WORKING PAPERS

IN

LINGUISTICS

The notes and articles in this series are progress reports on work being carried on by students and faculty in the Department. Because these papers are not finished products, readers are asked not to cite from them without noting their preliminary nature. The authors welcome any comments and suggestions that readers might offer.

An Equal Opportunity/Affirmative Action Institution

A SKETCH OF HANDSHAPE MORPHOLOGY IN HAWAI'I SIGN LANGUAGE

SAMANTHA RARRICK

Hawai'i Sign Language (HSL) is a critically endangered sign language indigenous to the Hawaiian Islands. Lexicostatistical data gathered by Lambrecht, Earth, and Woodward (2013) have shown that HSL is unrelated to American Sign Language (ASL). This article aims to provide additional descriptive work for this language, demonstrate a grammatical difference between HSL and ASL with respect to handshape morphology, and discuss the usage restrictions of these handshapes in typological perspective, concluding that this grammatical difference between ASL and HSL is significant and the restrictions found in HSL are typologically rare.[*]

1. INTRODUCTION AND METHODS. Hawai'i Sign Language (HSL) is a recently encountered and critically endangered sign language used by approximately 10 people in Hawai'i, all of whom are over sixty and are also signers of American Sign Language (ASL). Based on lexicostatistics gathered by Lambrecht, Earth, and Woodward (2013), it appears that this language is unrelated to ASL, which suggests that it was present in Hawai'i before ASL was introduced to the islands in the early twentieth century. As such, it exhibits a variety of grammatical differences, including in the morphology of handshapes. Here, I first provide some background on sign language linguistics, including basic information about phonology and morphology of handshapes (section 2). Then I focus on the four major categories of handshapes with morphological meanings attested in HSL so far (section 3), followed by a summary of how the usage restrictions of these handshapes differ from those of classifier constructions in ASL and many other sign languages (section 4). This paper aims to add to the description of HSL by providing a sketch of handshape morphology for HSL, especially that of the morphological meanings of handshapes, and some of the ways they are distinct from the "classifiers" of many sign languages, including ASL.

Documentation and description for HSL are ongoing, and the data provided here were elicited from two older female native signers of the language who are heavily involved in these efforts. Lexicalized signs were elicited primarily during the development of language-learning handbooks. For these handbooks, the main consultant, Linda Lambrecht, was given a semantic category, such as fruits or school supplies, and she would then give us a variety of signs that related to the given category. These types of signs were also found when both participants were asked to participate in conversations and provide narratives. Finally, signers were asked to translate phrases which included location or motion semantic components (such as 'bottles falling off a shelf', or 'put grapes into a line') to find handshape incorporation restrictions (see section 2). In cases where the signer did not incorporate the handshape into the location or motion predicate, she was then provided with two options for the phrase (the first phrase incorporated the handshape and the second did not), and asked which was more grammatical in HSL. If the signer was unsure which option was more felicitous, the question would be raised again in later elicitation sessions.

2. SIGN LANGUAGE LINGUISTICS BASICS. In sign languages, signs can be broken down into manual and non-manual components. Non-manual components, such as eyebrow-raising, tend to be grammatical rather than lexical, and tend not to be included in most descriptions of phonetics and phonology (Wilbur

---

2000). Manual signs are categorized by whether they involve one or both hands (one-handed or two-handed), their handshape or handshapes, location, and orientation. While the orientation and the location of a sign are important components and are frequently contrastive (van der Hulst 1996), handshapes are the focus of this article. Therefore, the basics of phonology and morphology of handshapes will be discussed in further detail in this section.

FIGURE 1: HSL Handshapes with Morphological Meaning

Handshape	# of Selected Fingers	Selected Fingers	Thumb	Bent	Round	Contact	Tapered	Spread	Meaning
	0	None	-	-	-	-	-	-	Handheld
	1	Index	-	-	-	-	-	-	Long & thin
	1	Index	+	+	-	-	+	-	Writing instrument
	2	Index, middle	-	-	-	-	-	+	Long & thin (DUAL)
	3	Middle, ring, little	-	+	+	+	-	+	Small & round
	3	Middle, ring, little	-	+	-	+	+	+	Pinchable
	4	Index, middle, ring, little	-	-	-	-	-	-	Surface
	4	Index, middle, ring, little	x	-	-	-	+	-	Paws
	4	Index, middle, ring, little	+	+	+	-	-	-	Cylindrical
	4	Index, middle, ring, little	+	+	+	-	-	+	Large & round
	4	Index, middle, ring, little	+	+	-	-	-	+	Claws

In manual signs, the fingers are the articulators. Handshapes, therefore, are distinguished by their selected fingers, joint configurations, and other distinctive features such as roundness or contact. Like speech sounds, these distinctive features are typically binary and can help to characterize and organize handshapes. In HSL, there are eleven handshapes that are especially important in terms of their morphology; these are provided in figure 1 above, which has a line drawing[2] for each handshape alongside its features. For these handshapes, the features "thumb," "bent," "round," "contact," "tapered," and "spread" are distinctive, in addition to the selected fingers (index, middle, ring, or little). "Thumb" refers to whether or not the thumb is extended, as the thumb is not considered a finger. There are handshapes in which the thumb is neutral, rather than extended or tucked. These handshapes are marked with an "x." The feature "bent" references whether or not the finger joints are bent. "Round" refers to whether or not the handshape is rounded. "Contact" refers to whether or not any fingers make contact with the thumb. "Tapered" handshapes are those in which the knuckles are bent. Finally, "spread" is used to indicate whether or not the selected fingers are spread or touching one another (Stokoe 1978).

In sign languages, "classifiers" are commonly the focus of handshape morphology. The term "classifier" used in sign language literature refers to handshapes that can help form location and motion predicates by being incorporated into the verb (Stokoe 1978), rather than as markers of noun classes, as in literature on spoken languages (Aikhenvald and Green 1998). Examples 1 and 2, from ASL and HSL, respectively, demonstrate the grammatical difference between the two languages. While the handshape in ASL can form a motion predicate, the handshape in HSL cannot. In the ASL example, the handshape associated with cylindrical objects such as a bottle does not change as the verb 'fall' is formed, resulting in an incorporated classifier. In the HSL example, in contrast, the handshape for cylindrical objects changes when the verb 'fall' is formed and therefore cannot be considered a classifier. These types of handshapes came to be called "classifiers" based on the theory that these were similar to verbal classifiers found in the languages of North America, including Navajo. Later research, however, has demonstrated that there are many differences between verbal classifiers, and new terms like "polycomponential verbs" have been proposed as an alternative (Sandler and Lillo-Martin 2006; Schembri 2003). Despite these problems, here I use the term "classifier," as it is the more common term.

Example 1 (ASL):'a cup falls'
Lit. Translation: 'a cylindrical object falling'
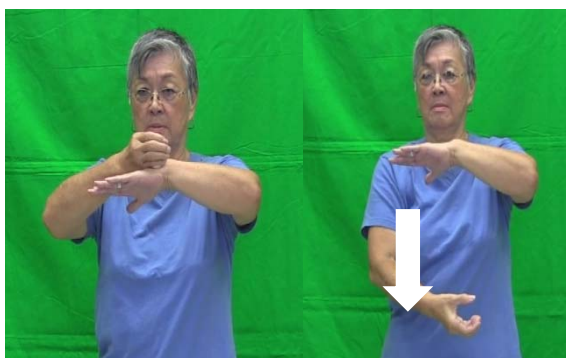
Example 2 (HSL): 'a bottle falls'
Lit. Translation: 'a cylindrical object falls'

Classifier handshapes are typically divided into four categories of morphological meaning: size and shape, whole entity, handling, and body and body part (Supalla 1986). The first category of classifiers and handshapes with morphological meanings, size and shape, includes handshapes with meanings related to an item's periphery. As discussed below, in HSL, there are three handshapes that fit into this category: small and round; large and round; and cylindrical. The second category, whole entity, includes handshapes that represent to an entire item or entity. In HSL, there are three such handshapes: long and thin; pair of long and thin; and surface and vehicle or vessel. The third category, handling, is made up of handshapes that reflect how a user manipulates an item. There are three HSL handshapes in this category: pinchable; handheld; and writing instrument. The final category, body and body part, represents a person's or an animal's entire body or a body part. In HSL, there is one body handshape, (long, thin body,) and two body part handshapes, (paws and claws.)

3. HANDSHAPES WITH MORPHOLOGICAL MEANING IN HSL. While classifiers are found in most sign languages, and many of these languages have several classifier handshapes (Aikhenvald 2003; Morgan and Woll 2007), documentation of HSL has yet to uncover any handshapes that can form both motion and location predicates, and therefore cannot be considered classifiers. This is interesting because ASL is a language which has a large number of classifier handshapes and makes extensive use of them. Since handshapes with a similar function in HSL occur in many lexicalized signs (Johnston and Schembri 1999; Liddell 2003), but are not used as classifiers, these are analyzed below as handshapes with morphological meaning. Another common process for these types of handshapes is using them in two-handed signs with identical handshapes to indicate that the item is large or that there are more than one (Padden 1988). This occurs with many of the handshapes in HSL. Among the eleven handshapes with morphological meaning of HSL, each represents a similar type of object in multiple signs, and falls into the four categories mentioned above: size and shape; whole entity; handling; and body and body part. This section focuses on four features of these handshapes: (1) A description of each handshape (organized by number of selected fingers); (2) the signs in which each handshape occurs; (3) whether or not such signs can be two-handed with identical handshapes; and (4) the motion and location predicate restrictions for each handshape.

 First, the zero-fingered [-thumb] "S" handshape indicates that an object can be clutched in the fist. This meaning falls into the "handling" category. It is found in many signs, including the signs for 'eraser' (example 3), 'school bag' (example 4), 'watermelon' (example 5), and 'eat-watermelon' (example 6)[3] provided below. With 'eraser' and 'school bag', the handshape only occurs on the dominant

---

3 These examples are representative of the types of signs which occur in HSL for each handshape and are not likely to be a complete set.

hand, but in 'watermelon' and 'eat-watermelon' both the dominant and non-dominant hands take this handshape. This distinction is likely related to the size of each of these objects, since watermelons tend to be much larger than erasers or bag handles. This handshape cannot form location or motion predicates.

Example 3: 'eraser'
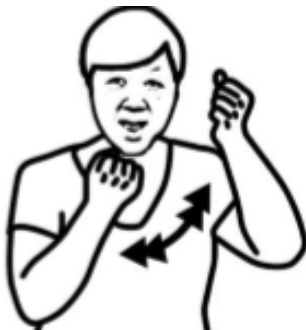Lit. Translation: 'handheld object rubbed
    on a surface'

Example 4: 'school bag'
Lit. Translation: 'writing –related
    object with a handle'

Example 5: 'watermelon'
Lit. Translation: 'large, curved thing grasped
    with two hands'

Example 6: 'eat-watermelon[4]'
Lit. Translation: 'eating a large,
    curved thing grasped with two hands'

The one-fingered (index) [-thumb] handshape represents a singular long, thin object and falls into the "whole entity" category. It seems also to denote that the object is pointed at one end, as it occurs with the signs meaning pencil in 'pencil sharpener' (example 7) and 'cherry' (example 8). This handshape has never occurred in a two-handed sign with identical handshapes, but it can also fall into the 'body' category. It represents an animal's entire long, thin body in the signs meaning 'snake' or 'eel' (example 9) and 'worm' (example 10). This is a good example of why there is some debate in sign language literature about whether or not body and body part handshapes should make up a separate category (Schembri 2003). The way that these signs can occur with movement is also quite different. While the whole-entity morpheme is typically rigid and the articulators do not move, the body morpheme often occurs in signs with a wiggling motion. This motion does not make this handshape a classifier, because it is part of the

---

    4 It is important to note that the 'eat-X' verbs throughout this section are best analyzed as the verb 'eat-(specified food)' has an unspecified handshape. Each of the handshapes for the specified food can then be incorporated to create the intended meaning.

lexical item and it is not possible to create path of motion predicates and cannot create any location predicates.

Example 7: 'pencil sharpener'
Lit. Translation: 'long, thin, round, writing
    instrument being shaved down'

Example 8: 'cherry'
Lit. Translation: 'red object with a small
    round bottom and long thin top'

Example 9: 'snake/eel'
Lit. Translation: 'long, thin body moving
    back and forth'

Example 10: 'worm'
Lit. Translation: 'long, thin body coming
    out of the ground'

 This one-fingered handshape uses the index finger and is [+thumb], [-round], [+contact], and [+taper]. It represents a writing instrument in signs for 'pencil' (example 11), 'name' (example 12), 'write', and 'color' (example 13). It never occurs in two-handed signs with identical handshapes, and cannot be used to create location or motion predicates.

Example 11: 'pencil'
Lit. Translation: 'writing instrument
  wetted by licking and writing'

Example 12: 'name'
Lit. Translation: 'writing thing'

Example 13: 'color'
Lit. Translation: 'writing instrument moving
  back and forth'

The two-fingered (index and mid) [-thumb], [+spread] handshape morpheme represents a pair of long and thin objects. It is found in signs for 'compass' (i.e., for drawing circles; example 14), 'chopsticks' (example 15), and the sign for 'vegetable' (example 16). So far, this handshape hasn't occurred in any two-handed signs with identical handshapes. In these signs, space cannot be used to create a motion or location predicates.

Example 14: 'compass'
Lit. Translation: 'pair of long thin objects
    which pivot on a surface'

Example 15: 'chopsticks'
Lit. Translation: 'pair of long thin objects
    being brought together'

Example 16: 'vegetable'
Lit. Translation: 'pair of long thin blades (i.e. a peeler)
    shaving down a long, thin object'

The three-fingered (mid, ring, and little) [+thumb], [+ bent], [+ round], [+contact] handshape indicates that the item mentioned is fairly small and round. This meaning falls into the 'size and shape' category. It occurs in signs for 'grapes' (example 17), 'eat-grapes' (example 18), 'watch' (example 19), and 'buttons'. It also represents stacks of coins in signs for 'expensive' and 'cheap' (examples 20 and 21), bamboo in 'green' (example 22), and even a 'ponytail' which is a part of the author's sign name. This handshape only occurs with two hands with identical handshapes when the meaning is intended to be plural, and is normally one-handed. With 'grapes', this handshape can be used in space to denote where the grapes are or if they are in a configuration, such as a bunch. This, however, is optional, and, unlike in ASL, it is ungrammatical to use this handshape in space to denote motion, such as falling or being arranged (Padden 1988). With 'coins', it is possible to move the handshape in an upwards direction to indicate a large or small amount of money. This usage is lexicalized, meaning 'expensive' or 'cheap', respectively. When used to denote 'buttons', the handshape can be used in space to denote the location of the buttons, such as on a garment. It can also be slightly altered by increasing or decreasing contact to more accurately represent the size of the buttons. With 'ponytail', this handshape can be used in space to denote the location of the ponytail in relation to the rest of the head, and can move varying amounts for the length of the ponytail. While this handshape can be used in location predicates, it has not been found in any motion predicates. Since the consultant also believes that incorporating this handshape into a

motion predicate would be ungrammatical, there is insufficient evidence to consider this handshape to be a classifier.

Example 17: 'grapes'
Lit. Translation: 'small round things
   all over'

Example 18: 'eat-grapes'
Lit. Translation: 'putting a small round thing
   in the mouth'

Example 19: 'watch' (noun)
Lit. Translation: 'small round thing
   on the wrist'

Example 20: 'expensive"
Lit. Translation: 'tall stack of coins'

Example 21: 'cheap'
Lit. Translation: 'short stack of coins'

Example 22: 'green'
Lit. Translation: 'small round column'

 The three-fingered (mid, ring, and little) [+thumb], [+bent], [-round], [+taper], [+contact] handling handshape construes that the object mentioned is small and can be picked up with the fingers. This handshape is found in the sign for 'eat-pineapple' (example 23), 'sheet' (example 24), and 'eat-cherry' (example 25). In 'eat-pineapple', it may reference small, diced chunks of pineapple, as this is how the fruit is normally eaten. This handshape occurs in two-handed signs with identical handshapes when the object indicated is large. It is not a classifier, as it cannot be used to create motion or location predicates.

Example 23: 'eat-pineapple'
Lit. Translation: 'small pinchable object being
   put in the mouth from a surface'

Example 24: 'sheet'
Lit. Translation: 'pulling up
   a large, thin, pinchable object'

Example 25: 'eat-cherry'
Lit. Translation: 'pinching the round part of a cherry and putting it in the mouth'

 The four-fingered [xthumb], [-spread] whole-entity handshape denotes a surface that is normally flat. This handshape occurs in the signs for 'book' (example 26), 'paper', 'eat-pineapple' (example 27), and 'floor' (example 28). With 'book' and 'paper', this handshape can be used in space to denote location and form a location predicate, especially in relation to other objects of the same type, like a stack of books or a stack of paper. Normally, this handshape occurs in two-handed signs with different handshapes, with the exception of when it denotes the two juxtaposed pages of an open book, or a floor. When it denotes surfaces, it cannot be used in location or motion predicates.

Example 26: 'book'
Lit. Translation: 'two juxtaposed surfaces'

Example 27: 'eat-pineapple'
Lit. Translation: 'small object being picked up from a surface and put into the mouth'

Example 28: 'floor'
Lit. Translation: 'surface which spreads in both directions'

This same handshape, found in the sign 'surfboard', also has the morphological meaning of whole entity vessel or vehicle. This is considered to have a separate meaning, since it can also represent a car or boat, which are not flat surfaces, and when used for these items the usage restrictions are different. While 'surfboard' is a lexical item, the handshape can also be used in space to denote multiple surfboards (example 29) or canoes next to one another (example 30). This is an example of the type of location predicates found in classifiers in sign languages (Emmorey 2003). However, these signs are analyzed here as having a slightly different morphological meaning from the surface handshapes, because there are differences in how these signs can be used. While both meanings can be used in space to create a location predicate, it may be the case that the vehicle or vessel meaning can be used for path of motion predicates, which would make it a full classifier (Cogill-Koez 2000), which is discussed further in section 4. This grammatical difference needs to be investigated further, and grammaticality judgments need to be elicited from as many signers as possible, but so far, this vessel/vehicle handshape is the closest we have found to a classifier in HSL.

Example 29: 'surfboards'
Lit. Translation: 'surfaces in a row'

Example 30: 'two canoes'
Lit. Translation: 'boats-2-two surfaces side-by-side'

 This handshape is four-fingered, [xthumb], [-spread], and [+taper]. It has a morphological meaning related to body parts, and represents paws in the sign for 'dog' (example 31), and occurs in 'rabbit.jumping' (example 32) and 'rat.walking' (example 33). Interestingly, it occurs in the lexical item for 'dog', but not in 'rabbit' or 'rat'. For the 'rabbit.jumping' and 'rat.walking', it occurs only in signs that represent their movement (but not path of motion). So far, this handshape has occurred only in two-handed signs with identical handshapes, but one-handed variations may be possible. This handshape is not a classifier, because it cannot be used to create predicates of path of motion or location.

Example 31: 'dog'
Lit. Translation: 'two paws moving
     while panting'

Example 32: 'rabbit jumping'
Lit. Translation: 'two paws hopping'

Example 33: 'rat walking'
Lit. Translation: 'two paws creeping'

 The four-fingered [+thumb], [+bent], [+round], [-spread] handshape has a size and shape morphological meaning, indicating a cylindrical object. This handshape has occurred in the signs for 'bottle', 'can' (example 34), and similar cylinders. It can be used in space, but occurs only in location predicates, such as being located on a shelf, and not motion, such as falling, despite the fact that the verb 'fall' occurs with classifiers in a variety of sign languages (Engberg-Pedersen 2010). Instead, as seen in examples 35 and 2 (reproduced) below, in order to create these meanings, the handshape changes to the verb's normal handshape. In these examples, the cylindrical handshape is maintained throughout the locative predicate 'to be on top of' (example 35). It changes to a four-fingered [+thumb], [+spread] handshape, however, in the motion predicate 'fall' in example 2. These patterns show that the handshape can occur with locative predicates, but not with motion predicate, and is therefore not a classifier. This is also discussed further in section 4 (Discussion), in which examples of both ASL and HSL are provided for each category of morphological meaning. While no examples have been found yet, it is likely that this handshape can occur in two-handed signs with identical handshapes when the item referenced is large.
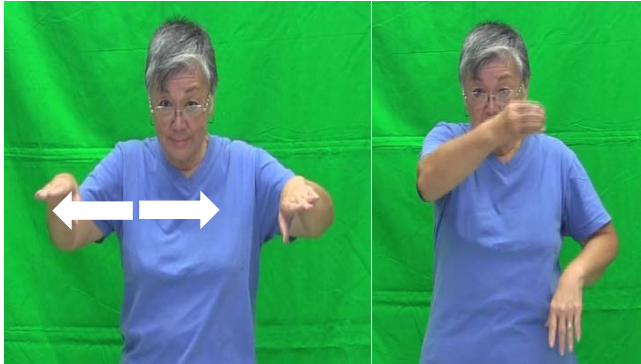
Example 34: 'can'
Lit. Translation: 'small cylindrical object'

Example 35: 'A bottle is on a shelf'
Lit. Translation: 'shelf'   'a cylindrical object on a shelf'

Example 2 (reproduced): 'a bottle falls'
Lit. Translation: 'a cylindrical object falls'

     The four-fingered [+thumb], [+bent], [+round], [+spread] is a size and shape handshape that denotes a large, round item. This can occur with 'orange' (example 36), 'eat-orange' (example 37), 'coconut' (example 38), and 'eat-coconut' (example 39), and 'ball'. A slightly tapered version occurs with 'mango' (example 40) and 'eat-mango' (example 41), but this does not seem to occur in other signs, and is therefore considered part of the "large and round" category. With larger items, including 'orange', 'eat-orange' 'coconut', and 'eat-coconut', both hands are used with identical handshapes, but with smaller items, including 'mango' and 'eat-mango', only a single hand is used. This handshape never occurs in location or motion predicates.

Example 36: 'orange'
Lit. Translation: 'large round object'
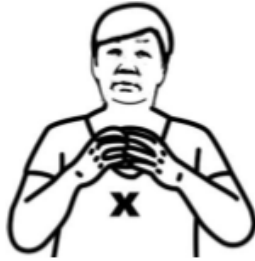
Example 37: 'eat-orange'
Lit. Translation: 'eating a large round thing'

Example 38: 'coconut'
Lit. Translation: 'large, smooth, round thing'

Example 39: 'eat-coconut'
Lit. Translation: 'eating a large, smooth, round thing'

Example 40: 'mango'
Lit. Translation: 'large, roundish object'

Example 41: 'eat-mango'
Lit. Translation: 'eating a large, roundish object'

The four-fingered [+thumb], [+spread], [+bent] handshape is very similar to the previous 'large and round' handshape. However, this handshape is typically less round. This handshape occurs in the sign for 'monster' (example 42), and 'tiger' (example 43). In these signs, it represents claws and therefore falls into the body part category. This handshape typically occurs in two-handed signs, but one-handed variations may be possible. Motion (which also indicate path) and location predicates are not possible with this handshape.

Example 42: 'monster'
Lit. Translation: 'animal with two claws'

Example 43: 'tiger'
Lit. Translation: 'growling animal with two claws'

These eleven handshapes are the only handshapes with morphological meaning found in multiple signs at this point in the documentation of HSL. For each of these handshapes, two-handed signs with identical handshapes tend to occur with either large objects (found in handheld, pinchable, and large and round handshapes) or plural meanings (found in small and round, paws, and claws handshapes). The use of both hands with identical handshapes to create these meanings is another morphological process in this language. While these handshapes do generally fall into the semantic categories expected, (size and shape, whole entity, handling, and body and body part,) they are not classifiers, based on their inability to form both location and motion predicates. A summary of each handshape, its category, examples of signs it occurs in, and its path of motion and location predicate restrictions are provided in figure 2 below.

FIGURE 2: Handshape Summary

Handshape	Category	Meaning	Motion?	Location?	Examples
	Size and shape	Small and round	No	**Yes**	'grapes' (17) 'watch' (19)
	Size and shape	Large and round	No	No	'orange' (36) 'coconut' (38)
	Size and shape	Cylindrical	No	**Yes**	'can' (34) 'bottle on a shelf' (35)
	Whole entity; body	Long, thin object; long, thin body	No	No	'cherry' (8); 'snake/eel' (9)
	Whole entity	Pair of long, thin objects	No	No	'compass' (14) 'chopsticks' (15)
	Whole entity	Surface; Vessel/Vehicle	?	**Yes**	'book' (26); 'two canoes' (30)

	Handling	Handheld object	No	No	'eraser' (3) 'watermelon' (5)
	Handling	Pinchable object	No	No	'eat-pineapple' (23) 'sheet' (24)
	Handling	Writing instrument	No	No	'pencil' (11) 'color' (13)
	Body part	Paw	No	No	'dog' (31) 'rabbit.jumping' (32)
	Body part	Claw	No	No	monster (42) tiger (43)

4. DISCUSSION. While the morphological handshapes described above do fit into the semantic categories found across sign languages, only some of these handshapes can form location predicates, and none of these handshapes have occurred in motion predicates, which suggests that these may not be classifiers within the parameters defined for sign languages. Unlike similar handshapes in ASL, which uses classifiers in almost every sentence (Supalla 1986), HSL's handshapes with morphological meanings are rarely found outside of lexical items. While it is possible that the low number of size and shape handshapes in HSL is because other handshapes have yet to be elicited, their frequency in normal signing is still low compared to other sign languages, including American Sign Language (Supalla 1986). Our primary HSL consultant, Linda Lambrecht, is a signer of both ASL and HSL and reports that classifiers of the nature found in ASL have not occurred in HSL. This is further demonstrated in the ASL and HSL examples provided below, in which a handshape from each category of morphological meaning has been put into a motion or location phrase, but none is able to incorporate the handshape into both motion and location predicates.

Example 44 (ASL): 'A cup is on a shelf.'
Lit. Translation: 'a cylindrical object on top of a surface'

Example 1 (ASL): 'a cup falls'
Lit. Translation: 'a cylindrical object falling'

Example 35: 'A cup is on a shelf'
Lit. Translation: 'shelf-a cylindrical object on a shelf'
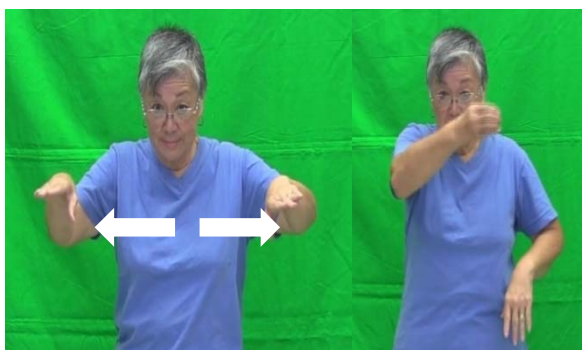
Example 2: 'a bottle falls'
Lit. Translation: 'a cylindrical object falls'

Example 29: 'surfboards'
Lit. Translation: 'surfaces in a row'

Example 30: 'two canoes'
Lit. Translation: 'boats-2-two.surfaces side.by.side'

Example 45: 'give him a book'
Lit. Translation: 'book-give.3SBJ'

Example 46: 'give him a box'
Lit. Translation: 'square-give.3SBJ'

Example 47: 'I was walking and a car hit me from behind and I fell over'
Lit. Translation: '1.SBJ-walk-car-hit-fall'

In these examples, the difference between ASL classifiers and HSL handshapes with morphological meanings is clear. Examples 44 and 35 show that both languages allow the cylindrical size and shape handshape to be incorporated into location predicates ('to be on top of', here). Examples 1 and 2 demonstrate that while ASL also allows the handshape to be incorporated into a verbal predicate, 'fall', HSL does not. The consultant insists that this is ungrammatical and that the handshape must change to the 'fall' handshape, (four fingered [+thumb] [+spread] for 'fall' in HSL). While examples 45, 46, and 47 demonstrate that these handling and body handshapes cannot be incorporated and are therefore not classifiers, the whole entity handshape seen in examples 29 and 45 does not have such clear restrictions. In 29, the handshape can be incorporated into the location predicate 'to be next to'. In 30, we see another example of its use in a motion predicate; however, the consultant claims that it is ungrammatical to move

the handshapes to denote path of motion, (such as 'move towards him'). When asked for a way to include path of motion, the signer could not think of a way. Since it is likely that it is possible to convey this meaning in the language, more research is necessary to determine whether or not the handshape can or cannot be incorporated into a path of motion predicate.

Mrs. Lambrecht's claim that HSL does not have the same sort of handshape incorporations as ASL, along with the data presented above, is interesting because classifiers are widespread in ASL and other sign languages (Sutton-Spense and Woll 1999) and only a handful of sign languages have been shown not to have such constructions. Adamorobe Sign Language (AdaSL) is one such language. AdaSL has a potential handling classifier, but no classifiers indicating size and shape, whole entity, body or body part (Nyst 2007). This is different from what we now find in HSL, which has a potential classifier indicating whole entity, but no classifiers indicating size and shape, body or body part, or handling. These findings could suggest some sort of hierarchy, where handling and whole entity classifiers are more likely to occur in a sign language than size and shape or body and body part, but more research on a variety of sign languages is necessary to determine whether or not this is the case.

While "classifiers" are widespread but not universal in sign languages, the lack of such constructions in HSL is still key to understanding its relationship to ASL. This morphological difference between the two provides strong additional evidence in support of the claim that ASL and HSL are indeed distinct languages. The fact that so few sign languages lack classifiers is also important typologically, and HSL's particular restriction on motion predicates with handling handshapes seems to be especially rare. Since there is insufficient evidence that any of these handshapes fit the criteria to be labeled as "classifiers", the HSL handshapes here are best described as handshapes with morphological meanings. The description provided here attempts to provide a framework upon which future research on this language can build.

ABBREVIATIONS

1	1ST PERSON	AdaSL	ADAMOROBE SIGN LANGUAGE
2	2ND PERSON	ASL	AMERICAN SIGN LANGUAGE
3	3RD PERSON	HSL	HAWAI'I SIGN LANGUAGE
SG	SINGULAR		
DU	DUAL		
PL	PLURAL		

REFERENCES

AIKHENVALD, ALEXANDRA Y. 2003. Classifiers in spoken and signed languages: How to know more. In *Perspectives on classifier constructions in sign languages*, ed. by Karen Emmorey, 87–90. Mahwah, New Jersey: Lawrence Erlbaum Associates.

AIKHENVALD, ALEXANDRA Y., and DIANA GREEN. 1998. Palikur and the typology of classifiers. *Anthropological Linguistics* 40(3):429–80.

COGILL-KOEZ, DOROTHEA. (2000). Signed language classifier predicates: Linguistic structure or schematic visual representation? *Sign Language and Linguistics* 3(2):153–207.

ECCARIUS, PETRA, and DIANE BRENTARI. 2007. Symmetry and dominance: A cross-linguistic study of signs and classifier constructions. *Lingua* 117:1169–1201.

EMMOREY, KAREN (ed.) 2003. *Perspectives on classifier constructions in sign languages*. Mahwah, New Jersey: Lawrence Erlbaum Associates.

ENGBERG-PEDERSEN, ELISABETH. 2010. Factors that form classifier signs. In *Sign languages*, ed. by Diane Brentari, 252–83. New York: Cambridge University Press.

THE HSL PRODUCTION TEAM. 2015. *Hawai'i Sign Language: Student handbook 1, level 1*. Honolulu: University of Hawai'i at Mānoa, Department of Linguistics.

JOHNSTON, TREVOR, and ADAM SCHEMBRI. 1999. On defining lexeme in a signed language. *Sign Language & Linguistics* 2(2):115–85.

LAMBRECHT, LINDA; BARBARA EARTH ; and JAMES WOODWARD. 2013. History and documentation of Hawai'i Sign Language: First report. Paper Presented at 3rd International Conference on Language Documentation and Conservation, Honolulu.

LEWIS, M. PAUL; GARY F. SIMONS; and CHARLES D. FENNIG (eds.). 2015. *Ethnologue: Languages of the world, eighteenth edition*. Dallas, Texas: SIL International. Online version: http://www.ethnologue.com. *Accessed 4/22/2015*.

LIDDELL, SCOTT. 2003. *Grammar, gesture, and meaning in American Sign Language*. New York: Cambridge University Press.

MORGAN, GARY, and BENCIE WOLL. 2007. Understanding sign language classifiers through a poly-componential approach. *Lingua* 117:1159–68.

PADDEN, CAROL A. 1988. *The interaction of morphology and syntax in American Sign Language*. New York: Garland.

NYST, VICTORIA. 2007. *A descriptive analysis of Adamorobe Sign Language (Ghana)*. Utrecht: LOT.

SANDLER, WENDY, and DIANE LILLO-MARTIN. 2006 *Sign language and linguistic universals*. New York: Cambridge University Press.

SCHEMBRI, ADAM. 2003. Rethinking "classifiers" in signed languages. In *Perspectives on classifier constructions in sign languages*, ed. by Karen Emmorey, 3–34. Mahwah, New Jersey: Lawrence Erlbaum Associates.

STOKOE, WILLIAM. 1978. *Sign language structure: The first linguistic analysis of American Sign Language*. Silver Spring, MD: Linstok Press.

SUPALLA, TED. 1986. The classifier system in American Sign Language. In *Noun classes and categorization*, ed. by Colette Craig, 181–214. Philadelphia: John Benjamins Publishing Company.

SUTTON-SPENSE, RACHEL, and BENCIE WOLL. 1999. *The linguistics of British Sign Language: An introduction*. New York: Cambridge University Press.

VAN DER HULST, HARRY. 1996. On the other hand. *Lingua* 98:121–43.

WILBUR, RONNIE B. 2000. Phonological and prosodic layering of nonmanuals in American Sign Language. In *The signs of language revisited: An anthology to honor Ursula Bellugi and Edward Klima*, ed. by Karen Emmorey, Harlan L. Lane, Ursula Bellugi, and Edward S. Klima, 215–44. Mahwah, New Jersey: Lawrence Erlbaum Associates.

srarrick@hawaii.edu