	NP	<u>ICL: DGV</u>	VP [overt]	VP CL:
26	Fallen boy hurting		GV1/	<u>ICL: DGV</u>	VP [overt]	GV
26	Fallen boy	VP [overt]	<u>ICL: DGV</u>	<u>ICL: DGV</u>	VP [overt]	GV 3rd time
26	Fallen-boy	GV	VP [overt]	<u>ICL: DGV</u>	/ICL: DGV	
26	X help Y (plural subject)	<u>ICL: DG</u> <u>V</u>	VP [overt]	<u>ICL: DGV</u>	<u>ICL: DGV</u>	AP [overt]
27	Look-at (with interest)		CL:	<u>ICL: DGV</u>	Quote in RS	GV1
27	X help Y	AP [overt]	/ICL: DGV	<u>ICL: DGV</u>	Quote in RS	GV1

Iconic Gesture Verb (GV):patterns:

Line #	Meaning	Phrase/ verb type	Phrase/verb type	<u>CA verb type</u>	verb type	verb type
4	Picking	NP [overt]	PP [overt]	<u>GV1</u>	GV1	/NP[overt]
4	Empty- into	PP [overt]	VP GV	GV1	/NP[overt]	VP[plain]
5	Picking	VP [overt]	NP [overt]	<u>GV1</u>	GV1	/CL:1
5	Empty- into		VP GV	GV1	/CL:1	CL:1
6	Empty out X into or Y		CL:	GV1	/NP#	PP
7	Throw- into	VP [CL:]	NP [overt]	GV1	/VP	CL:
9	Picking	VP [overt]	PP [overt]	<u>GV1</u>	/NP	NP
12	Pull-at (Tug-left)	CL:	VP [overt]	GV1	VP[overt]	/
13	Picking	PP [overt]	NP [overt]	<u>GV1</u>	NP [overt]	
16	Picking	(comme nt)	VP [overt]	VP(adj p) <u>GV1</u>	/CL:	
19	Grab- pickup	NP	AdjPh/	GV1	CL:	GV
19	Place-on	GV	CL:	GV1	Overt + GV	/
25	Gather(p ears)	VP [overt]	CL:	GV1	GV1	/ICL:DG V

APPENDIX E

PEAR STORY TEXT FORMAT

The Pear Film

The scene begins with an orchard farmer who is working diligently to pick quality pears and place them in his wicker baskets. He delicately picks each one and places the pears in his apron pocket. He gently polishes a few of the pears with his bright, red bandana. While standing near the top of his ladder, the farmer is hidden within the thick of the leaves. He could not see who or what would pass by him.

As the farmer continues picking his pears, a tall lanky man walks idly by him. This tall man is pulling his stubborn, female goat on a rope-leash. The goat notices the two full baskets of pears. However, to the goat's dismay, the tall man forces the goat to walk past the pears.

In between these different scenes, the farmer comes down from the tree and places pears in each basket until two of the baskets become full. Then, he climbs back up into the tree to gather more pears. The thick leaves, once again, obstruct his view.

A young boy is riding by on a red bicycle. The young boy stops and warily looks up at the farmer. The boy notices that the man cannot see him. The boy in haste grabs a full, wicker basket of pears and places it on his bicycle. He softly rode the bicycle away from the farmer.

While riding his bicycle, which held the large wicker basket of pears, the boy passes a young girl on her bicycle. Her braided hair flaps in the breeze. The girl passes

him quickly. As she passes, the current of wind from the speed of the bicycle whips the boy's hat from his head. He looks back quickly to see where his hat is going. As his gaze is focused behind him, his bicycle hits a stone in the road. His bicycle topples over casting the basket of pears all across the road.

Three young boys see his demise. They help him gather all the pears and place them back in the boy's basket. One of the three boys did not help because he was too busy playing with a paddleball toy. When all was finished, the boy with the pears began walking his bicycle back down the road.

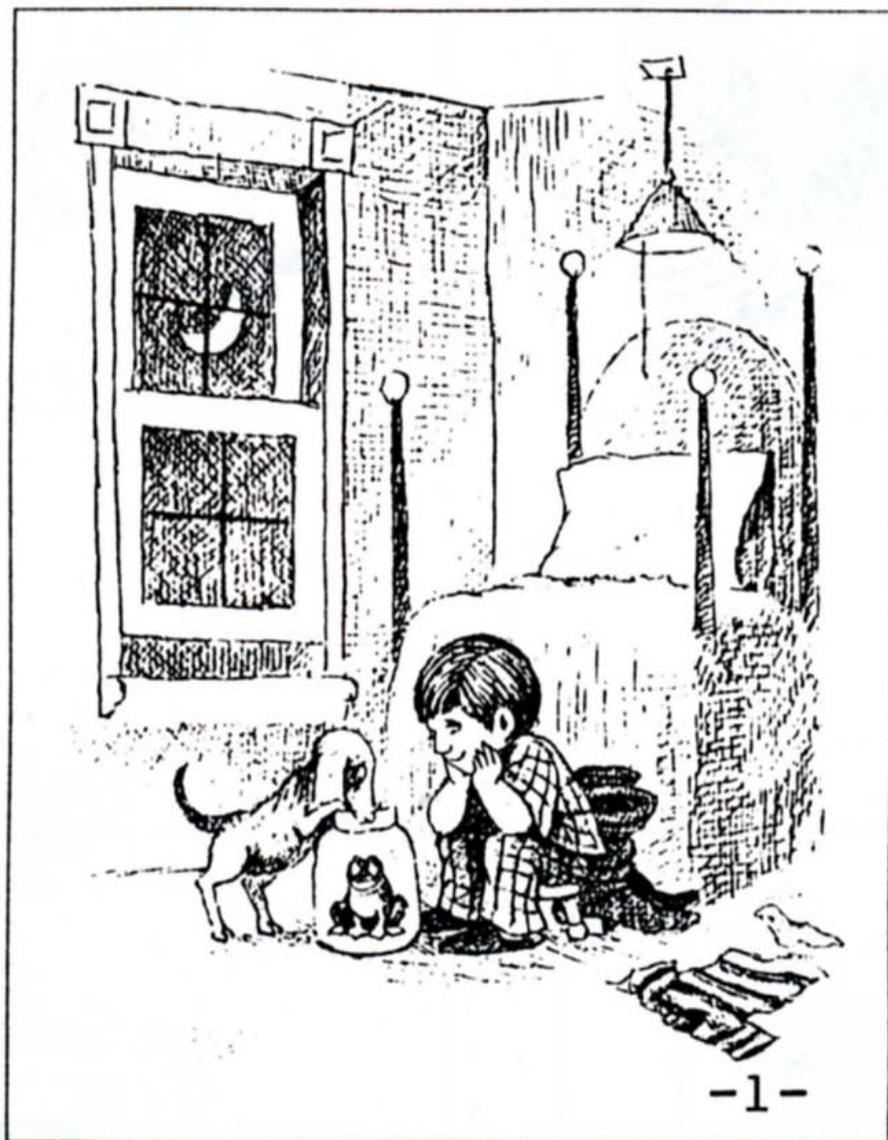
The boy who was playing paddleball picked up the hat that had been swept by the wind from the boy with the pears. The boy with the paddleball gave the hat to the boy with the pears. The boy with the pears was grateful and gave three pears to the three boys in exchange for his hat and their help. The three boys then go in the opposite direction down the road from the boy with the pears.

The orchard farmer climbed down the ladder to discover that one of the baskets of pears is missing. He seems bewildered. Suddenly, the three boys walk past him eating the pears that were given to them. The farmer stares at them with a curious, bewildered look upon his face.

The Film Ends

APPENDIX F

FROG STORY PICTURE FORMAT



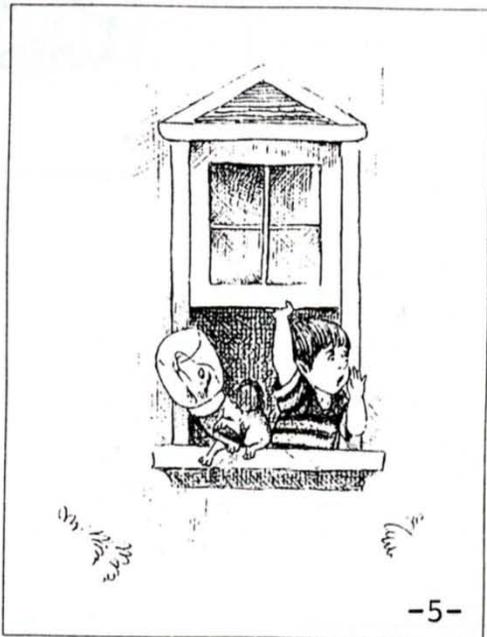
-1-



-3-



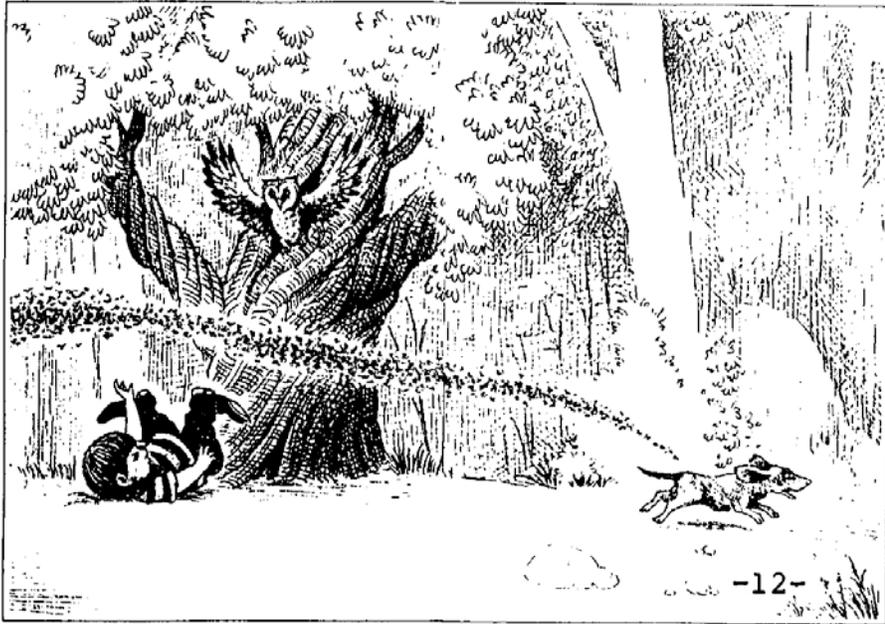
-4-



-5-









-15-

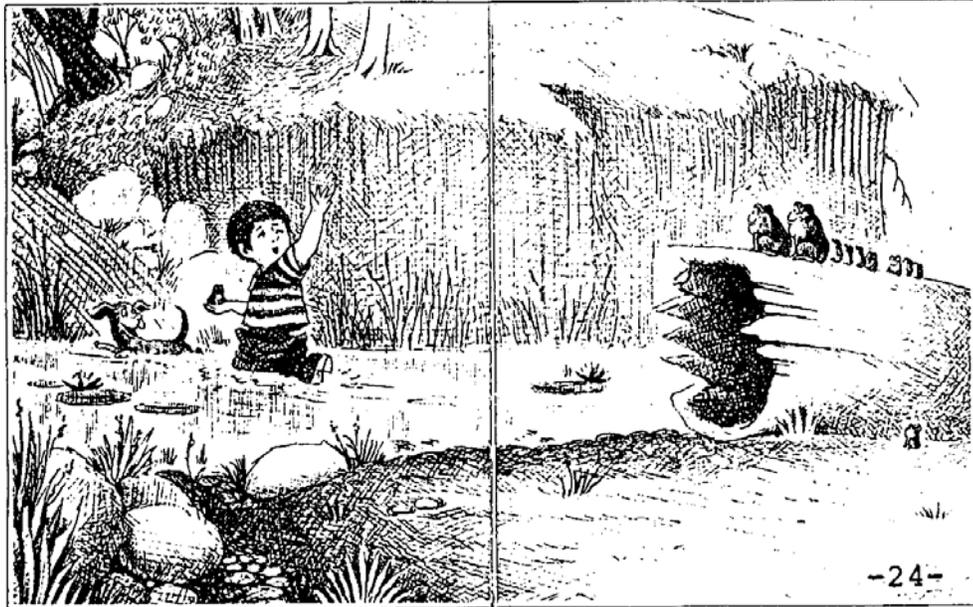


-16-



-17-





APPENDIX G

PARTICIPANT CONSENT FORMS

University of Texas at Arlington
Institutional Review Board
Research Consent Form

Date:

Title of Study: American Sign Language Verb Categories in Constructed Action

Principle Investigator: K. Larry Rogers

Co-investigators:

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the proposed procedures. It describes the procedures, benefits, risks, and any potential discomforts from participating in the study. It also describes your right to withdraw from the study at any time.

You are invited to participate in a research study being conducted by K. Larry Rogers Ph.D. student from the University of Texas at Arlington. The purpose of the research is to study story telling in American Sign Language.

In Part I, your participation in this study will involve completing the attached survey. The purpose of the survey is to connect culture with American Sign Language and specific style of story-telling. Your participation in this study is voluntary. You may withdraw from the study at any time. Any question that you do not wish to answer, you may leave blank or choose "No Response". There are no known risks to participation beyond those encountered in everyday life. Your responses will be confidential, and it is preferred that you do not identify yourself in any way on the survey. No one except the research staff will see your individual answers to this survey. If you agree to participate in part I, please, complete the survey by following the instructions on the survey. This should take less than 20 minutes.

In Part II, your participation in this study will involve:

A) Watching an eight minute silent film and then being videotaped re-telling the story to a friend. You will have a number given to you which will be your only identification on the videotape. This is to maintain your confidentiality. Possible risks to this part of the study could include embarrassment, nervousness, or awkwardness at being recorded on video. Your participation is voluntary and you can withdraw at any time.

Or

B) Viewing a story through still pictures. The story contains 24 illustrations used to show the plot and sequence of the story. After viewing the pictures for 5-8 minutes, you will be videotaped retelling the story to a friend. The story pictures will not be available for viewing while re-telling the story. You will have a number given to you which will be your only identification on the videotape. This is to maintain your confidentiality. Possible risks to this part of the study could include embarrassment, nervousness, or awkwardness at being recorded on video. Your participation is voluntary and you can withdraw at any time.

The videotapes will be labeled only with a code number. This will be kept private in the researcher's locked files. The tapes will be used for American Sign Language linguistic study. If you agree to participate in this study, your signature on this consent form gives the researchers permission to make and retain the videotape for this study. You have the right to review the videotape and to request that all or any portion of the tape be erased.

Additionally, the researchers would like to be able to use brief sections of the videotapes for training purposes and publication of their findings in scientific journals or books, and presentations at professional meetings or conferences. You are free to refuse this additional use of the videotapes, and the tapes will not be used in this way unless you give your specific consent by signing the additional release at the bottom of this page. If you agree that the videotapes may be used for training in scientific journals or professional presentations, you will not be identified by name in any publication or presentation of this material.

I understand that the researchers would like to use brief excerpts from the videotapes for training purposes and to illustrate their findings in scientific publications or at professional conferences or meetings. My consent for this use is optional, and I am free to refuse this request and still participate in the study.

_____ I agree that parts of my videotaped story in this research may be used for conference presentations.

_____ I agree that parts of my videotaped story in this research may be used for education and training of future researchers and teachers.

The benefits of participating in this research are as follows:

1. Support American Sign Language as a true language.
2. Benefit classroom lessons for Sign Language teachers and interpreter training programs.

3. Support American Sign Language as a primary language in Deaf Education.
4. Support Deaf Culture

Only researchers and those involved in the above-mentioned academic activities will have access to the surveys and videotapes. You will be given a copy of this form to keep for your records and future reference. At the end of this study, you will be debriefed of details to the study. You will have the opportunity to participate in a raffle to win a prize as a compensation for your time.

If you have any questions about this study, feel free to contact K. Larry Rogers at klrogers@uta.edu , or (940)-369 7413, Debra Rogers at dlr0017@unt.edu or L. Stvan at stvan@uta.edu

This research study has been reviewed and approved by the UTA Committee for the protection of Human Subjects. The UTA IRB can be contacted at (817) 272-3723.

RESEARCH SUBJECTS' RIGHTS: I have read or have had an interpreter for all of the above.

K. Larry Rogers or an assistant has explained the study to me and answered all of my questions. I have been told the risks or discomforts and possible benefits of the study.

I understand that my decision to withdraw from this study will involve no penalty or loss of rights or benefits or legal recourse to which I am entitled. The study personnel may choose to stop my participation at any time.

I understand my rights as a research participant, and I voluntarily consent to participate in this study. I understand that after the study, I will be informed of the particular details of the study. I have also been told that I will receive a signed copy of this consent form.

Print name and Date

Signature and Date

I certify that I have reviewed the contents of this form with the person signing above, who, in my opinion, understood the explanation. I have explained the known benefits and risks of the research.

Signature of Principal Researcher

Date

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BIOGRAPHICAL INFORMATION

Larry Rogers was born in Santa Ana California on October 17, 1953, the only son of Ernest Rogers. After completing Montclair High School, Montclair, California, in 1971 he entered Tennessee Temple University. It was during the college years that he began learning American Sign Language. He began to interpret for the student chapel shortly afterward. He received the Graduate of Theology degree in 1975 and the Bachelor of Theology in 1976. After working as a religious and community ASL interpreter (holding state and national certifications), he entered Dallas Theological Seminary in 1985. He received the Master of Theology degree in 1990. In 1993, he entered the teaching field. He started teaching American Sign Language first as an interpreter trainer then beginning in 2003 to the present time at the University of North Texas, Denton, Texas.