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THE ICONICITY AND NON-ARBITRARINESS OF BODY LOCATIONS IN FOUR  
UNRELATED SIGN LANGUAGES

by

John Samson  
Master of Arts Theology, Southwestern Baptist Theological Seminary, 2018

A Thesis  
Submitted to the Graduate Faculty

of the

University of North Dakota

in partial fulfillment of the requirements

for the degree of

Master of Arts

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December  
2021

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This thesis, submitted by John Samson in partial fulfillment of the requirements for the Degree of Master of Arts from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

---

J. Albert Bickford, Chair

---

Mark E. Karan

---

Keith W. Slater

This thesis is being submitted by the appointed advisory committee as having met all of the requirements of the School of Graduate Studies at the University of North Dakota and is hereby approved.

---

Chris Nelson, Associate Dean  
School of Graduate Studies

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## ABBREVIATIONS

ap	analogous part
ASL	American Sign Language
asp	analogous shape or position
bor	borrowing
bp	body part
eap	experienced at the part
fop	function of the part
ges	gesture
HSKL	Hong Kong Sign Language
HS	handshape
iup	item used at part
KSL	Korean Sign Language
loc	location
lsa	language-specific association
LSF	Langue des Signes Française (French Sign Language)
qop	quality of part
ma	mimetic action
mov	movement
ndh	non-dominant hand
nmm	non-manual markers
ori	palm orientation

## ABSTRACT

In this thesis, I show that universally, there is a strong tendency for signs located on the body to have an iconic or non-arbitrary motivation, especially in their original form. I analyze sign language dictionaries from four unrelated sign languages and establish an iconic or non-arbitrary link between the form of the signs and their meaning, and classify those links according to 8 categories of body location iconicity and 3 categories of non-arbitrariness. The strength of this tendency depends on the percentage of signs that are shown to have an iconic or non-arbitrary link. For the data analyzed here this percentage is between 92.0-98.1%. In addition to this I provide helpful principles for analyzing the iconicity and etymology of signs; I provide a framework for analyzing iconicity and make a new distinction between it and a type of non-arbitrariness which I am calling “form to form resemblance.”

# CHAPTER 1

## INTRODUCTION

In this thesis, I show that universally, there is a strong tendency for signs located on the body to have an iconic or non-arbitrary motivation, especially in their original form. I analyze sign language dictionaries from four unrelated sign languages and establish an iconic or non-arbitrary link between the form of the signs and their meaning, and classify those links according to 8 categories of body location iconicity and 3 categories of non-arbitrariness. The strength of this tendency depends on the percentage of signs that are shown to have an iconic or non-arbitrary link. For the data analyzed here this percentage is between 92.0-98.1%. In addition to this I provide helpful principles for analyzing the iconicity and etymology of signs; I provide a framework for analyzing iconicity and make a new distinction between it and a type of non-arbitrariness which I am calling “form to form resemblance.”

### 1.1 Iconicity in Signed Languages

In the past, arbitrariness has been considered the hallmark of the lexical unit. Saussure wrote of word-formation saying, “Meaningless phonemes combined to form meaningful morphemes or words” (de Saussure 1916). However, the strong form of this view does not still hold because not all phonemes are meaningless. In spoken languages there are sub-lexical units that have been found to have an iconic form-meaning correspondence (Meir and Tkachman 2018). In sign languages iconic form-meaning correspondence is pervasive. It is more common in sign languages than spoken language because the visual-gestural modality is “richer in iconic devices” (Meir and Tkachman 2018).

Iconicity is found across sign languages. It is defined by Meir and Tkachman (2018) as “a relationship of resemblance or similarity between the two aspects of a sign: its form and its

meaning. An iconic sign is one whose form resembles its meaning in some way.” Johnston and Schembri (2007:3) defines iconic symbols simply: “some aspect of [a] symbol’s form resembles some aspect of its meaning.” The common theme here is a resemblance between form and meaning.

Some signs have obvious iconicity. The sign BIRD in ASL pictured below in Figure 1 has the thumb and index finger of the signer located at the mouth opening and closing in a way that clearly resembles a bird’s beak.



Figure 1: BIRD (ASL)<sup>1</sup>

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<sup>1</sup> Jennifer Samson, the ASL language model, is a hearing sister of a Deaf adult and has been raised bilingually using both English and ASL in the home since age 5.



Figure 2: GIRL (ASL)

Other signs have an iconicity that is less clear. For the ASL sign GIRL in Figure 2 above, the signer's thumb traces a line from the signer's cheek to their chin. Without a knowledge of ASL or the history of ASL, it would be difficult to see the iconicity of this sign. However, we do know from historical records that the sign GIRL is picturing a string on the bonnets that women used to wear.

With the sign GIRL there is an important point that must be clarified: just because a sign is iconic, doesn't mean that a person automatically understands the meaning of the sign, and it also doesn't mean the signer recognizes the iconic origin of the sign. It is unlikely that a person seeing the ASL sign GIRL for the first time would recognize its meaning, it has a particularly opaque iconicity. Furthermore, even if a signer is familiar with the sign GIRL, they may not be able to recognize its iconic origin picturing a bonnet string. Nevertheless the sign is still iconic.

The research of iconicity within sign languages has had an interesting history. Much of the reason people previously did not believe signed languages were true languages is due in part to their pervasive iconicity. Sign languages were considered a form of pantomime. As such, early researchers downplayed the role of iconicity in order to argue that sign languages were true languages. With signed languages now well established as true languages within the linguistic

community, it is not necessary to downplay iconicity. Quite the opposite actually, iconicity is in vogue in both spoken and signed language research.

One thing, however, must be addressed before talking further about iconicity in signed languages, and that is the topic of the parameters that are the phonetic building-blocks of every sign.

## **1.2 Sign Language Parameters**

There are five phonological categories, called parameters, that combine to make up every sign: handshape, orientation, location, movement, and non-manual markers. The handshape refers to the hand configuration used to make a sign. Signs can be either one-handed or two-handed. The orientation refers to the orientation of the hand such as palm facing up or down. The orientation can also be relative such as toward or away from another location. The location of a sign will be either on the body or in neutral signing space in front of the body and a single sign can have up to two locations. The movement can be a path movement between two locations, a hand-internal movement such as opening and closing of the hand, or a change of orientation. Non-manual markers is a bit of a drip pan category for everything else. It includes mouth movements (such as sticking the tongue out), head tilt, body shift, eye-contact, raising and lowering the eyebrows, and others.

## **1.3 History of Iconicity and Signed Languages**

With this in mind, we can go back to the topic of the history of iconicity. The following are some of the important works for the understanding iconicity within sign languages, especially as it pertains to this thesis.

### ***1.3.1 Mark Mandel 1977: Iconic Devices in American Sign Language***

Mark Mandel is one of the first to write on the iconicity of signed languages. He goes against some of the other researchers in sign languages of his time who “do not consider

iconicity a significant factor in ASL, at least at the lexical level” (1977:61). He notes the continuum of iconicity vs conventionality in signs, the importance of historical iconicity within lexical signs, and also notes a metonymic relationship (where a part of something is used to refer to the whole thing) between what he calls the base of the sign (what I will refer to as an iconic base) and its meaning. His definition of base is “The thing (or action, etc.) which is actually pictured or presented in an icon, not necessarily identical with the referent” (Mandel 1977, 93). He gives the example of OLD, which traces the outline of a beard. The beard is the base while ‘old’ is the meaning. He mentions that “when the base is not identical to the referent, it represents the referent metonymically” (Mandel 1977:93).<sup>2</sup> He notes three types of relationships between the sign and the base: presentation, depiction, and mime. Presentation involves simply doing the action of the base (miming falls into this category), or if it’s an object, simply indexing (pointing to) it. The indexical presentation is used mostly for body parts. The other two relationships are depiction: where the sign pictures the base, and mime which presents a “token of action.” He uses the sign MONKEY (which pictures a monkey scratching its sides) as a type of mime where the agent is not human. These three relationships have some similarities with how I relate the form to its iconic base in section 2.2. Mandel’s work surveys many aspects of sign language and shows some of the common iconic devices at every level of sign language rather than focusing in depth on any one aspect.

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<sup>2</sup> This part I disagree with because there can also be a metaphorical relationship between the base and the meaning. The ASL sign STUBBORN is related to the sign DONKEY. The iconic base for both signs depicts the ear of a donkey, which is a metonymic relationship for DONKEY, but for STUBBORN, an extra step is needed to relate the animal to the character of stubbornness, and that is a metaphorical relationship. This also comes up in section 6.2.1 for HKSL with the homonyms MATERNAL GRANDFATHER and NOSY.

### 1.3.2 Klima and Bellugi 1979: *The Signs of Language*

One of the most important of the earlier works on sign language is Klima and Bellugi's (1979) *The Signs of Language*. Since the main obstacle for early linguists was actually demonstrating that signed languages were real languages instead of a complex system of pantomime, necessarily, much of their work had to focus on the differences between pantomime and signed languages. As such, much of the iconicity of sign languages was downplayed. In Klima and Bellugi (1979), they emphasize the conventionality and grammaticality of ASL while still affirming the importance and productivity of iconicity.

Within the book, Susan Fischer contributes a chapter on the historical changes in ASL from iconic to arbitrary. This information is necessary for understanding the regular patterns that signs tend to undergo over time shifting from iconic to arbitrary. This deiconization of signs is not random, but is the result of regular phonological changes over time. She mentions that signs tend to move from the edges of neutral signing space to the middle. Also, signs on the body tend to change along the axis of bilateral symmetry that divides the body from head to waist centered at the hollow of the neck. This divides the body into ipsilateral and contralateral sides (that is, the same side and opposite side of the body as the dominant hand). Thus, signs starting at the center of the face tend to get displaced to the periphery over time. At the same time, for signs on the torso, they tend to move from the periphery (such as the heart location) to the center of the chest.<sup>3</sup> All of these processes can result in deiconization.

### 1.3.3 Sarah Taub 2001: *Language from the Body*

In the past 20 years or so, sign language linguists have been much more open to the research of iconicity within sign languages, now that sign languages are firmly established as being true languages within the broader linguistic community. One of the most important

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<sup>3</sup> It should be emphasized that these are tendencies, not hard and fast rules.

works on iconicity within signed languages is Sarah Taub's (2001) *Language From the Body*. Within Taub's book, she looks at metaphor and iconicity from the perspective of cognitive linguistics.

Few if any works on iconicity in signed languages lack Sarah Taub's work in their reference list. There are many things that could be discussed about it, but here I'll focus on her analogue-building model of linguistic iconicity.

Taub's analogue-building model in Figure 3 below represents the creation of a new iconic item, not the mental process for each time an iconic sign is used.

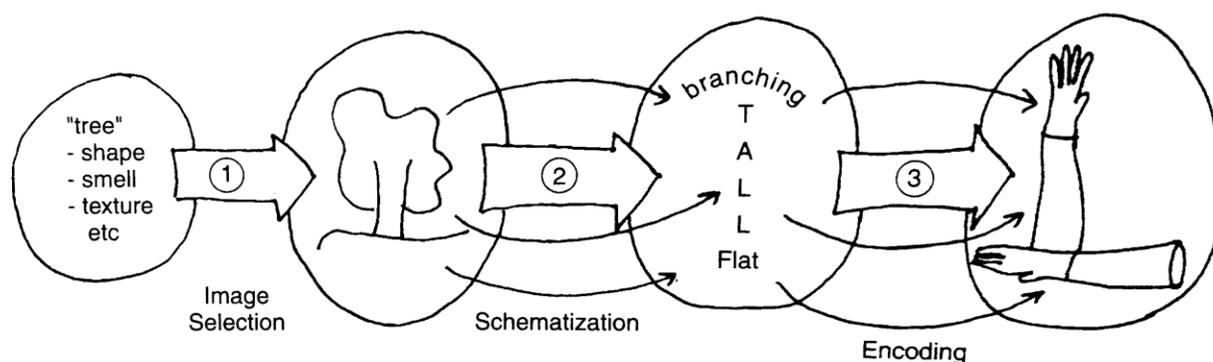


Figure 3: Taub's Analogue-Building Model<sup>4</sup>

Taub describes her model saying,

[The model] can be summarized as following: To create an iconic item, one *selects* an image to represent, modifies or *schematizes* that image so that it is representable by the language, and chooses appropriate forms to show or *encode* each representable part of the image. Moreover, when modifying the image or "translating" it into linguistic form, one makes sure that the new

---

<sup>4</sup> This image is taken Language from the Body by Sarah Taub (2001:44). It is copyrighted and is reproduced with permission of Cambridge University Press through PLSclear.

image preserves the relevant physical structure of the previous stage. (Taub 2001:44)

The image of the tree in the above figure 3, which Taub simply refers to as the “image,” would be what Mandel calls the “base” and what I’m calling an “iconic base.” In this case, there is not a metonymic relationship between the iconic base and the meaning of the sign, rather the iconic base simply resembles (or depicts) the meaning.

The third circle, with the schematization of the image, largely corresponds to what I describe in section 3.1 as the category of iconicity. Since this thesis deals with location rather than handshape, I will only comment on the location within the schematization here. What Taub refers to as the schematization of “flat,” I refer to as “analogous shape or position: surface” in my data.<sup>5</sup>

One of the most influential aspects of Taub’s work is the idea of the double-mapped metaphor. The idea is that many signs are simply iconic, but other signs require a further step of metaphorical mapping to relate the iconic base to the meaning. She does an excellent job of detailing this in chapter 6 of *Language from the Body* (Taub 2001:94-113). There is no need to repeat her work. In my data, I do note when there is a metaphorical connection between the iconic base and the meaning in a sign, but I do not go into detail about the nature of the metaphor.

#### *1.3.4 Ronnie Wilbur 2008: Event Visibility Hypothesis*

This thesis is largely inspired by Ronnie Wilbur’s work. The idea that much of the universal grammar of signed languages can be found at the level of the individual parameter comes from her work on the motion parameter for the Event Visibility Hypothesis (EVH). In

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<sup>5</sup> Technically, the sign TREE would be excluded from my data since it is located at the non-dominant hand. However, this use of the non-dominant hand is equivalent to how the forearm is used as a location.

her work on the EVH, Wilbur proposes six morphemes that seem to be universal sign language morphemes rather than limited to ASL. The six morphemes are: EndState, InitialState, Extent, Path, Extra, and USET (Unchanging State in Elapsing Time).

The EVH makes use of Brentari's Prosodic Model (1998), specifically prosodic features of a sign that change during sign formation. Two timing slots (x-slots) are used to account for the change of the prosodic features. The first timing slot is for the initial specification and the second is to show the final specification. An example of this is the ASL sign THROW, where the signer's fist starts closed and ends opened.

Wilbur observes that (2010:370) homogenous events (States and Activities) have the same features for both x-slots, while heterogenous events (Achievements and Accomplishments) have different features for the x-slots. Telic events all have a specific prosodic feature: a rapid deceleration to a stop. This morpheme is called EndState. Unsurprisingly, the sign STOP is a good example of this: the dominant hand starts above the non-dominant hand and moves down forcefully to come to a stop on the non-dominant hand. This morpheme works with classifiers as well: if an entity classifier is moving on a path and rapidly decelerates to a stop, that means the entity came to a stop, which is a telic event (specifically an accomplishment).

Four of the morphemes posited by Wilbur relate to situations, two of which correlate to state: InitialState and EndState, and two which correlate to process: Extent and Path. EndState we've already covered, and InitialState is the reverse: a rapid acceleration from an initial location. Extent and Path are both phonologically realized as movement along a path, but Extent corresponds to the duration of the event, while Path corresponds to the distance of spatial events (Wilbur 2008:220).

The two other morphemes posited are adverbial modifiers. The first one is Extra, which modifies the meaning and the movement of both Extent and Path. The movement is changed to an arc, and the meaning is changed to mean "more of." So for Extent this would mean a longer time, and for Path this would be a farther distance. The second adverbial morpheme is Unchanging State in Elapsing Time or USET. It indicate that a change continues unchanged

over time. It is indicated by a trilled movement. It only has a temporal meaning. An example of this is the finger-wiggling in the ASL sign WAIT.

In Wilbur's work it is shown that much of the movement in signs can be correlated to a consistent meaning across sign languages. In this work I am trying to show something similar for the location parameter.

### *1.3.5 Other Literature*

The article "Re-thinking Sign Language Verb Classes: Body as Subject" by Meir et al. (2006) argues that the main function of the body location in verb forms is to represent the subject.<sup>6</sup> They note that this explains the prevalence of object agreement over subject agreement verbs. In the three types of verbs (plain, agreement, and spatial) put forth by Padden (1988), Meir et al. reclassify the use of the body for plain verbs as corresponding to the subject, for agreement verbs as corresponding to the 1st person, and spatial verbs as a special reference point or not involved.

The article "Location, Location, Location" by Cates et al. (2013) has a good statistical analysis of the relative levels of contribution to the iconicity of a sign for the parameters: handshape, location, and movement. They find that location is far and away the most iconic parameter and give a chart of some of the semantic neighborhoods for each body location.

While much work has been done on iconicity, no one has yet undertaken to create a comprehensive list of the form-meaning mappings across sign languages for each of the parameters. I hope that this thesis provides a good foundation for the location parameter.

---

<sup>6</sup> As a joke, you can sign the ASL sign THINK (or other body-anchored verbs) on someone else to mean "you think," though this would never be done in normal conversation.

## CHAPTER 2

### METHODOLOGY

#### 2.1 The Dictionary Data Corpus

The data for this thesis comes from four sign languages: American Sign Language (ASL), Auslan (Australian Sign Language), Korean Sign Language (KSL), and Hong Kong Sign Language (HKSL). These languages have been chosen because they are genetically unrelated, are culturally distinct from one another, and have large video dictionaries available. It is necessary to have them unrelated so that they can be considered a representative sample of sign languages universally, not just of a certain sign language family. It is important to have them culturally distinct because different cultures have different values and meanings that they associate metaphorically with different body parts. For example, in ASL the location of the chest can express the concept of the self, while KSL can also use the nose to refer to the self.

One dictionary is used for each language. For ASL, the Gallaudet Dictionary of American Sign Language (Valli 2006) is used. It has 2986 entries. For Auslan, the Auslan Signbank is used. It has 7794 entries. It is adapted from Trevor Johnston's previous *Signs of Australia: A new dictionary of Auslan*. (Johnston 1998). The Korean Sign Language dictionary is managed by the National Institute of Korean Language along with the Korean Deaf Association. It has about 14,000 entries. The HKSL dictionary used is the Hong Kong Sign Language Browser. It was established by the Centre for Sign Language Linguistics and Deaf Studies of the Department of Linguistics and Modern Languages at The Chinese University of Hong Kong. There are currently 5482 entries in the dictionary, although many of these are variants. The dictionary provides English as well as Chinese glosses.

I limited the sample size for each dictionary roughly to a minimum of 500 signs and a maximum of 1000. This reduced the amount of work required for the analysis. Any new signs added to a dictionary after my initial sample selection were not included in the analysis. For the selection of data, the Auslan and HKSL dictionaries' word lists were searched alphabetically by the sign's English gloss. I examined approximately 200 signs from each letter of the alphabet with the goal of getting an approximately equal number of signs from each letter, until a minimum of 500 signs on the body were found. This should be considered sufficiently random, since there is not much of a pattern relating the alphabetical order of the English gloss to the location of the sign.<sup>7</sup> The KSL dictionary was searched by location, but not by English alphabetical order.<sup>8</sup> As much as possible, an approximately equal number of signs were taken from each location.

## **2.2 Located at the Body**

Before anything about the iconicity of body locations can be established, we must first figure out what we mean by body locations and when a sign is considered to be at a specific location or not.

### *2.2.1 Significant Proximity*

Every sign must be signed at a location. A sign can be located either in neutral signing space or "on the body", but this notion must be made precise. For a sign to be located on the body, it must be in contact with, or in 'significant proximity' (Johnston 1989:102) to the body. For

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<sup>7</sup> There were some minor patterns of locations tied to English gloss such as the "au" section had many signs on the ear, but the samples from each of the locations was roughly as expected.

<sup>8</sup> There were some issues with this method. Relatively fewer signs are located at the chest in my KSL data because the dictionary categorized neutral signing space and signs located on the chest together. To remedy this I doubled the quantity of signs I searched through, but that still resulted in a reduced representation from the chest location.

example, the ASL sign FACE does not touch the face, however since the index finger traces a circle around the face, the sign is in significant proximity to the face. Neutral signing space is the empty space in front of the signer that is not in significant proximity to the body. Typically signs in neutral space are in front of the signer at chest level. However, some signs are higher or lower than that. The signs HEAVEN, SKY, and STARS in ASL are signed in neutral space at or above head level, while SOCKS and HELL are signed in neutral space closer to waist level.<sup>9</sup>

There is an inherent difficulty in determining whether a sign is located in significant proximity to a body part versus simply being in neutral signing space, but other phonetic parameters can help to make this distinction. A sign with a movement and orientation towards the body (such as FACE) is more likely to be referencing the body than a sign without movement and orientation towards the body (such as STARS). However, there are exceptions. The ASL sign that can be glossed as FASCINATING (figure 4 below) pictures the signer's face (or eyes) being drawn toward the thing they are fascinated by. The orientation is not toward the face and the movement is away from the face, but the sign seems to clearly reference the face. In this case the semantics clearly are referencing a body location. However, there is likely to remain some amount of subjectivity in the distinction between signs in significant proximity with the body and signs in neutral space, and plausibility of an iconic relationship is the ultimate deciding factor.

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<sup>9</sup> It seems likely that signs in the higher and lower levels of the neutral signing space would similarly also have a strong tendency for iconic motivation. If this were true it would mean that all signs outside of the default neutral signing space have a strong tendency for iconic motivation. The five examples given here seem to have clear iconic motivation, but due to the need to limit the breadth of this research, I have not included them.



Figure 4: FASCINATING (ASL)

### 2.2.2 Distinguishing Body Locations

In order to analyze iconicity of body locations, it is important to distinguish locations from each other, but this too can be difficult. Technically, there are near infinite locations on the body depending on how precise the measurement is. Generally though, signs on the body are clustered around a few distinct locations. Every sign language linguist divides and subdivides the body in different ways, each for their own purposes.

Johnston (1989) divides the body into 18 major locations with subdivisions for a total of 48 distinct locations. His major locations are: whole of face, top of head, upper face, eye, nose, ear, cheek, mouth, chin, under chin, neck, upper trunk, chest, lower trunk, arm, elbow, pronated arm, supinated arm. He uses this large quantity of locations for the purpose of distinguishing the minimal pairs in Auslan.

In contrast, Sandler and Lillo-Martin (2006) distinguish relatively few locations. They have four major locations: head, trunk, non-dominant hand, and arm, and seven setting features: hi, lo, ipsilateral, contralateral, proximal, distal, contact. With this system they are able to describe every location on the body with a combination of these locations and settings. The ASL sign HEAD (pictured below in Figure 5) in their system would be located at the ipsilateral side of the head with hi and lo contact.



Figure 5: HEAD (ASL)<sup>10</sup>

This system cuts down on the need to posit complicated locations and settings and fits into their established Hand Tier model of phonological description.

In the article “Location, Location, Location”, Gates et al. (2013) list body locations based on the “semantic neighborhoods” found in their data. They note that a location such as the shoulder is not limited to the physical properties of the shoulder alone, but also metaphorical uses of the location as well. The shoulder location can be used simply to refer to the shoulders or things worn on the shoulder, but it can also be used to refer to the concept of responsibility. This is because of the metaphor that responsibility is a burden borne on the shoulders. They use twelve major locations for semantic neighborhoods in ASL: head, eyes, nose, mouth, ears, neck, shoulders, trunk, heart, hands, non-dominant hand, and legs.

Each of these lists of body location are designed for different analytic purposes. The purpose of this thesis is to show that universally, there is a strong tendency for signs located on the body to have an iconic motivation, especially in their historical forms. Because I am looking for the iconic motivation of the body locations, which is a semantic concept, my list of body locations has similarities to the one by Gates et al. (2013). However, their list was a bit

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<sup>10</sup> The chronological sequence of the sign is represented in the pictures from left to right.

too short for my purposes. For example, where they had one location of torso, I found many signs indicating anger would be located specifically at the stomach and many signs related to breathing would be located at the chest. So the list I use conceptually falls between theirs and Johnston's more extensive one. My list isn't as exhaustive as Johnston's because I didn't need that many subcategories to describe my data: I was not looking to establish minimal pairs, and his list would over-divide semantically similar locations. The list by Sandler and Lillo-Martin is good for the purposes they made it for, but it would obscure the iconicity of sight being tied to the eye by naming the eye location as the hi, lo, (i.e. in the middle) ipsilateral side of the head.

### *2.2.3 The Locations used in this Thesis*

In this thesis I have chosen a list of 18 locations and 6 sublocations, based in part on phonological distinctness and in part on the patterns of iconicity in the corpus. In my data (located in the appendices), if more detail is required, after the main location, I mention relative position. An entry such as "eye, below" is used if the major location was the eye, but the sign is below it, or "eye, side" is used if the location is specifically at the side of the eye. These locations are generally ordered from the top of the body downward.

Table 1: Body Locations List

Location	Examples
Head	
- Face	ASL: FACE, BEAUTY
- Side	HKSL: HUSBAND
- Top	ASL: BALD
- Back	ASL: BACK-OF-MIND
Forehead	ASL: THINK, INFORM Auslan: FAMILIAR, WORRY
Eyes <sup>11</sup>	KSL: 며칠 ‘a few days’
Ears	HKSL: DAUGHTER
Nose	KSL: 좋다 ‘to like’
Cheek	ASL: CANDY
Mouth	HKSL: CIGAR
Chin	HKSL: WOOL
Neck	KSL: 체험 ‘experience’
Shoulder	KSL: 등 ‘rank’
Chest	Auslan: ASTHMA
Heart	ASL: BADGE
Arm	
- Upper arm	Auslan: SYRINGE
- Forearm	Auslan: TOAD
Elbow	ASL: PUNISH
Wrist	HKSL: CUT/SCRATCH
Stomach	KSL: 설사 ‘diarrhea’
Waist	ASL: NAVY
Leg	Auslan: LEG

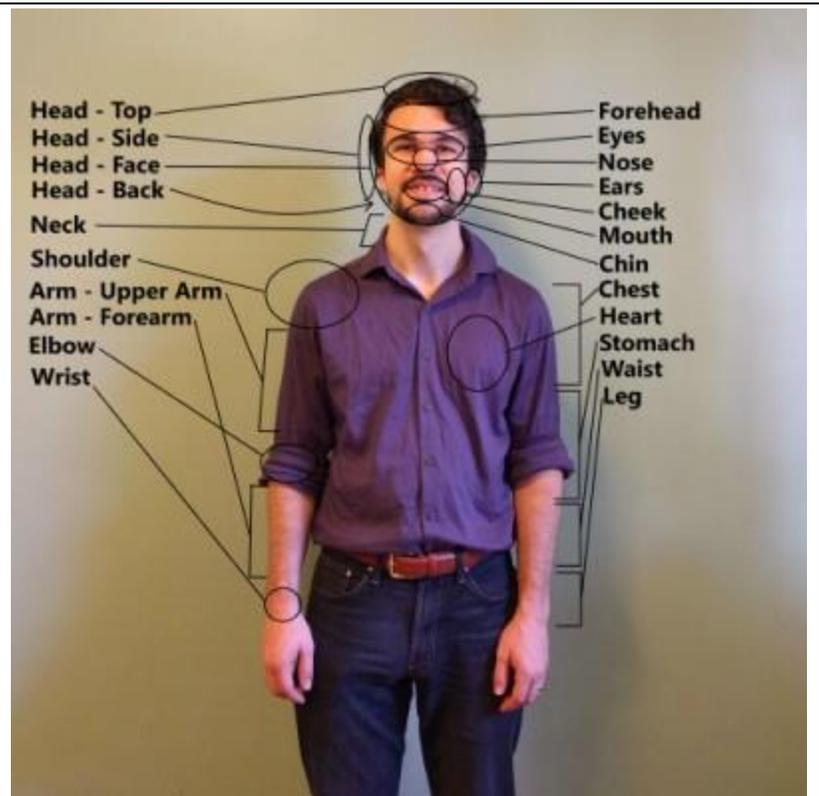


Figure 6: Body Locations

<sup>11</sup> The location of the eyes does not include the nose despite the circle overlapping that location.

The first major location is the head, the sublocations of the head are the face, side, top, back. After analyzing the data, it became clear that while there is a lot of overlap between the semantic neighborhoods at the top and side of the head, often referring to cognition, hair, or head-gear, the location of the face generally was associated with different semantic concepts such as beauty, appearance, or sight.

The forehead/temple is its own location separate from the head because it is one of the most common categories across the sign languages and tends to have a more limited semantic range than the rest of the head. This location is the main location for cognition across the four sign languages.

The location of the eyes is the main location for the category of eyesight. Almost all signs at the eyes have to do with eyesight or something used or worn at the eyes. It is difficult to phonetically differentiate signs that are in front of the eyes with signs that are in front of the face. Generally, if it is in front of the face and it has to do with sight, it will go in the “eyes” category, though there are exceptions. One thing worth noting is that very few signs are directly at the eye, likely due to concern for poking oneself in the eye while signing. Often signs that are associated with sight are at the upper cheekbone. This location can be confused with the cheek, but across the four sign languages it consistently patterns after the eyes rather than the cheeks.<sup>12</sup>

The location of the ears is almost exclusively used for signs related to hearing, or things you wear on your ear (such as earrings). This location can be hard to distinguish from the side of the head.

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<sup>12</sup> I have been learning Kenyan Sign Language recently. Interestingly, my language teacher actually touched his eyelids when signing EYES. This did not happen in any of the sign languages looked at for this thesis.

The nose location is used for a variety of meanings. The location is used for smell, of course, but the other uses varied widely from language to language. In ASL the nose is used for humor and generally negative signs. In Auslan it is used for humor, but also for luck. In HKSL it is used for some negative signs, though that could be influence from other signs/cultures. In KSL the nose can be used to refer to the self, things that are good, dislike, and things that are dirty.

The cheek is often used for eating, specifically the image of chewing. It is also the location of things used or worn and is often associated with color, or facial hair.

The location of the mouth is one of the most common body locations for signs. It is usually used for signs related to eating or speaking.

The location of the chin almost always overlaps in categories with the location of the mouth. Semantically, it might be appropriate to consider them as two parts of the same location most of the time. However, the chin does have some things that differentiate it from the mouth. Signs related to beards are at the chin (or cheek) rather than the mouth. Also there are signs that are located below the chin, these are consistently used differently than the mouth location.

The neck is commonly used for thirst, desire, breathing, and speaking. There is a lot of semantic overlap between the neck and the mouth.

The shoulder isn't the most common location, but it is often associated with rank or responsibility.

The (upper) chest location is one of the more common locations for signs across the different languages. Its main purpose seems to be to refer to the self. Other things commonly located there are emotions, health, and clothing.

The location of the heart (the contralateral side of the chest) is interesting. It does not meaningfully occur in every sign language. In my data, KSL only has 2 signs located at the heart, and that is because that's where nametags go. ASL, on the other hand, has many signs at

the heart, especially related to emotions or personality. This location seems to be more language and culture-specific than some other locations.

The location of the arm is subdivided into upper arm and forearm. Though the sublocations are distinct there was often overlap between them. Signs for power are a bit more typically located at the upper arm at the bicep, but they can also be located at the forearm. The forearm is commonly used to refer to the length of something or a flat surface.

The location of the elbow is another unusual location. The main language it occurs in is ASL, often its use overlaps with the use of the forearm. In the other sign languages in my data it isn't used as a distinct location.

The location of the wrist is often used for time in association to watches. It is also used for other things worn at the wrist or for taking the pulse. This was not a very common location except when used in reference to time.

The stomach has overlap with the chest location. Often emotions are associated here, but they are more likely to be associated with anger or disgust. Interestingly, KSL uses this location as the "heart" this location is used for conscience and intuition in KSL.

The leg (upper thigh) location was rather infrequent. It is almost always used to refer to the body part itself or something worn there.

Among all the body locations, the non-dominant hand (NDH) is one of the most commonly used for signs. However, it functions differently than the other locations. It can change handshape and orientation which allows it to represent many different iconic motivations, because of this, it is not included in this analysis. An analysis of the iconicity of the non-dominant hand would likely fit better in an analysis of the iconicity of handshape.<sup>13</sup>

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<sup>13</sup> That being said, there does seem to be a good amount of semantic overlap between the flat handshape NDH and the forearm.

Different linguists are likely to use different body location categories based on what they are trying to describe. These locations are helpful to see the various semantic categories across different sign languages. Some sign languages will include more categories (such as the ipsilateral chest in Kenyan Sign Language), and some will include fewer (HKSL didn't have any signs at the elbow). There is no one list of locations that fits all sign languages, but this list is sufficient to describe my data.

## CHAPTER 3

### OVERARCHING THEMES

#### 3.1 Categories of Body Location Iconicity

In the analysis of the four sign languages, certain basic cross-linguistic patterns of iconicity emerged. The majority of signs located on the body can be categorized in one of these 12 categories. The categories are as follows: the body part (bp) itself, an analogous body part (ap), the basic function of that body part (fop), a quality of that body part (qop), an item typically used at that body part (iup), an analogous shape or position (asp), something experienced at the body part (eap), mimetic action (ma), a language-specific association (lsa), borrowed from another language (bor), gesture (ges), and unknown (??). Table 2 below gives a summary of the different categories.

Table 2: Categories of Body Location Iconicity

Body Part	bp	A body part at that location. Eg.: forehead, eyebrows, tongue, cheek, heart, etc.
Analogous Part	ap	One body part for another. Eg.: forehead for animal forehead, arm for leg.
Function of Part	fop	Typical functions of that body part. Eg.: eating, speaking, thinking, smelling, etc.
Item used at Part	iup	Items that are typically used at that location. Eg. wearables, phones, whistles, etc.
Quality of Part	qop	Quality or property of the body part. Eg: red lips, hard chin, oily face, rubbery skin.
Analogous Shape or Position	asp	The shape or position of the body part. Eg: horizontal forearm for a surface, circular face for a circular clockface, a location on the body for the “center” position on the timeline.
Experienced at Part	eap	Something experienced at the body part. Eg: illness, surgery, pain.
Mimetic Action	ma	Imitating an action that is not standard use of the location. Eg: monkey scratching its sides, pulling a bus cord by the side of the head to stop.

Language-specific Association	lsa	These are non-iconic signs that are derived from an iconic original. Eg.: ASL HUSBAND, NEPHEW, and UNCLE from the original BOY.
Borrowed	bor	A sign that borrows from another sign language, or an orthographic form or lip-read form of a spoken language word. Eg.: initialized signs, CABBAGE/GARBAGE, or an ASL sign in another sign language.
Gesture	ges	A typical gesture borrowed from the hearing culture. The meaning should be transparent. Eg.: salute for hello.
Unknown Iconicity	??	Signs with unknown iconicity.

The most basic iconic use for location is to have the location refer to itself. Across sign languages, one expects the sign for ARM to generally gesture at the arm in some way. The sign for EYES will likely point toward the eyes in some way, and the sign for MOUTH will probably point to the mouth in some way. The main variation is which handshape and movement are used. I also found that this category of sign is also the most likely to extend past a sign language's normal phonological limits for location. For example, in Auslan, the only sign I found at the (upper) leg location is the sign LEG. In HKSL, the only signs at the eyebrow and at the back were the signs EYEBROW and BACK.

The next category is that of the analogous (body) part (ap). This is where one body part is used to picture another body part. This is often used for body parts that would be inconvenient or inappropriate to simply point to. For example, one of the signs for PENIS in ASL is located at the nose. This is likely a location shift by euphemism. The non-dominant hand can be used to represent to the legs, feet, and toes. Across sign languages body parts are commonly used to refer to the analogous body parts of animals. In KSL the sign PIG uses the nose location to picture a pig's snout, and in ASL the sign OWL uses the eyes to picture an owl's eyes.

The third general category of iconicity that occurred across all four sign languages is that of the basic function of the part (fop). Simply put, this is any action closely associated with the body part. For the forehead location, *cognition* is the basic function, since it is closely associated with the brain. The eyes are closely associated with *seeing* and *crying*; the ears with *hearing*; the nose with *smelling*, *breathing*, *sneezing*, and *running*; the cheek with *blushing*; the mouth with

*eating, drinking and speaking, the neck with swallowing and thirst; the chest with feeling emotion, breathing, and coughing; the stomach is associated with hunger.*

Another common category is items typically used at a certain body part (iup). The most common example of this category is wearable items, but it also includes non-wearable things such as phones, microphones, smoking pipes, and x-ray machines.

The next category is quality of the body part (qop). Certain body parts have distinct inherent qualities that can be used iconically. For ASL, Auslan, and KSL the sign RED is located on the mouth because lips are typically red.

The category “analogous shape or position” (asp) is used for signs that are located at the body part because of its physical shape or 3 dimensional position rather than as a body part. The forearm is commonly used in this way to refer to a flat surface, or a long object. In Auslan the sign WORM is located at the forearm which is picturing the surface that the worm is crawling on. The head or the face is sometimes used to picture round objects. I believe the ASL sign LIGHT, which has the 8 handshape flicking upward at the chin, is picturing the filament of an incandescent lightbulb flicking on. It is located at the chin because the head is the shape of a lightbulb, and that is roughly where the filament would be located.<sup>14</sup>

The next category includes things that happen or are experienced at a certain body part (eap). A lot of medical signs fall into this category. For example, pain can be experienced anywhere on the body, so the sign PAIN in ASL can likewise be signed at any body part, and it refers to pain at that location. Surgery is another example of something that happens to body parts. In ASL you can move the sign SURGERY to any location on the body to show where the surgery was performed.

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<sup>14</sup> This sign is not found in Long (1918) or Michaels (1923) but is simply an educated guess that I believe fits the parameters quite well.

The category of mimetic action (ma) is similar to function of part, but is used for non-basic functions. In the HKSL sign WARM, the signer rubs their both their upper arms in the same way people tend to do when they are cold and trying to warm themselves up. This would not be considered a basic function of the arms. Another example from HKSL is BUS STOP which is located at the side of the head to mimic someone pulling the cord on the bus. This is not a function of the side of the head at all, so it can't be a basic function of the part.

One of the more difficult categories is language-specific association (lsa). There are groups or families of signs that are all formed by analogy to an original. In ASL all the masculine and feminine signs are formed by analogy to the signs BOY and GIRL respectively, which historically more generally referred to male and female.<sup>15</sup> The source signs are iconic, but the derived signs are not iconic.<sup>16</sup> At the same time they are also not arbitrary. The reason this category is called "language-specific" is that this relationship between form and meaning only works within its own language. Other sign languages are unlikely to associate these meanings to the same location.

The next category is borrowing (bor). Every language borrows from other languages, sign languages are no exception. Sign languages can borrow from other sign languages. Often the names of countries are borrowed from other sign language, GERMANY in ASL is borrowed from German Sign Language (DGS). Sign languages can also borrow from spoken languages. This is commonly seen when Deaf people simultaneously sign a word and mouth the equivalent word in their country's native spoken language. Sign languages can also borrow from the written form of languages. This is often seen in the handshape parameter of initialized ASL signs. The sign FAMILY is related to the sign GROUP, but with the F-handshape instead. In HKSL this can

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<sup>15</sup> See section 4.2.2 for a more in-depth discussion of the gender signs in ASL.

<sup>16</sup> This is actually how to determine the original sign vs the derived signs. The original one is fully iconic and the derived signs are not iconic, but generally have one or more parameters that resemble the form of the original. This is the location parameter for the signs derived from BOY and GIRL.

be seen in the location parameter for the sign MALL which is located at the mouth because the Chinese characters for the word mall include the mouth character.

If a sign is borrowed from another sign language it can always be considered to be a non-arbitrary association between form and meaning, and sometimes it can be considered iconic. Often the sign will likely be iconic in its source language, and it may still be iconic in the target language, but the association between form and meaning can often be opaque in the target language. If a sign is borrowed from a spoken language, it will generally be associated to the lipread or orthographic form of the word in the source language, but this may not be tied to the meaning in the target language. In ASL, the sign CABBAGE and GARBAGE are homonyms because they are indistinguishable in lipreading from English, but the form of the sign GARBAGE is not associated with its own meaning but it is associated with the meaning of CABBAGE.

The category of gesture (ges) can be considered a type of borrowing. The gesture category is reserved for commonly understood gestures within the society that even hearing people use and understand. These signs can be considered to be borrowed from the hearing gesture system of the culture. Examples of this are the thumbs-up to mean good, or the sign HELLO in ASL is located at the forehead because it is a salute gesture. Obscene gestures would also fall into this category, but those aren't typically put in dictionaries so they are underrepresented in my data.

The last category, unknown (??), isn't a true category. It's simply a placeholder category for signs that I couldn't figure out any association between their location and their meaning. These signs are considered non-iconic for this thesis.

Of these 12 categories, 8 of them are iconic, 3 are non-arbitrary and 1 is unknown iconicity and counted as non-iconic. The 8 iconic categories are: body part (bp), analogous part (ap), function of the part (fop), item used at the part (iup), quality of the part (qop), analogous shape or position (asp), experienced at the part (eap), and mimetic action (ma). For all of these categories, the form resembles the meaning of the sign, though often the iconic base must be associated with the meaning by metonymy or metaphor.

The three categories of iconicity that are non-arbitrary are gesture (ges), language-specific association (lsa), and borrowed (bor). In these categories the form of the sign does not necessarily resemble the meaning, however, the forms are not arbitrarily associated with their meanings. For the signs in these categories, they relate to their meaning in a different way. The form of the signs resembles another linguistic form. For gesture, the form of the sign resembles a gesture commonly used within the broader culture. For language-specific association, the form of the (derived) sign resembles the form of an original iconic sign. For the borrowed signs category, the form of the sign resembles the form of the foreign language word. If it is borrowed from another sign language, the sign resembles the foreign sign. If it is borrowed from an orthographic form, the sign resembles the orthographic form. If it is borrowed from a lipread form, the sign resembles the lipread form of the spoken word. I am calling these three categories “form to form resemblance”, which is discussed further in section 8.3.2.

### *3.1.1 Notes about the Categories*

These categories of iconicity are specifically for the location parameter for signs on the body. Some of them apply also to other sign language parameters also (as indicated by some of the examples above), but those other parameters are likely to have additional categories.

Some signs can be analyzed as being members of one category or another. The ASL sign SMOKING, which is signed at the mouth could be analyzed in different ways. It could be fop: smoking, where smoking is considered a (somewhat) basic function of the mouth, or it could be ma: smoking because the sign mimics the action of smoking. Other signs fall into two categories simultaneously. An example of this is the ASL sign HOSE ‘nylon stocking’, which is signed at the forearm. It should be considered both ap: leg and iup: wearable because the forearm is used to reference the leg and also references clothing worn on the leg.

### *3.1.2 Compounds and Iconicity*

Compound signs can be a source of difficulty. For each of the sign languages looked at here, the individual signs that make up the compound may be iconic, but that iconicity may be

seemingly non-sensical when applied to the compound as a whole. In KSL the sign HONEY is a compound of BEE + SWEET. The sign BEE depicts a bug stinging one's cheek and then slapping it, and the sign SWEET moves in a circular motion in front of the mouth indicating taste or something that is consumable. The second part of the compound's iconicity transfers well to HONEY, it is still something consumable, but the first part doesn't. It's not as if you get attacked by a bee every time you want to put honey in a cup of tea. So while the parts are individually iconic, the iconicity is misleading when applied to the whole.

Another example is the sign RAIN in KSL, it is a compound of 'water' + a classifier. The sign for WATER depicts someone drinking from a cup, and the second part is a classifier that indicates many small things falling down (such as depicting raindrops). The compound of water and many drops falling down makes sense for RAIN, but the image of someone drinking from a glass is not at all iconic for rain.

### **3.2 The Timeline**

One group of iconic signs has appeared in all four sign languages and defies simple categorization. Those are signs related to the timeline. Every culture has beliefs about time, whether its linear, cyclical, or something else. Unexpectedly, the picture of the timeline is shared in common with these four unrelated sign languages. The form of the timeline that is shared here is one that uses the signer's positioning as the present, locations behind the signer as past (usually implied by a backward movement), and the locations in front of the signer as the future. This is pictured in Figure 7 below.



Figure 7: Timeline<sup>17</sup>

Signs related to the timeline are often located on the body, or if not, are usually in significant proximity. Often their location is at, or above the shoulder<sup>18</sup>, though they are also located at the cheek, eye, or forehead. Less commonly, some signs are located to the side of the body, such as the ASL sign LATE (Figure 8 below).

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<sup>17</sup> Special thanks to baby Sophie for modelling the “near future” position for us.

<sup>18</sup> If you draw an imaginary square at the side of the head in the space between the forehead and the shoulder, most of the signs for the timeline would fall somewhere in that square.



Figure 8: LATE (ASL)

These signs are not semantically linked to their body location in the way that eating is semantically linked to the mouth. Rather, they're linked to the body as the conceptual center point of the timeline. Because of this, many different locations are used for different signs because the location isn't referencing a property of the body part as much as a property of the body as a whole.

A commonality of the locations used for the timeline is that they tend to be to the side of the body so they can move either backwards or forwards. So the signs concerning time at the chin, eyes, and forehead will often be at the side of the chin, eyes<sup>19</sup>, and forehead respectively. However, signs referencing the future aren't as bound by this restriction as signs referencing the past. Examples of this are FOREVER in HKSL (at the chin) and GRANDFATHER in ASL (at the forehead). It's easy to move from the body forward from any location. It's less easy to move from the body backwards.

The category of iconicity I use for classifying the timeline is analogous shape or position: central (asp: central). The analogous shape or position category is used when the body part is

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<sup>19</sup> KSL in particular uses the eye location for the timeline.

used for its 3 dimensional qualities rather than actually picturing a body part. A quality all these timeline locations share is that they are located on the body which is at the center of the timeline. A problem with the subcategory “central” is that it would technically apply to any body part, except possibly the arms. The analogous shape or position category has several uses, but the subcategory “central” is only used for the timeline. A problem that remains is that I do not currently know why there are several body locations used for the timeline within a single sign language. Normally families of signs are formed by analogy from an original sign and thus all the signs in the family tend to have the same location, but this is not the case here.

With the explanation of the categories out of the way it’s time to apply them to the first of the four sign languages looked at here: ASL.

## **CHAPTER 4**

### **AMERICAN SIGN LANGUAGE**

The origins of ASL can be traced back to the early 19th century with the work of Thomas Hopkins Gallaudet and his founding of the American School for the Deaf (ASD) in Hartford Connecticut. A graduate of Andover Theological Seminary, Gallaudet encountered Alice Cogswell, the Deaf daughter of his neighbor Dr. Mason Cogswell, and attempted to teach her English. With funding from Cogswell and others, he travelled to Europe to learn Deaf pedagogy. He went to France to the Institut National de Jeunes Sourds de Paris, which taught a manual communication method. He learned the methods of the school and convinced Laurent Clerc, a Deaf assistant to the school's founder, to accompany him to America. The signs that Clerc brought from France mixed with the pre-existing signs of the students from Martha's Vineyard, Henneker New Hampshire, and the Sandy River Valley in Maine (Lane et al. 2000:17), and possibly also Plains Indian Sign Language (Davis 2010). This mixture of sign languages resulted in ASL.

#### **4.1 ASL Dictionary – The Gallaudet Dictionary of American Sign Language**

The Gallaudet Dictionary of American Sign Language was initially published in 2005 by Gallaudet University and edited by Clayton Valli. Gallaudet University was founded in 1864 and is located in Washington DC. It was the first school for the advanced education of Deaf people and still is the only university in the country specifically for the Deaf, though there are others with large programs for the Deaf.

Since Gallaudet is located in Washington DC, the signs in the dictionary predominately reflect that dialect. Texas, California and other states have their own regional sign variants, but since Gallaudet attracts students from across the US, the Gallaudet dialect is generally known throughout the US.

The dictionary includes videos for 2986 signs and typically includes several English glosses for each sign. The dictionary is arranged in alphabetical order by English gloss. Sometimes a few variations on a single sign are given. When this variation is simply a variation of handshape due to initialization<sup>20</sup>, I generally skipped it. If the variant wasn't initialized, and especially if it was signed at a separate location, I generally included it in the analysis. The dictionary does not categorize signs by locations, and each word is signed by a single signer from a single angle (typically the camera is directly in front of the signer). This occasionally made it more difficult to assess a sign's location. In those cases, I cross-referenced the sign with an online ASL dictionary such as [handspeak.com](http://handspeak.com).<sup>21</sup>

## **4.2 ASL Data Analysis**

### *4.2.1 ASL Iconicity Chart*

An analysis of the data from the Gallaudet Dictionary is provided below in Table 4-2. All the signs gathered in the data located on the body for ASL are summarized in the chart below and identified as being in one of the 12 categories of iconicity discussed in chapter 3. The full list of data for ASL is found in Appendix A. The location of the sign is given in the left column, the category of iconicity is given in the middle column. Also, the location name is formatted as

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<sup>20</sup> Initialization is a common occurrence in ASL. The handshape of a sign is typically replaced with the first letter of the English gloss, though sometimes a non-initial letter within the word is used. It is a type of borrowing.

<sup>21</sup> A particular strength of this dictionary is that it often gives several sign variations. This has been helpful in tracing phonological change.

a link that goes directly to the associated location table in the appendix. If there is any question about the truncated labels in this summary chart, the full form can be found in the appendix, which should clear up any ambiguity.

The third column is the “Iconic Relationship” column. For many signs there is no need to provide any information in the third column to get from the form to the meaning, but some signs have a more complex relationship. Beyond the category of iconicity there can be one or more metonymic or metaphorical extensions, as the journey from form to meaning can be a multi-step process. In the “Iconic Relationship” column, there can be a chain of metonyms or metaphors. These are separated by the word “for.” An iconicity chain is when there are multiple steps required to connect the form to the meaning of the sign. An example of this is the sign STUBBORN. It is homonymous with DONKEY, which is signed at the forehead location, depicting a donkey’s ears. This is a simple metonym where a part of the animal is associated with the whole animal. For English speakers it may be easy to see the link between donkeys and stubbornness because we commonly ascribe that personality trait to donkeys and have idioms like “stubborn as a mule.” For non-native speakers of English this association might be opaque. But with each link of the chain in place it makes sense: the donkey ear at the forehead is associated with donkeys which are in turn associated with the character quality of being stubborn. So in the chart, STUBBORN is annotated “ap for creature for character.” Not every metonym and metaphor needed to link the form to the meaning is given, that would be prohibitively lengthy, just the ones that seem less obvious.

Table 3: ASL iconicity by location

Location	Categories of Iconicity	Iconic Relationship (metonym or metaphor)
<a href="#">Head</a> (80)		
- Face (43)	fop: seeing (11), facial expression (9), cognition (4), seeing/cognition (3) <sup>22</sup>	expression for emotion: anger (3), awe (1), love (1), sadness (3)
	iup: wearable (1), camera (1), mirror (1)	
	bp: face (11), freckles (1)	face for appearance (8)
	asp: front (2)	
	eap: washing (1)	
	ma: crossing the forehead (1)	ma for religion (1)
- Side (25)	fop: cognition (4) <sup>23</sup> , sweat (1)	
	iup: wearable (2), shampoo (1), scissors (1), pillow (1), hairbrush (1)	
	bp: hair (1), head (1)	
	ap: head of cabbage (1)	
	asp: central (3)	central for timeline (3)
	qop: beauty (1), curly (1), height (1)	
	eap: haircut (4)	
	lsa: male/female gender (1) <sup>24</sup>	
- Top (11)	iup: wearable (2), comb (2), scissors (1)	
	ap: lion's mane (1), skunk stripe (1)	ap for creature (2)
	qop: bald (1), blonde (1), height (1)	
	eap: shower (1)	
- Back (1)	fop: cognition (1)	

<sup>22</sup> The category exists solely for the sign SLEEP and compounds of that sign. It does seem to minimally indicate a closing of the eyes, but it seems to indicate more than that. Perhaps a shutting off of consciousness or a relaxing of the whole face.

<sup>23</sup> The location of the sign ISOLATED is unclear in the video. It may touch the cheek bone, or come from the side of the head, and there are variations of this sign that aren't located on the body at all. This seems to be a phonological shift from the forehead. The iconic base of the sign has to do with someone having a conversation inside their own head.

<sup>24</sup> This location for COUSIN-(neuter) is halfway between the upper half of the head which designates the masculine gender and the lower half which designates the feminine gender. The positioning of this sign indicates that the gender is unspecified and is formed from analogy to the male/female locations.

<a href="#">Forehead</a> (131)	fop: cognition (69)	
	iup: wearable (12)	wearable for: male gender (2) <sup>25</sup> , person (10) <sup>26</sup>
	bp: brain (1), eyebrow (1), face (1), forehead (1)	face for moon (1)
	ap: horns (7), donkey ears (2), antlers (1) horse ears (1), rooster crest (1)	ap for creature (12), creature for character (2)
	asp: central (1)	central for timeline (1)
	qop: black (2)	
	eap: illness (2)	
	ma: bowing (3), wiping sweat (1) <sup>27</sup>	
	ges: salute (3)	salute for person (1)
	lsa: male gender (17)	
	bor: English: “sense” (5) <sup>28</sup>	
<a href="#">Eyes</a> (34)	fop: seeing (17), opening (3), crying (2), blinking (1), facial expression (1), winking (1)	opening for surprise (2)
	iup: wearable (4), telescope (1)	
	bp: eyes (1), eyelash (1)	
	ap: owl eyes (1), raccoon eyes (1)	ap for creature (2)

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<sup>25</sup> Historically the signs for the masculine gender BOY and MALE were tied to types of hats worn. This iconicity has been reduced or lost over time. This discussion of the signs for masculine and feminine gender is complex and is dealt with in section 4.2.2 Gender in ASL.

<sup>26</sup> Six out of ten of the signs labelled “wearable for person” are related to the government. Shaw and Delaporte (2015:119) trace this sign back to the LSF sign RÉPUBLIQUE ‘republic’ which is an iconic depiction of the badge worn in republican’s hats during the French Revolution. This interpretation makes sense of the handshape, location and small circular movement of the sign. However, this icon is defunct in ASL since politicians in the US do not typically wear badges in their hats.

<sup>27</sup> Shaw and Delaporte (2015:269) tie this sign to LSF by means of referencing an academic laurel crown won by students in the summer. Historically this may have been the case, but now most consider this to be representing wiping sweat off one’s brow.

<sup>28</sup> Five different signs are built off the same iconic base as CENTS. Shaw and Delaporte (2015:198-199) mention that CENTS could be a reference to the head depicted on the penny, or a result of the homophony between “sense” and “cents.” I personally think it’s likely the latter because the sign is the exact handshape and initial location as SENSE (THINK), and other signs that reference the whole head either have a handshape or movement that depicts a larger surface.

<a href="#">Ears</a> (21)	fop: hearing (12)	
	iup: wearable (4), hearing aid (1), headset (1)	wearable for person (1) <sup>29</sup> , wearable for color: gold (1), silver (1)
	bp: ear (1)	
	eap: illness (1)	
	ma: pulling ear (1)	
<a href="#">Nose</a> (44)	fop: smell (6), runny nose (2), blowing nose (1), sight (1) <sup>30</sup> , sneeze (1)	runny nose for person (1)
	iup: bull-ring (1), clown nose (1), handkerchief (1)	bull-ring for creature (1)
	bp: face (3), nose (1)	face for person (2), face for doll (1)
	ap: mosquito proboscis (2), mouse/rat nose (2) eagle beak (1), elephant trunk (1), fox snout (1), hooked nose (1), penis (1), wolf snout (1)	ap for creature (10)
	eap: illness (1)	
	ma: throwing snot (1)	
	lsa: negative (9), humor (4)	negative for creature (1)
	bor: English idiom: “hard nose” (1)	

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<sup>29</sup> While wearable for person is common in the other sign languages analyzed here, it is comparatively less common in ASL. This is likely because of the prevalence of the PERSON suffix, which is used to derive nouns referring to professions (Bickford 2009).

<sup>30</sup> INVESTIGATE here seems to be a phonological shift from the eyes to the nose. [Handspeak.com](http://Handspeak.com) has it coming from the eye as expected.

<a href="#">Cheek</a> (76)	fop: eating (8), chewing (3), facial expression (2), cognition (1) <sup>31</sup> , drinking (1), speaking (1)	
	iup: wearable (1), phone (3), makeup (2)	wearable for female (1)
	bp: beard (1), cheek (1), dimples (1), face (1), jaw (1), skin (1)	
	ap: whiskers (2), leather (1), peach fuzz (1), tiger stripes (1), upper and lower half of head (1) <sup>32</sup>	whiskers for creature (1), tiger stripes for creature (1)
	asp: central (5)	central for timeline (5)
	qop: red (2), fat (1), rubbery (1), tan (1)	
	eap: blushing (5), sting/bite (3), illness (2), ?cool breeze (1), rub (1), shaving (1), tooth extraction (1)	blushing for emotion: shame/shy (4)
	ma: folding hands to sleep (4), taking pen from ear (1)	
	lsa: female gender (11)	
	ges: bite finger (1)	biting finger for envy (1)
	?: NEAT/COOL (1)	
<a href="#">Mouth</a> (110)	fop: speaking (27), eating (26), drinking (9), smoking (4), facial expression (2), kissing (2), spitting (1), vomiting (1)	speaking for fame (1)
	iup: musical instrument (4), wearable (2), snorkel (2), lipstick (1), napkin (1), pencil (1), pipe (1), stamp (1), straw (1), thermometer (1), toothbrush (1)	wearable for creature (1)
	bp: lips (2), teeth (2), mouth (1), mustache (1), tongue (1)	
	ap: beak (2), snake fangs (2)	ap for creature (4)
	qop: red (3), brown (1), hard (1)	
	ma: blowing a kiss (4), brushing teeth (1)	
	bor: English: who (1)	

<sup>31</sup> The sign EXPERIENCE used to be at the forehead, see Shaw and Delaporte (2015:91).

<sup>32</sup> The sign SEX in ASL moves from the top to the bottom of the cheek. This is referencing the top and bottom half of the head which are used for male and female genders respectively. The mapping of the whole head onto the cheek is also seen in some variations of the sign PARENTS, originally a compound of MOTHER and FATHER, but now often articulated on the cheek.

<a href="#">Chin</a> (100)	fop: eating (17), speaking (12) drinking (11), taste (5), sex act (2), breathing (1), licking (1)	eating for character (1), taste for emotion (1)
	iup: wearable (2), microphone (1), napkin (1), stamp/seal (1)	
	bp: beard (5), chin (1)	beard for age (5) <sup>33</sup>
	ap: frog throat (1), goat beard (1)	ap for creature (2)
	asp: lightbulb filament (4) <sup>34</sup> , thin/thick (2) central (1)	central for timeline (1)
	qop: red (4), hard (1)	
	ma: blowing a kiss (7), <sup>35</sup> pig rooting (3), door shut in face (2)	pig rooting for creature (3), creature for dirty (2)
	ges: biting thumb (4), biting fingers (2) <sup>36</sup>	biting thumb for negation (4)
	lsa: female gender (5)	
	bor: English "who" (1)	
?: BIRTHDAY (1), TWINS (1)		
<a href="#">Neck</a> (21)	fop: speaking (2), drinking (2), swallowing (1) <sup>37</sup>	
	iup: wearable (7)	wearable for person (1)
	bp: neck (1), throat (1)	
	ap: giraffe neck (1)	part for creature (1)
	eap: choking (2), illness (2)	
	ma: chopping head (1)	
	?: CURIOUS (1) <sup>38</sup>	

<sup>33</sup> These 5 signs are related to the sign OLD. According to Shaw and Delaporte (2015:191-192) the etymology of the sign OLD goes back to LSF depicting how old people rest their chin on canes. This is likely true, however, the iconic base has been reanalyzed as depicting a beard, which is how Long (1910:67) describes the sign. The phonology of the sign has shifted accordingly.

<sup>34</sup> The sign LIGHT seems to be depicting a flickering filament of a lightbulb, where the signer's head is the bulb.

<sup>35</sup> The original iconic base for GOOD and THANK-YOU seem to have been lost along with all the signs formed by analogy to them.

<sup>36</sup> Shaw and Delaporte (2015:206-207) analyze the sign TREASURE/PRECIOUS as historically biting the fingers as a gesture of envy.

<sup>37</sup> The functions of the part at the neck are a bit different than at the mouth, even though most of the categories overlap. The iconic base at the throat tends to depict something travelling through the throat.

<sup>38</sup> Shaw and Delaporte (2015:59) didn't find any record of the sign CURIOUS before 1965 and couldn't trace the historical origin. I also am not confident on the iconic base, but there do seem to be a few logical clues. The handshape and the pulling action is similar to the sign LIKE in which the person is

<a href="#">Shoulders</a> (30)	fop: carrying (3)	carrying for responsibility (3)
	iup: wearable (9)	wearable for person (8)
	bp: back (1)	
	ap: wings (2)	part for creature (1)
	asp: central (10)	central for timeline (10)
	eap: pat (1)	
	ma: lifting weights (2)	
	?: RECOVER (1), RELIGION (1)	
<a href="#">Chest</a> (140)	fop: blood flow (5), breathing (3), coughing (2),	
	iup: wearable (32), purse (1), rifle (1)	
	bp: chest (30), body (4), breasts (2), rib (2), side (2), lungs (1), nipples (1)	chest for self (29), breasts for female (1)
	ap: bat wings (1), bear claws (1), leather (1)	ap for creature (2)
	asp: central (1)	central for timeline (1)
	qop: white (3)	
	eap: emotion (25), hug (1), hunger (1), illness (1), poke (1), tickling (1)	emotion: happiness (5), anger (4), fear (3), love (3), sadness (3), stress (1)
	ma: pulling curtain (3) scrubbing body (3), thumbs in overalls (2), folding arms (1), monkey scratching (1), putting in pocket (1), skeleton with crossed arms in coffin (1), taking shirt (1)	monkey scratching for creature (1)
	lsa: life (2) <sup>39</sup>	
	bor: French: cœur 'heart' (1)	
?: GANG (1)		

being “led” to the desired thing. The location of the neck in ASL and in other sign languages is tied to the concept of desire.

<sup>39</sup> This version of GYM and WELL (health) are related to the sign STRONG. According to Long (1910:68) this sign wasn’t originally associated with the chest. It had a circular motion in front of the signer. Over time this movement was changed to a forward movement out from the chest. This may be due to an association of the chest with life. Also these signs seem to have a connection to the arms which is connected to strength, even though the arms aren’t being used as the location but rather part of the handshape.

<a href="#">Heart</a> (18)	fop: heartbeat (1)	
	iup: wearable (3)	wearable for person (1)
	bp: heart (12)	heart for personality (5), heart for emotion: fear (1), hurt (1), love (1), heart for religion (2)
	eap: illness (1)	
	ges: cross-heart (1)	
<a href="#">Arm</a> (41) <sup>40</sup>		
- Upper (11)	iup: wearable (6), hypodermic needle (1),	
	bp: bicep (2), arm (1)	bicep for power (2)
	asp: length (1)	
- Forearm (30)	fop: cradling (3)	
	iup: wearable (2), hypodermic needle (3), basket handle (2)	pun: hypodermic needle for coke (soda) <sup>41</sup>
	bp: arm (2), bicep (2), nerves (1)	bicep for power (1)
	ap: legs (3) <sup>42</sup>	
	asp: surface (6), length (3)	surface for cover (2), surface for creature (1)
	?: SING (3) <sup>43</sup>	
<a href="#">Elbow</a> (10)	iup: wearable (2)	
	asp: length (1), surface (1)	length for tree (1), surface for cover (1)
	bp: elbow (1)	
	ma: harvesting (3), lifting by collar and striking with rod (1)	
	?: CRACKER (1)	
<a href="#">Wrist</a> (15)	iup: wearable (3)	
	bp: wrist (1), vein (1)	
	eap: cut(1)	
	ma: check pulse (3), bound hands (1)	
	lsa: time (4)	
	?: DUTY (1)	

<sup>40</sup> In ASL there are several signs that move from the upper arm to the forearm. I am including them here once under upper arm, not upper arm and forearm to avoid redundancy. Likewise, signs moving from forearm to upper arm are included just once in the forearm category.

<sup>41</sup> In English “coke” can refer to cocaine or to the soda (Coca-cola originally contained cocaine). This sign refers to the soda but its iconicity is based on drug use.

<sup>42</sup> Two of these signs are both iup: wearable and ap: legs. They are both referring to stockings worn on the legs.

<sup>43</sup> SINGER and POETRY both come from the sign SING. The iconic base for SING is unclear. My best guess would be that it depicted a conductor waving their hands and phonologically shifted to this form, or choristers turn a page in their music. Long (1910:43) gives no reason associated with this sign.

<a href="#">Stomach</a> (9)	fop: giving birth (1)	
	iup: wearable (1)	
	bp: fat (1), stomach (2)	
	eap: emotion (2), illness (2)	illness for emotion: anger (1), disgust (1)
<a href="#">Waist</a> (20)	iup: wearable (16)	wearable for person (8)
	bp: chest (1) <sup>44</sup> , penis (1), waist (1)	chest for self (1)
	ap: penguin wings (1)	
<a href="#">Legs</a> (3)	iup: wearable (1)	
	bp: legs (1), lap (1)	

#### 4.2.2 Gender in ASL

The signs associated with gender in ASL, categorized as a language-specific association is a large enough and complex enough category that it needs a more in-depth discussion. This section explains the history of the non-arbitrary association between the form and the meaning of the gender signs in ASL.

One of the most commonly known bits of iconicity in ASL is that the masculine gender is at the upper half of the head and the feminine gender is signed at the lower half of the head. Shaw and Delaporte (2015) trace the history of the signs BOY, GIRL, MAN and WOMAN to their origins in LSF (Langue des Signes Française or French Sign Language) which shows their original iconicity and subsequent phonological shifts, as well as extension of their usage to other gendered signs. Shaw and Delaporte (2015:32) write in their entry for BOY:

BOY comes from the LSF sign GARÇON (boy), which was originally a compound of the signs HOMME (man) and JEUNE (young). The second part of the compound has since disappeared. HOMME is described as “taking one’s hat to say hello” (Brouland 1855), the “sign of tipping a hat” (Pélissier 1856), and the “sign of lifting and putting a hat back on one’s head” (Lambert 1865).

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<sup>44</sup> Phonological shift from chest (Shaw and Delaporte 2015:32)

Confirming its connection with HOMME, the contemporary ASL sign BOY can also be used to mean “man”.



Figure 9: BOY (ASL)

The original iconic base of the sign GARÇON referred to tipping one’s hat. This is a mimesis of an action culturally associated with men. In present day ASL, it seems to still be commonly understood that the sign refers to the brim of a hat.<sup>45</sup> However, the tipping action may be lost in the iconic base since this is no longer a cultural practice of men, and there is no motion in the sign to indicate that the hat is being tipped.

Shaw and Delaporte (2015:114). write in their entry for GIRL:

[GIRL] comes directly from the French sign FEMME (woman), which has been noted since Abbé de l’Épée’s time. At least two French authors (Puybonnieux 1846; Lambert 1865) indicate the unambiguous, iconic origin of this sign in their descriptions: the thumb traces the length of the cheek to represent the drawstrings

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<sup>45</sup> I heard this etymology when learning ASL, and it is also attested at <https://www.handspeak.com/word/search/index.php?id=223>. Note that there is no reference to tipping the hat, or an understanding that the LSF originally referred to a grown man.

of the bonnets that girls once wore. In [GIRL], the movement is now one or two short strokes on the lower chin.

It seems to still be commonly understood that the iconic base of this sign is picturing a bonnet string.<sup>46</sup> Even so, it is a dated imagery since women don't wear bonnets anymore. This sign seems to be the origin of the current ASL association between the lower half of the face and the female gender. In addition to being possibly the oldest sign at this location associated with the female gender, it is also the only one with a form still picturing something in the real world: a bonnet string.

For the sign MAN (in figure 10 below), Shaw and Delaporte give an extended explanation of the history (2015:168-168), but in short it pictures an ostrich feather in the hat of and the ruffles on the shirt of a French gentleman. According to the Gallaudet ASL Dictionary, the sign still means either MAN or GENTLEMAN, but MAN is the more common usage. This explanation makes good sense of the 5 handshape used at both locations.



Figure 10: MAN (ASL)

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<sup>46</sup> When learning ASL, I personally had heard that this referred to a girl's bonnet. This common etymology is also noted at <https://www.handspeak.com/word/search/index.php?id=908>.

The sign WOMAN (pictured in figure 11 below) was originally a compound of GIRL + FINE where FINE pictures the ruffles on the shirt like the sign MAN (Shaw and Delaporte 2015:312-313). The 5 handshape spread backwards from the second part of the compound to the first, obscuring the iconicity of the first part. MAN and WOMAN in ASL are now minimal pairs contrasting the forehead with the chin location. While the iconic base of MAN still makes sense as a feather in the hat of a French gentleman, it would be nonsensical to imagine a feather on the chin of a French lady.



Figure 11: WOMAN (ASL)

The rest of the male/female signs in ASL seem to derive from one of these previous four signs. FATHER is a reduction of the sign MAN to only include the forehead location (Shaw and Delaporte 2015: 98). The connection between the iconic base and the meaning of the sign is broken, because ostrich feathers in hats were never specifically associated with fatherhood. The sign MOTHER is similarly a reduction of the sign WOMAN to only include the chin location (Shaw and Delaporte 2015:181). The iconic base of this sign is likewise lost because there never was supposed to be an image associated with the 5-hand at the chin, rather the location is still linked to the iconic base of a bonnet with the sign GIRL. The sign PARENTS is a compound of MOTHER and FATHER.

The sign GRANDFATHER and GRANDMOTHER seem to be derived from FATHER and MOTHER with an added forward movement, which would be reference to the passing of generations (Shaw and Delaporte 2015:121). It is interesting that the iconic base of hats, bonnets, feathers, and ruffles is long lost at this point of the male and female derivations, but here with the signs for grandparents there is a new iconic feature added which is movement along the timeline.

The masculine and feminine gender words referring to collateral kinship (those off the direct line of descent) are initialized: AUNT, UNCLE, NIECE, NEPHEW, COUSIN-(male), COUSIN-(female). The handshape of these signs is iconically linked to the initial letter of the English glosses, the movement is a forearm rotation that doesn't seem to add an iconic component, and the location is iconic for gender although displaced to the side of the head as an iconic representation of relationship "to the side". At this point the locations aren't in reference to headgear but they seem to have gender as one of the basic meaning attached to the location.

The forehead location, of course, is also used to represent cognition. This can add ambiguity for things such as name signs. One of my linguist friends, named Albert, has a name sign that is an A-handshape tapped at the temple, originally due to his tendency to always be thinking about language. However, the significance of the location of his name sign got reinterpreted as referring to his masculine gender, resulting in his wife Anita being given a name sign of an A-handshape tapped at the chin to indicate her female gender.

There is one additional kinship term (Figure 12 below) which breaks the standard pattern: COUSIN-(neuter).



Figure 12: COUSIN-(neuter) (ASL)

Unlike the male/female versions of COUSIN, which are signed to the side of the forehead and chin respectively, the neuter version, which is unspecified for gender, is half-way between the male and female gender locations. I have not seen this gender-neutral location extend to other signs, so it may only exist for COUSIN. It could be motivated by the fact that the English word “cousin” is also gender-neutral.

Another unusual gender contrast comes from the signs PRINCE and PRINCESS (pictured in figures 9 and 10 below).



Figure 13: PRINCE (ASL)



Figure 14: PRINCESS (ASL)

There are several signs for royalty, distinguished by initialization, whose locations picture a sash worn across the body, from the contralateral shoulder to the ipsilateral side of the waist. Examples include: KING, QUEEN, ROYAL, PRINCE, and LORD; even CHRIST and MESSIAH are initialized signs built around the image of a sash. PRINCESS is an unusual case of female gendering in ASL, which uses the sash location but can't be distinguished from PRINCE simply by initialization. In the Gallaudet dictionary the sign is initialized with a P-handshape and moves from the contralateral side of the chest to the ipsilateral side of the chest, then down to the ipsilateral side of the waist, in an upside-down L-shape which doesn't look anything like a sash. There is only one other sign I know of that uses these specific locations, and that is CHINA. However, CHINA is borrowed from Chinese Sign language, so it is unlikely that PRINCESS is based off CHINA. Interestingly, [handspeak.com<sup>47</sup>](https://www.handspeak.com/word/search/index.php?id=5327) gives a variant of PRINCESS which moves from ipsi to contra chest down to ipsi waist, which preserves the imagery of the sash. The ipsi to contralateral chest locations are only used for a few signs in ASL: WE, STAFF, MEMBER, a few other semantically-related signs, and also the sign BREASTS. The location of

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<sup>47</sup> <https://www.handspeak.com/word/search/index.php?id=5327>

the breast is not a common location to designate female gender in ASL, but it is very common in other sign languages such as Kenyan Sign Language and Swedish Sign Language. So, the sign PRINCESS with the variation of the movement attested at [handspeak.com](http://handspeak.com) is most likely a compound sign BREASTS + PRINCE where the initialized P-handshape spread to the first part of the compound. It is unclear why the movement changed, but it is common for signs that are ipsi-contra on the chest to also be signed contra-ipsi.

### 4.2.3 ASL Compared to Other Sign Languages

ASL has some unique or unusual features compared to the other sign languages analyzed here, specifically the use of two locations: the elbow and the nose. Most of the other unusual features have already been discussed either in the footnotes to the chart, or section 4.2.2 Gender in ASL.

The elbow location, commonly used in ASL, does not occur in either KSL or HKSL, and only two signs are located there in Auslan: one of which is the sign for the body part itself, and the other is a highly iconic CHOP-TREE. If Shaw and Delaporte's etymology is correct, many of the signs in ASL located at the elbow were not located there originally but moved over time. The sign COUNTRY is identical to the LSF CAMPAGNE 'countryside', which, according to Shaw and Delaporte (2015:57), originally simulated the act of cutting wheat by grabbing it with the left and cutting it as with a sickle with the right hand. Over time the movement reduced to a circular motion and the location shifted to the elbow. Another sign in ASL that moved to the elbow is PUNISH. An earlier form of PUNISH depicted grabbing someone by the collar with the left hand and striking them with a rod (Long 1918:53). For both these signs, the location shift to the elbow obscures the iconicity of the sign. There seems to be a tendency for signs located near a body part to move to that body part over time. This also has happened with some signs on the timeline such as FOREVER. I am unaware of the linguistic motivation for this.

In ASL the nose location has two less common categories associated with it: humor and negative evaluation. According to Shaw and Delaporte (2015:111) ASL and LSF both associate

the nose with humor. In European culture, the nose is considered humorous, as with clown noses. The sign SILLY used to be signed at the forehead (Long 1918:34), but moved down to the nose presumably due to the nose's connection with humor and negative qualities.<sup>48</sup>

Similar to the category of humor is the category of generally negative quality. Sometimes these categories can overlap such as with the sign FOOLISH which is clearly negative, but also associated with humor. The sign BUG (insect) used to be located at the chest (Long 1918:95) and iconically depicted the movement of bug legs at the thorax and abdomen. This location shifted to the nose presumably due to the association of the nose with negative qualities. Other signs associated with negative evaluation are FALSE, DON'T-CARE, LOUSY, MOSQUITO, MOUSE, WITCH.

Of the 904 signs in ASL located on the body included in the data, only 17 of them were placed in the unknown (??) category because I either could not figure out how they had an iconic or non-arbitrary motivation, or was very unconfident in their potential explanation. Out of all the sign languages analyzed here, ASL is likely to have the lowest number of unknown motivation signs because ASL is the only sign language of these that I use personally, and it has had the most extensive research out of any of these sign languages. In total, 98.1% of the signs in my data are shown to have iconic (90.0%) or non-arbitrary motivation (8.1%), especially in their original forms. This shows that there is a strong tendency for signs located on the body in ASL to have iconic or non-arbitrary motivation.

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<sup>48</sup> This re-iconization is due to a reanalysis of the iconic base. It moves from a general cognition iconic base indicated by its former location at the forehead to a more specific humor related location at the nose. This sign is interesting because it is contrary to Fischer's observations in two ways. First, it became more iconic rather than less iconic over time (due to reanalysis), and it moved from the periphery of the face to the center, which is the opposite of the phonological norm.

## CHAPTER 5

### AUSLAN

Auslan has roots in both old British and Irish sign languages. The earliest records of sign language in Britain go back to 1644, but the education of the deaf took off in the 1800s. Thomas Braidwell founded the first deaf school in Britain, The Braidwell School, in 1760. It was an oral school but used some signs as well. Within 100 years there were over 22 deaf schools established (Kyle and Woll 1985:40).

In Australia, the first deaf school, the Sydney school, was founded by Thomas Pattison, a deaf man educated at the Edinburgh Deaf and Dumb Institution. The second deaf school, the Melbourne school, was founded soon thereafter by another deaf man, Frederick Rose, who was educated at the Old Kent School in London (Flynn 1984). Even before these schools, however, there had been much deaf education going on through various religious institutions, especially the Catholic church. Many of the early settlers of Australia were Irish and they brought Catholicism along, and the church educated the deaf in Irish sign language, which has French sign language influence including a one-handed manual alphabet (Johnston 1989:32). While there were Aboriginal sign languages in Australia, such as Warlpiri Sign Language, Johnston (1989:31) states there is no evidence that these sign languages had any influence on Auslan.

Even though there have always been two signing systems among people of European descent in Australia, British sign language and the two-handed alphabet have been the basis of the sign language of the Australian Deaf community. Most users of the one-handed alphabet understand the two-handed alphabet, but the reverse is not true (Johnston 1989:32).

The majority of the dialectal variation within Auslan is between the north, which includes New South Wales and Queensland, and the south, which includes Victoria, South Australia, Tasmania, and Western Australia.

There has been recent influence on Auslan from (American) Signed English and ASL. Johnston writes, “In recent years (late 1970’s onwards) there has been an explosion of borrowing from ASL — some of it imposed by teachers for Signed English and some of it spontaneous, brought about by increased cultural and personal contacts between the American and Australian Deaf communities” (1989:30). So, although Auslan comes mainly from British sign language and is part of the BANZSL (British, Australian, and New Zealand sign language) language family, there is a historic connection to Irish sign language and by extension Old French sign language, and there is a modern connection to Signed English and ASL due to borrowing.

## **5.1 Auslan Dictionary – Auslan Signbank**

Johnston is the author, chief researcher and primary editor of the Auslan Signbank. He is also responsible for publishing the first Auslan dictionary (Johnston 1989), and several subsequent editions in the 1990s. The signs in the dictionary have been collected over the past two decades and are in the Auslan lexical database that the Signbank draws on. Other researchers and co-editors are Adam Schembri, Robert Adam, Jemina Napier, and Darlene Thornton, along with many contributions by others over the years ([www.auslan.org.au](http://www.auslan.org.au)).

As of December 2019, the Signbank had 7794 entries. In the dictionary, each sign is given multiple glosses, which shows the variety of meaning a single sign can have. For my data, I included the exact string of English glosses used in the dictionary to reference the sign. The dictionary includes information on the regional variations of signs for New South Wales, Queensland, South Australia, Tasmania, Victoria, and Western Australia. It also includes the more general categories ‘Northern Dialect’, ‘Southern Dialect’, and ‘Australia Wide’. I collected

my data using the ‘Australia Wide’ search preference, so there are likely fewer regional variants in my data.

## 5.2 Auslan Data Analysis

### 5.2.1 Auslan Iconicity Chart

As mentioned, the Auslan Signbank tends to give several glosses for a single word. In order to differentiate the signs properly I included every gloss for each sign. This sometimes made things difficult for the iconicity chart. For example, the sign ANESTHESIA is also glossed as ANESTHETIST. The sign can refer to the substance or the person associated with the substance. If at least one of the glosses referred to a person, I included “for person” in the “Iconic Relationship” column. Within this chapter especially, due to the multiplicity of glosses I have sometimes taken the convention of referring to a sign by two of its gloss words separated by a “/”. For example, the gloss ANESTHESIA/ANESTHETIST could be used for the sign mentioned previously.

Table 4: Auslan iconicity by location

Location	Categories of Iconicity	Iconic Relationship (metonym or metaphor)
<a href="#">Head</a> (79)		
- Face (26)	fop: cognition (2), facial expression (5), seeing (2)	facial expression for emotion: unkind (2), happy (1), shame (1)
	iup: camera (1)	
	bp: face (7)	face for: age (3), appearance (1)
	asp: clockface (2), front (1) statue bust (1)	clockface for time (2)
	qop: black (1)	
	eap: feel air on face (4)	

- Side (29)	fop: cognition (4), seeing (2)	
	iup: wearable (5), comb (1), hairspray (1)	wearable for person (2)
	bp: hair (7)	hair for: person (2), social status (1)
	asp: height (3)	height for rank: for person (2), for character (1)
	eap: shave (1)	shave for person (1)
	ma: folding hands to sleep (5)	
- Top (23)	fop: cognition (3)	
	iup: wearable (9)	wearable for person (6)
	bp: hair (3), head (1)	
	ap: dorsal fin (1), crest (1), horns (1), light on top of cab (1) <sup>49</sup>	ap for creature (2)
	asp: height (1)	
	ma: dog ears drooping (1)	
	bor: English idiom: “over the head“ (1)	
- Back (1)	iup: wearable (1)	wearable for person (1)
<a href="#">Forehead</a> (90)	fop: cognition (63), seeing (1)	cognition for: fame (1), group (1), person (1)
	iup: wearable (4)	wearable for person (3)
	bp: hair (1) <sup>50</sup> , brain (1)	hair for female (1)
	ap: horns (2), antennae (1), antlers (1), mane (1), rabbit ears (1)	ap for creature (6)
	asp: height (1)	height for person (1)
	eap: illness (1)	
	ma: christening (2), crossing forehead (1)	
	ges: salute (2)	
	lsa: female (2)	
	?: name (2), COUNTRY (1), INSIGNIFICANT (1)	

<sup>49</sup> This sign, CAB, is included in the analogous part category because the head is the top of the body like the light is on the top of the cab. For analogous shape the head would need to resemble the form of the cab, which it does not.

<sup>50</sup> Two of these signs: GIRL and GIRLFRIEND seem to be at the forehead related to the sign MUM which seems to be picturing hair. The forehead may have a small family of signs for female gender, similar to the cheek. Also, GIRL and BOY are near-minimal pairs contrasting the forehead and chin locations.

<a href="#">Eyes</a> (49)	fop: seeing (29), crying (2), opening (2), blink (1), contraction (1),	seeing for person (1)
	iup: wearable (5), binoculars (1), telescope (1)	wearable for person (1)
	bp: eye (1)	
	ap: owl eyes (1), sheep ears (1)	ap for creature (2)
	eap: bruise (1)	
	ges: eye-pulling (1)	
	bor: English: 'bull's-eye' (1)	
	?: GRANDMOTHER (1)	
<a href="#">Ears</a> (21)	fop: hearing (13)	
	iup: wearable (2), phone (2)	
	bp: ear (1)	
	ap: ears (1)	ap for creature (1)
	eap: illness (1)	
	?: CHERRY (1)	
<a href="#">Nose</a> (35)	fop: smell (5), seeing (1)	
	iup: wearable (3), handkerchief (1)	wearable for humor (2)
	bp: nose (1)	
	ap: beak (2), nose (1), trunk (1)	ap for creature (4)
	asp: central (1), length (1)	central for timeline (1)
	eap: illness (1)	
	ma: snorting drugs (1)	
	ges: tapping side of nose (1)	
	lsa: possibility/luck (6)	
	bor: English: 'nosy' (2), ASL: KID (1)	
	?: DEMOCRACY (1), ELDEST (1), HERO (1), JOKE (1) <sup>51</sup> , OF COURSE (1), OYSTER (1)	

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<sup>51</sup> The iconicity for JOKE is unclear, but finding humor on the nose is expected. There are two other signs associated with humor in my Auslan data: CLOWN-NOSE and FUN that are signed on the nose that picture a clown's fake nose. Also, humor is one of the uses of the nose in ASL.

<a href="#">Cheek</a> (47)	fop: eating (7), speaking (1)	
	iup: phone (2), wearable (1)	
	bp: face (6), meat (1), skin (1)	face for appearance (6) <sup>52</sup>
	ap: hippo's mouth (1), whiskers (1)	ap for creature (2)
	asp: central (5)	central for timeline (5)
	qop: black (1)	
	eap: shaving (2), illness (1), pain (1), scar (1)	
	ma: cued-speech (1), pulling bowstring (1)	
	bor: English: 'cheeky' (3)	
?: (10) <sup>53</sup>		
<a href="#">Mouth</a> (76)	fop: speaking (25), eating (14), breathing (2), drinking (2), licking (2), smoking (2), chewing (1), kissing (1), tasting (1)	speaking for person (8)
	iup: wearable (2), balloon (1), dentures (1), toothbrush (1)	wearable for person (1)
	bp: teeth (2), lip (1), mouth (1)	teeth for person (2)
	ap: beak (4), snout (1)	ap for creature (5)
	asp: thin (1)	
	qop: red (1)	
	ma: clenching mouth (1), fellatio (1)	
	ges: zip-lips (1)	
	bor: ASL: DON'T-CARE (1), THANK-YOU (1)	
?: (5)		

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<sup>52</sup> The sign LADY seems to be in reference to appearance and NIECE seems related as well. This seems to be a small family of signs for female gender, but it doesn't extend very far. There is another small family of signs for female gender on the forehead.

<sup>53</sup> Generally, when the "??" category contains five or more signs, I am not glossing them all individually. These signs can be referenced in Appendix B

<a href="#">Chin</a> (83)	fop: speaking (15), eating (6), laughing (3), drinking (2), biting (1), licking (1) tasting (1), vomit (1)	
	iup: wearable (2), microphone (1) shaver (1)	wearable for person (1), microphone for person (1)
	bp: beard (3), chin (1), face (1)	beard for male (2), beard for person (1), face for appearance (1)
	ap: beak (2), tongue (2), beard (1)	beak for creature (2), tongue for creature (2), beard for creature (1)
	asp: lightbulb filament (4), central (1), place to hang coat (1)	central for timeline (1)
	qop: hardness (2), brown (1)	
	ma: jaw dropping (2), kissing ring (1), stroke chin (1), wet with mouth (1)	stroke chin for cognition (1)
	ges: biting-fingers (2)	biting-fingers for envy (2)
	lsa: male (5), noon (2) <sup>54</sup>	
	bor: ASL: FED-UP (2), <sup>55</sup> CUTE (1), LESBIAN (1)	
	?: (13)	
<a href="#">Neck</a> (27)	fop: drinking (4), breathing (1)	drinking for desire (4)
	iup: wearable (5)	wearable for person (1)
	bp: neck (2)	neck for death (1)
	ap: giraffe neck (1)	ap for creature (1)
	qop: fat (1)	
	eap: choke (1), illness (1)	
	ma: cut-throat (5), dragged by neck (2), hanging (1)	cut-throat for butchering (3), cut-throat for butchering for death (2), dragged by neck for person (1)
	bor: English: 'cut-throat' (2), 'hangover' (1)	
<a href="#">Shoulders</a> (10)	fop: carrying (2)	carrying for responsibility (2)
	iup: wearable (2)	wearable for person (1)
	asp: central (3)	central for timeline (3)
	ma: shoulder touch (1), tapping on shoulder (1)	
	bor: ASL: BOSS (1)	
<a href="#">Chest</a> (90)	fop: blood flow (3), breathing (2), cough (1), hiccup (1)	blood flow for life (3)
	iup: wearable (20)	
	bp: chest (24), breasts (3), body (1)	chest for: self (19), health (4)

<sup>54</sup> It is unclear if this sign is related to the 'clockface' or related to eating, or something else.

<sup>55</sup> The Auslan sign FULL/FED-UP is the exact same as the ASL sign FED-UP. However, Auslan has a negated form of this sign NOT-ENOUGH/INSUFFICIENT that does not exist in ASL. The iconicity in ASL comes from eating, specifically, being filled all the way up to your chin such that there's no more room for food.

	eap: emotion (13), illness (3), hug (1), washing (1)	emotion: content/relief (4), happy (3), anxiety/fear (2), love (1)
	ma: beat chest (1), holding a rifle (1)	beat chest for creature (1), holding a rifle for person (1)
	bor: ASL: VACATION (4), FINE (1), French 'cœur' (heart) (1)	
	?: (7), morning (2)	
<a href="#">Heart</a> (25)	bp: heart (14)	heart for: love (7), emotion (3), personality (3)
	iup: wearable (8)	wearable for person (2)
	eap: illness (1)	
	ges: cross-heart (1)	
	bor: ASL: MESSIAH (1)	
<a href="#">Arm</a> (34)		
- Upper (11)	iup: wearable (5), syringe (1)	
	bp: arm (2), bicep (1)	arm for power (1), bicep for power (1)
	eap: amputation (1), draw blood (1)	
- Forearm (23)	iup: antiseptic (1)	
	bp: arm (1), bone (1), nerve (1)	
	asp: surface (14), length (2)	surface for cover (3)
	eap: goosebumps (1), illness (1)	
	?: HUMILIATION (1)	
<a href="#">Elbow</a> (2)	bp: elbow (1)	
	ma: chopping tree (1)	
<a href="#">Wrist</a> (9)	iup: wearable (8)	
	bp: left hand (1)	
<a href="#">Stomach</a> (23)	fop: defecation (2), eating (2), pregnancy (1), vomiting (1)	
	iup: wearable (3)	
	bp: stomach (3)	stomach for person (1) <sup>56</sup>
	eap: emotion (5), illness (1), surgery (1)	emotion: anger (4), anxiety (1)
	ma: holding a rifle (1), scratching stomach (1)	holding a rifle for person (1), scratching stomach for creature (1)
	?: LIVE (1), NOT-WANT (1),	

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<sup>56</sup> The sign FARMER is picturing someone with a potbelly. Apparently farmers are associated with having large stomachs.

<a href="#">Waist</a> (19)	fop: birth (1)	
	iup: wearable (15)	wearable for: money (1), person (1)
	bp: hip (1)	
	bor: ASL: MESSIAH (1)	
	?: BUSINESS (1)	
<a href="#">Legs</a> (1)	bp: leg (1)	

### 5.2.2 Gender in Auslan

Gender in Auslan is unusual because it does not seem to have a regular pattern for male/female, but rather has a few small partial patterns, along with several signs that don't seem to follow any pattern.

The male gender seems to be more consistent than the female gender. When it is signed on the body it is signed at the chin. The signs MAN and GENTLEMAN both picture a beard. Other signs formed by analogy at this location are BOY, BOYFRIEND<sup>57</sup>, NEPHEW, and possibly COUSIN. However, this location isn't consistently male because two of the variants for the sign BOYFRIEND are also glossed GIRLFRIEND, and a gender neutral COUSIN is also signed at the chin. Also, signs that one would expect to be some of the most basic masculine signs are located elsewhere. The signs FATHER, GRANDFATHER, UNCLE, BROTHER, SON are all located in neutral signing space. At best, there seems to be a partial pattern of masculine gender at the chin, but even that isn't fully consistent.

The feminine gender is a bit more complicated. There seem to be two different partial patterns for female. One is at the forehead and the other at the cheek. The sign MUM/MOTHER is located at the side of the forehead and seems to be iconically linked to hair. The signs GIRL and GIRLFRIEND are located at the middle of the forehead and seem less iconically motivated. They may be formed in analogy to MUM/MOTHER. Three signs for female are located at the

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<sup>57</sup> There are three variations of BOYFRIEND, two of which are also glossed GIRLFRIEND, so the location doesn't seem to be obligatorily masculine.

cheek: LADY, one of the variants of GIRL, and NIECE. LADY, also glossed LADY-LIKE and FEMININE is located at the ipsilateral cheek, and seems to be iconically linked to beauty or appearance. The sign FASHION is at this same location. The variants of GIRL and NIECE<sup>58</sup> are located at the contralateral cheek. Other signs are located elsewhere. DAUGHTER and AUNT are initialized signs in neutral signing space. SISTER is at the nose. GRANDMOTHER has three variants, one of which is located below the eyes and may be a reference to glasses or trouble seeing, another is in neutral space, and is a compound sign where the first location is at the nose and the second part is the sign MOTHER/MUM at the forehead.

The male gender is somewhat more consistent than the female gender in AUSLAN as far as location is concerned. Many of the family signs were initialized and located in neutral signing space, so there is some pattern there, but it doesn't indicate gender. My conclusion is that there is no overarching language specific association pattern for gender, but rather a few partial patterns.

### *5.2.3 Auslan Compared to Other Sign Languages*

Though much of the use of location in Auslan is similar to other sign languages, there are a few things worth mentioning. The location of the neck is used pervasively to refer to the concept of death or risk. The common picture across these signs related to death/risk is the image of a throat being cut. For example, the signs related to butchering, ABATTOIR/SLAUGHTER, BUTCHER, and CHOPS (a cut of meat), all picture cutting the throat of something. Similarly, the signs for KILL and MURDER also picture cutting the throat of someone. Also related, as a borrowing from English, the signs for CRIMINAL and CRUEL also use this image of cutting a throat. The connection is made clear by the fact that they're also given the option of CUT-THROAT as a gloss. A criminal can also be called 'a cut-throat' and

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<sup>58</sup> NIECE is an initialized form of this variation of GIRL.

being ‘cut-throat’ can be synonymous with being cruel. The sign RISK is also located at the neck, which fits with the theme of death.

Also related to death, several signs are built off the image of being hung by a rope around the neck, such as the sign HANGING, and HANGOVER (which is a borrowing from English). The signs OBLIGATED and SLAVE picture being dragged by the neck, but not necessarily hung.

The neck also has some of the more common categories associated with it, such as thirst/desire, and breathing.

Moving to the cheek, one unusual category is tied to the British English idiom ‘cheeky’. The signs CHEEK/RUDENESS, OBSTINACY, and RUDE all use this location. This makes perfect sense from a British English dialect, but is more opaque for the dialects of English that don’t use this idiom.

At the chin there is an unusual case of homonymy, where the same form can mean: NOON, AFTERNOON, and DINNER. It seems that the sign is tied to the location of the chin due to the association of eating food, which is a standard use of that location.<sup>59</sup> There are other variants of the signs for NOON and AFTERNOON. I would presume that individual signers either wouldn’t use the same sign for all three concepts, or would have another way of differentiating them. ASL also ties meals to times of day with the variations of BREAKFAST, LUNCH, DINNER that are compound signs: MORNING-MEAL, NOON-MEAL, and EVENING-MEAL.

There is also an unusual use of the forearm in Auslan. There is a group of signs at the forearm whose motion parameter starts at the back of the non-dominant hand (NDH). I don’t believe there are any other groups of signs in the other sign languages here that regularly span from the NDH to the forearm. The signs in my data that do so are: ANTISEPTIC, CABBAGE, TOAD, SPIDER, WORM, and CONCEAL. Four of the signs are using the NDH to forearm location as the ground, CONCEAL uses it at a surface to hide under, and ANTISEPTIC is using

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<sup>59</sup> LUNCH is also signed at the chin.

the location as just a reference to the body part. While regularly spanning both locations is uncommon, there are a lot of similar uses of the NDH and the forearm (especially when the NDH is configured in the B-handshape) , such as picturing the ground, or a flat surface, often used for concealment.

In the Auslan data, there are 49 signs out of the 720 signs located on the body that I put in the unknown category because I could not figure out their use of iconicity, or the signs had a possible explanation that I was not very confident in. This is much higher than the 14 unknown signs for ASL. This is to be expected because I don't personally know Auslan, and ASL has been more extensively researched. That being said, even with the greater difficulties of researching Auslan, 93.2% of the signs analyzed here are iconic (86.7%) or non-arbitrary (6.5%). This shows that, for Auslan, there is a strong tendency for signs located on the body to have iconic or non-arbitrary motivation.

## **CHAPTER 6**

### **HONG KONG SIGN LANGUAGE**

The first records of formal Deaf education and sign language use in Hong Kong are from 1935 with the establishment of the Hong Kong School for the Deaf by missionaries. This was an oral school that banned the use of sign language within the classroom. However, the Deaf children still communicated with each other through signs after class and in the dormitories. Some of those signs are still in use today, though this was not modern HKSL. Later, in 1948 and 1949 a signing Deaf couple set up the first signing school (Overseas Chinese School for the Deaf and Dumb) and brought over the Nanjing and Shanghai variety of Chinese Sign Language. This mixed with the sign language already used by the Deaf in Hong Kong to create what is now HKSL (Sze et al. 2013). HKSL was first distinguished as a language separate from the Shanghai variety of Chinese sign language in 1993 by James Woodward. In this study he found a 66-68% similarity between Hong Kong signs and Shanghai signs. ASL, which is known to be a descendant of French Sign Language (LSF) mixed with indigenous signs from America, has a 61% similarity in basic vocabulary with LSF (Woodward 1978).

#### **6.1 HKSL Dictionary – The Hong Kong Sign Language Browser**

The HKSL dictionary called the HKSL Browser is managed by the Centre for Sign Linguistics and Deaf at the Chinese University of Hong Kong. The HKSL Browser is searchable in both Chinese and English. Because the signs are translated into English by the researchers of the dictionary I used their translations of the signs for this thesis. Sometimes the Chinese translation is referenced, but this mostly to discuss the signs that are borrowed from written

Chinese. There were a few examples of signs located at the mouth because the Chinese character included the character for mouth.

As of November 2020, when I recorded the data for this sign language, there were 5482 entries in the dictionary. One of the strengths of this dictionary is it provides numerous sign variants and ranks them by most commonly used to least commonly used. I did not use this function much in this thesis because often the difference between variants did not change body location. However, if it was unclear where a sign was located, I checked the variants to clarify.

The dictionary includes a variety of semantic domains, but an idiosyncrasy of this dictionary is there are many legal terms. These are often not single signs, but rather are closer to phrases or sentences. In order to keep the data to single signs, I skipped any sign that had more than two locations because single signs generally have a maximum of two locations.

## 6.2 HKSL Data Analysis

### 6.2.1 HKSL Iconicity Chart

Table 5: HKSL iconicity by location

Location	Categories of Iconicity	Iconic Relationship (metonym or metaphor)
<a href="#">Head</a> (43)		
- Face (16)	fop: seeing (9), reading (2), cognition (1)	
	iup: wearable (2), camera (1)	wearable for sport (1)
	bp: face (1)	face for appearance (1)

- Side (19)	fop: cognition (1)	
	iup: wearable (1)	wearable for person (1)
	bp: hair (4), head (1)	
	ap: mane (1)	ap for creature (1)
	qop: black (4)	
	eap: shaving hair (4)	shaving hair for male gender (4) <sup>60</sup>
	ma: monkey scratching (1), sleep (1), pulling cord to stop bus (1)	monkey scratching for creature (1)
- Top (8)	fop: cognition (2)	
	iup: wearable (2),	wearable for person (1)
	ap: rabbit ears (2), bear ears (1)	ap for creature (3)
	bp: hair (1)	
- Back (0)		
<a href="#">Forehead</a> (71)	fop: cognition (39), sweat (2)	
	iup: wearable (11)	wearable for person (9), wearable for religion (1)
	bp: hair (1), face (2)	face for appearance for celebrity (2)
	asp: central (2), above (1), clockface (1) <sup>61</sup>	central for timeline (2), above for God (1), <sup>62</sup> clockface for time of day (1)
	ap: horns (6), antlers (1)	ap for creature (7)
	eap: fever (1), headache (1)	
	ges: salute (2)	salute for person (2)
	?: FATHER'S DAY (1)	

<sup>60</sup> The male and female genders are not in the language-specific association category because the derived signs are all compounds, so the original iconicity is preserved in each of the signs. This is unlike in ASL or Auslan, where the iconicity is lost.

<sup>61</sup> Six signs that I found in the HKSL dictionary make up this “clockface” category. They are NOON at the forehead, MORNING and AFTERNOON at the chin, and three compound signs derived from MORNING and AFTERNOON at the chin. The concept of TIME is often associated with wristwatches, so it seemed plausible that these signs could be associated with a clockface. If MORNING and AFTERNOON are associated with 6am and 6pm respectively then they would be at the bottom of the clockface (the chin) and NOON is at the top (the forehead). The paired locations of forehead and chin are used elsewhere to reference the entire face, such with the sign CELEBRITY which is signed at both the forehead and the chin and is associated with a person’s appearance/reputation.

<sup>62</sup> My HKSL language consultant, Yiu Aaron, gave the explanation that this sign, UNLUCKY, is related to divine blessing, and that the HKSL sign BLESSING is formed similarly.

<a href="#">Eyes</a> (21)	fop: seeing (8), opening (3)	seeing/opening for surprise (4), opening for awakening (1)
	iup: wearable (1), camera (3), gun (1)	
	bp: eye (2), eyebrow (1)	
	ap: compound eye (1)	ap for creature (1)
	qop: brown (1)	
<a href="#">Ears</a> (14)	fop: hearing (5)	
	iup: wearable (7), phone (1)	wearable for female gender (6)
	bp: ear (1)	
<a href="#">Nose</a> (21)	fop: inhale (1), sneeze (1), smell (5)	
	bp: nose (1)	
	ap: beak (1), elephant trunk (1)	ap for creature (2)
	asp: seeds (1)	
	qop: oily (2)	
	lsa: negative (4) <sup>63</sup>	flinging snot for disdain (1)
	?: new (2), plastic (2)	
<a href="#">Cheek</a> (32)	fop: eating (6), puckering (3), facial expression (1)	puckering for character (1)
	iup: phone (5)	
	bp: drooping jowl (5), face (3), pores (1), scar (1), mole (1)	drooping jowl for age (5), face for reputation (2)
	ap: whiskers (1)	ap for creature (1)
	asp: central (2)	central for timeline (2)
	qop: blue (1)	
	ges: close call (1)	
	?: life (1)	

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<sup>63</sup> These signs also may be related to the mimetic action of flinging snot, which is a common iconic base for ASL signs at the nose. These signs seem to have both a similar form and meaning to the ASL signs in these categories.

<a href="#">Mouth</a> (96)	fop: eating (23), speaking (17), drinking (6), laughing (2), tasting (2), biting (1), smoking (1), vomiting (1), yawning (1)	
	iup: balloon (1), cigarette (1), lipstick (1), pipe (1), toothpick (1), whistle (1)	whistle for person (1)
	bp: tooth (4), moustache (2), tongue (1), mouth (1)	moustache for person (1), moustache for person for character (1)
	ap: beak/bill (5), snout (2), moustache (1), tongue (1)	
	qop: red (2)	
	ma: wetting stamp/seal (1)	
	ges: blowing (1)	
	bor: Chinese character 'kou' (1), ASL KISS-FIST (2)	
	lsa: family (9) <sup>64</sup>	
	?: holiday (1), know nothing (1), interest (1)	
<a href="#">Chin</a> (55)	fop: speaking (9), eating (3)	
	iup: microphone (2), spoon (1)	
	bp: face (2), beard (2)	face for appearance for celebrity (1), beard for person (1)
	asp: clockface (5), central (1)	clockface for time of day (5) central for timeline (1)
	ap: sheep beard (3)	ap for creature (3)
	qop: thin (1)	
	eap: shaving (1)	
	ma: resting chin on hands (1), hook in mouth (1)	resting chin on hands for waiting (1), hook in mouth for attraction (1)
	bor: ASL: RED (7), Chinese character 'kou' (1)	
	lsa: family (2)	
?: (14)		
<a href="#">Neck</a> (10)	fop: cough (1), thirst (1), vomiting (1)	
	iup: wearable (1)	
	bp: throat (1)	
	ap: giraffe neck (1)	ap for creature (1)
	eap: cut neck (2), touching (2)	touching for sexual assault (2)

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<sup>64</sup> There is a very clear pattern of family members being signed on the mouth and chin. There are 11 of such signs in the data. However, I don't know the iconic origin of this sign, and neither did my language consultant, Yiu Aaron.

<a href="#">Shoulders</a> (26)	iup: wearable (9)	wearable for person (4)
	bp: shoulders (13), back (1)	shoulder for responsibility (5), shoulder for responsibility for low class profession (2)
	asp: central (8)	central for: timeline (7), behind (1)
	ma: shoulder throw (1)	shoulder throw for sport (1)
<a href="#">Chest</a> (47)	iup: wearable (14), stethoscope (2), rifle (1), soap (1), x-ray (1)	stethoscope for person (2)
	bp: chest (10), chest and stomach (1), heart (1), lungs (1)	chest for self (10), heart for self for character (1)
	ap: stripes (1)	part for creature (1)
	eap: emotion (8), disease (1)	emotion: anxiety/fear (4), happiness (3), relief (1)
	ma: folding arms on chest (1)	folding arms for rest (1)
	bor: Chinese character for heart (2)	
	?: (2)	
<a href="#">Heart</a> (6)	bp: heart (6)	heart for self (3) heart for self for character (2)
<a href="#">Arms</a> (26)		
- Upper (6)	iup: wearable (1)	
	bp: upper arm (2)	upper arm for power (2)
	ma: warming arms (1), embrace (1)	
	?: grey (1)	
- Forearm (20)	iup: wearable (7)	wearable for person (5)
	bp: bicep (1)	bicep for work
	asp: surface (8), length (3)	surface for cover (3), length for measurement (2)
	eap: chicken pox (1)	
<a href="#">Wrist</a> (12)	iup: watch (8), cuffs (1)	watch for time (8) <sup>65</sup>
	eap: cut (1)	
	ma: taking pulse (2)	

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<sup>65</sup> WATCH and the signs related to it are not included in the language-specific association category because they retains their iconicity throughout the signs.

<a href="#">Stomach</a> (9)	fop: eating (1)	
	iup: wearable (2)	
	bp: stomach (2), fat (1)	stomach for intuition (1)
	eap: pregnant (1), surgery (1)	
	ma: monkey scratching (1)	ma for creature (1)
<a href="#">Legs</a> (5)	iup: wearable (3), shopping cart (2)	

### 6.2.2 HSKL Compared to Other Sign Languages

The body locations and the categories of iconicity associated to them in HKSL are mostly similar to what I've found in the other three sign languages. Various types of clothing and items are found at the body parts they're worn at or used at. All the functions of the body parts are where they would be expected.

Many of the metaphors and metonyms also fall along the usual lines. Body parts are used to represent various animals, such as horns and antlers at the head, or an elephant's trunk at the nose. Clothing and items are often associated with the person that uses them, such as a chef's hat for a chef, or a whistle for a police officer. Clothing is often also associated with gender, such as earrings to represent the female gender. The shoulder is metaphorically associated with responsibility. Emotions are experienced in the chest. The upper arm is associated with power, and the lower arm is associated with length and flat surfaces such as the ground or a ceiling. The wrist is associated with time by its relation to wristwatches. There are many others as well.

HKSL also has a few somewhat more unusual categories that contrast with the other sign languages. If my assessment is correct with the face being associated with a clockface, that is an uncommon use of the face, but it does fall within the normal bounds of iconicity that I have found where the shape of a body part can be analogous to the shape of thing it pictures. Shaving the side of the head was a cultural practice for men and so it is used to refer to the masculine gender. The cheek and the face are associated with one's fame or reputation, which is something that doesn't occur much in the other sign languages. The shoulder is associated with responsibility, which is common, but that is extended to refer to low-class professions as well. The location of the mouth is associated with signs that include the Chinese character

‘mouth’. This is similar in concept to initialization in ASL where the first letter of a written English word is used as the handshape for sign.

In HKSL, 27 out of 494 total signs were categorized as having unknown (??) iconicity. That is 94.5% of the signs located on the body in HKSL have either iconic (88%) or non-arbitrary (6.5%) motivation. This is a bit higher than Auslan and KSL, which is likely because I was able to meet with a Yiu Aaron, a Deaf man from Hong Kong, to discuss the data. This shows that, for HKSL, there is a strong tendency for signs located on the body to have iconic or non-arbitrary motivation.

## **CHAPTER 7**

### **KOREAN SIGN LANGUAGE**

Not as much background information is available on Korean Sign Language (KSL) compared to the other sign languages discussed thus far. Most of the information comes from Fischer and Gong (2010). KSL is historically related to Japanese sign language (JSL) because of the Japanese occupation from 1905 to 1945. However, sign language has been in use in Korea since 1889, so the language predates Japanese influence somewhat. According to the Ethnologue (Gordon 2005), KSL has been used in Korean schools since 1908.

KSL has had an explosion of development activities during the 2000s (Byun and Plumlee 2021). The Sign Language Interpreting Center in Korea was established in 1999. The National Institute of the Korean Language with the Ministry of Culture, Sports, and Tourism have worked on the standardization of KSL starting in 2000, and the first KSL dictionary was published in 2005. National certification of KSL interpreters was established in 2006. In 2016 KSL was legally recognized as one of Korea's official languages.

#### **7.1 KSL Dictionary**

The KSL dictionary was started by the Ministry of Culture, Sports and Tourism and the National Institute of the Korean Language in 2005. It was created as part of the effort to promote the standardization of Korean Sign Language, which started in 2000. However, the KSL standardization project received criticism because it was not documenting KSL as used by the Korean Deaf (Lee 2017:69-70). Hyeon-Hwa Lee states that some of the problems were that signs included in the dictionary were selected by a limited number of committee members and

some signs were even coined for the dictionary (Lee 2017:72). Further, the headwords in the dictionary were based on spoken Korean instead of the signs the Korean Deaf use, and there was not documentation of language variation.

Despite the problems with the initial KSL dictionary, it now being updated and improved by sign language linguists. The dictionary went through an overhaul in 2020. The headwords now accurately reflect the Korean Sign Language word (Byun and Plumlee 2021:6). All the signs that were coined for the dictionary were deleted. While the previous dictionary was approved by a committee, in the new version, the Korean Deaf Association, the Korean Deaf themselves and sign language interpreters were consulted to ensure the accuracy and acceptability of the dictionary. Since the KSL dictionary has been overhauled it now reflects KSL as used by the Deaf community in Korea (Hong 2021).

One of the difficulties in using this dictionary is that it provides Korean glosses but does not provide an English translation. Since I don't know Korean, I largely had to rely on Google Translate or Papago<sup>66</sup>. This gave some problematic results, so I tried to include all the relevant translations of the gloss. There are many homophones in Korean, which can give some nonsensical results, however, a bit of judgement would usually make quick work of the problematic options. For example, the sign that is glossed  $\frac{\text{눈}}{\text{눈}}$  'nun' can be translated as 'eye', or 'snow'. The sign itself is a compound of pointing to the teeth and something fluttering downward with the 5-hand in neutral space moving downward while wiggling the fingers. Of the two translations 'eye' and 'snow', the first one could be easily ruled out, and the second fit perfectly. This conclusion is corroborated by the KSL dictionary which provides this sign as a compound sign made up of two signs: 'white' and 'down'.

Another issue with the KSL dictionary is that it does not distinguish between neutral space and the chest location in its location search list. In order to get a better sampling of signs

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<sup>66</sup> The web addresses are [translate.google.com](https://translate.google.com) and [papago.naver.com](https://papago.naver.com).

located at the chest, I doubled the amount of signs I normally searched through for that location. Even still, the chest location is noticeably shorter than in other sign languages.

As already mentioned, the KSL dictionary was less accurate before the revisions in 2020. My data for the nose, neck, eyes, and arms were from 2019, while the other locations are from 2021. Since the method of updating the dictionary was the deletion of the unacceptable signs, I also went through my data and deleted any sign that did not still appear in the dictionary. This resulted in fewer signs from the KSL dictionary compared to the others. Regardless, the 600 signs in the KSL data is more than enough to show that there is a strong tendency for signs located on the body to have iconic motivation.

## 7.2 KSL Data Analysis

### 7.2.1 KSL Iconicity Chart

Table 6: KSL iconicity by location

Location	Categories of Iconicity	Iconic Relationship (metonym or metaphor)
<a href="#">Head</a> (52)		
- Face (34)	fop: seeing (12), facial expression (3)	facial expression for: brazen (2), emotion: sadness (1)
	iup: mask (2), book (1), gun sight (1)	
	bp: face (7)	face for: appearance (2), reputation (1), movie poster for person (1) <sup>67</sup>
	asp: behind bars (3) <sup>68</sup>	behind bars for person (1)
	qop: smooth (3)	
	?: 청주 'rice wine' (1), 개성 'individuality' (1)	

<sup>67</sup> The sign glossed MAIN CHARACTER is picturing a face in the middle of a poster.

<sup>68</sup> These signs related to prison are difficult to categorize. Essentially they are picturing someone being behind prison bars. If the iconic base is that you are the prisoner seeing the bars, then it would be fop: seeing or iup: prison bars. If the iconic base is someone else seeing you (focused on your face) behind bars, then it may be asp: behind bars referring to the position of the bars relative to the signer.

- Side (18)	fop: seeing (4), reading (2), sweating (2)	
	iup: fan (1)	
	asp: central (1)	central for timeline (1)
	qop: black (2)	
	eap: feel air on face (1)	
	ma: lifting weights (2), sleep (2), ?cooing (at baby) (1)	
- Top (0)		
- Back (0)		
<a href="#">Forehead</a> (88)	fop: cognition (52), facial expression (1)	
	iup: wearable (7)	wearable for person (4)
	ap: crest (3), rhino horn (1)	ap for creature (4)
	asp: clockface (4), height (4)	clockface for time (4)
	eap: illness (4)	
	ma: bow (2), feeling temperature (1), shielding eyes (1), wiping sweat (1)	
	bor: English: 'birdie' (1)	
	?: (6)	
<a href="#">Eyes</a> (58)	fop: seeing (29), crying (4), eye closing/opening (2)	seeing for: new (4), person (3), surprise (1)
	iup: camera (1), eyedropper (1), eyepatch (1), microscope (1), pendulum (1)	
	bp: eyes (6)	
	asp: central (11)	central for timeline (11)
	?: 호텔 'hotel' (1)	
<a href="#">Ears</a> (36)	fop: hearing (20)	
	iup: wearable (5), phone (3), headset (2), conch (1)	
	bp: ear (2)	
	ma: cracking walnut (1), cutting ears off (1)	
	?: 농 'farm' (1)	

<a href="#">Nose</a> (32)	fop: exhale (4), smell (3), sigh (1)	exhale for: difficult (2), frustration (1), insignificant (1)
	iup: handkerchief (1), tissue (1)	
	bp: nose (7), snot (1)	nose for: person (4), good/beauty (2), dirty (1)
	ap: pig snout (1), rhino horn (1)	ap for creature (2)
	asp: pointed (1), straight (1)	
	ma: blowing snot (1), finger wiggle (1), nose wiggle (1), wiping nose (1) <sup>69</sup>	blowing snot for dislike (1), finger wiggle for mocking (1), nose wiggle for jealous (1), wiping nose for illness (1)
	lsa: good (3)	
	?: 모르는 척하다 ‘pretend not to know’ (1), 천하다 [賤-] ‘lowly’ (1), 성병 [性病] ‘STD’ (1)	
<a href="#">Cheek</a> (55)	fop: chewing (2), jaw clench (2), eating (1), facial expression (1)	facial expression for shame (1)
	bp: cheek wrinkles (7), dimples (2)	cheek wrinkles for old (7)
	ap: mane (1), tiger stripes (1)	ap for creature (2)
	asp: ?pepsi logo (1)	
	qop: blue (10) <sup>70</sup> , green (2), brown (1), oily (2), fat (1), skinny (1)	
	eap: cheek strike (3), bubbly drink (1), cheek flush (1)	
	ma: slap bug (3) <sup>71</sup> , patting cheek (1), scratching cheek (1)	scratching cheek for creature
	ges: mocking (1), ?suspicion (1)	
	bor: ASL: WINE (1), Korean: 예 ‘yes’ (1)	
	?: (3), false (3)	

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<sup>69</sup> Some of these signs could be gestures, but that is a more specific claim that I am hesitant to make without full knowledge of Korean gestures.

<sup>70</sup> The color blue refers to cheeks turning blue from cold (or hypoxia). The color green is a combination of blue and leaf.

<sup>71</sup> The iconic base for the signs glossed BEE, HONEY, and MOSQUITO have two actions done at the cheek, first the bug bites (eap), then you slap the bug (ma).

<a href="#">Mouth</a> (61)	fop: speaking (10), eating (8), drinking (4), taste (4), blowing (2), licking (1), singing (1), spitting (1)	
	iup: microphone (1)	
	ap: beak (2)	beak for creature (2)
	asp: central (1)	central for timeline (1)
	qop: white (4), yellow (3), red (2), pink (1)	
	ma: brushing teeth (1), putting pen in mouth (1), ?licking paws (1),	licking paws for creature (1)
	?: (10), stone (3)	
<a href="#">Chin</a> (50)	fop: speaking (9) drink (3), eating (3), taste (3), facial expression (3), spitting up (1)	
	iup: wearable (1) <sup>72</sup>	
	ap: butt (1), tentacles (1)	tentacles for creature (1)
	asp: central (2), ?clockface (1)	?clockface for time (1)
	eap: get hit (1)	
	ma: resting on chin (2), shaking head (1)	
	ges: ?dislike (1)	
	lsa: color (5)	
?: (10), poverty (2)		
<a href="#">Neck</a> (25)	fop: blood flow (3), coughing (1), speaking (1)	
	iup: collar (1)	collar for person (1)
	bp: head (3), neck (2), two tumors on the neck (1) <sup>73</sup>	head for rank (3), rank for person (2)
	eap: thirst (4), biting the neck (1)	thirst for desire (3)
	ma: cutting throat (3), chopping neck (1), recoiling in disgust	cutting throat for death (3), chopping neck for risk (1)
	bor: Korean idiom: 고비를 넘기는 것 ‘to be over the hump’ (3)	

<sup>72</sup> The sign 팬티 ‘underpants’ uses this location euphemistically similar to ap: butt.

<sup>73</sup> The sign glossed SIMULTANEOUS is highly unusual. It may be a reference to a popular Korean folklore about a man with two tumors on his neck: <https://folkency.nfm.go.kr/en/topic/detail/6021>.

<a href="#">Shoulders</a> (17)	iup: wearable (7) <sup>74</sup>	wearable for: rank (2), responsibility (1), person (1)
	bp: back (2)	
	asp: length (3), central (1)	length for measure (3), central for timeline (1)
	qop: ?hard (1) <sup>75</sup>	
	ma: shoulder throw (1), weightlifting (1)	ma for sport (2)
	?: 부자 'wealth' (1)	
<a href="#">Chest</a> (17)	iup: wearable (3), guitar (1)	
	bp: chest (8) <sup>76</sup>	chest for self (8)
	eap: emotion (4)	emotion for: fear (2), anger (1)
	?: 위험, 험하다 'danger, it's tough' (1)	
<a href="#">Heart</a> (2)	iup: wearable (2)	wearable for name (2)
<a href="#">Arm</a> (36) - Upper Arm (9)	iup: wearable (4)	wearable for rank (1), wearable for rank for person (3)
	bp: bicep (2)	bicep for power (2)
	asp: camel humps (1), surface (1)	camel humps for creature (1)
	eap: injection (1)	
- Forearm (26)	iup: wearable (4)	wearable for rank for person (3)
	bp: arm (1)	arm for power (1)
	asp: surface (5), length (1), left (1), right (1), printing press (1)	length for measure (1)
	ma: scratch arm (2), roll up sleeve (1)	
	lsa: good (6)	
	bor: ASL: COMPUTER (1)	
	?: 다니다 'attend' (1), 내력 'history' (1)	
<a href="#">Elbow</a> (1)	asp: surface (1)	
<a href="#">Wrist</a> (2)	iup: wearable (1)	wearable for rank for person (1)
	ma: scratch arm (1)	

<sup>74</sup> One sign is ambiguous: 신사 'gentleman' could be depicting a gesture, but a wearable item seems more probable.

<sup>75</sup> If this is the iconic base for the sign glossed HARDTACK, it would be analogous to how the bottom of the chin (bone) is used for hardness in ASL.

<sup>76</sup> The two signs related to knowing were ambiguous.

<a href="#">Stomach</a> (36)	fop: birth (7), emotion (3)	emotion for: anger (2), hesitance (1)
	iup: wearable (3)	wearable for person (2)
	bp: stomach (16), liver (1),	stomach for heart (13) <sup>77</sup>
	qop: skinny (1)	
	eap: illness (2), feeling warm (1)	
	ma: keep to one's self (1), tapping stomach (1)	tapping stomach for creature (1)
<a href="#">Waist/Leg</a> (29)	fop: bowel movement (1)	
	iup: wearable (10), bag (1), diaper (1), handbag (1), palanquin (1)	wearable for person (4) <sup>78</sup>
	bp: lower back (1), thigh (1), waist (1)	
	asp: behind (1)	
	ma: pulling with effort (2), swing tennis racket (2), bowling (1), holding the stomach in laughter (1), practice taekwondo (1), spreading seed (1), using a wheelchair (1), weightlifting (1)	pulling with effort for character (2)

### 7.2.2 KSL Compared to Other Sign Languages

Several locations are used differently in KSL than the other sign languages. The location of the nose seems to vary in its cultural connotations from language to language, but Korean definitely seemed to have a far more varied usage of it than the other sign languages. The concept of good or attractive is associated with the nose. Because Koreans typically have flat noses, pointed noses are considered particularly attractive.<sup>79</sup> However, the nose is also used for many negative qualities such as dirty, jealousy, and dislike. Interestingly, all these uses are fully iconic. Dirty is iconically associated with snot, jealousy is a mimetic action of a typical nose wiggle used to show jealousy, and dislike is the mimetic action of intentionally blowing

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<sup>77</sup> Here 'heart' does not refer to the organ, but the place that holds the conscience/intuition. This is similar to the idea of 'gut' in English.

<sup>78</sup> The sign for MONK pictures tying a belt around the waist. There are several compounds derived from this sign.

<sup>79</sup> Any information on Korean culture was either included as an explanation of the sign in the KSL dictionary itself, or simply from asking one of my Korean friends Charlie Kim.

snot at something.<sup>80</sup> Another interesting use of the nose is that it can be pointed at to refer to the self. This is much like how most sign languages (including KSL) can point to the chest to refer to the self. This usage is also associated with learning which is linked to the idea of the teacher pointing at you in class.<sup>81</sup>

Color signs are often located on the body, but KSL has more color signs located on the body than the other sign languages. The color signs in KSL are all located at the mouth, chin, or cheek. Both ‘white’ and ‘yellow’ are located at the mouth. Pointing to the teeth for the color white is common enough, but the color yellow also seems to be associated with the teeth, which makes perfect sense for those of us who drink too much coffee. Uniquely among my data, the color blue is associated with the cheeks. Even in English we talk about someone’s cheeks turning blue due to cold (or lack of oxygen). Related to blue, the sign for green is also at the cheeks and seems to be a derived compound leaf-blue. All eight signs for color are on the body: red, pink, white, yellow, blue, green, brown, and the sign ‘color’.

ASL has a vast system of initialization of signs linking the handshape to an English word. KSL seems to have less of this, but it’s still possible. The sign 예 ‘yes’ directly imitates the form of the written Korean word. The signer’s head represents the circle, and the hand is placed at the cheek in a configuration similar to the shape of the written word. This handshape is particularly marked and is not in any other sign in the KSL data. Using a body part as a orthographic symbol is not common in my data. In ASL I only know of one sign (which is not part of my data) that ties directly to a written English word in this way. WOW can be signed with both hands on either side of the head in a ‘w’ handshape and the mouth making a round ‘o’ mouth shape.

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<sup>80</sup> Some of these actions may be better classified as gesture, but since I am not as familiar Korean gestures I left them as mimetic action.

<sup>81</sup> The KSL dictionary gave this explanation for the iconic base of the sign.

The 'heart' location is a common location for signs in many sign languages, especially for signs associated with love, character, or emotion. However, in Korean, the 'heart' is associated with the location of the stomach and is related to signs concerning the intuition and conscience. This is similar to the concept of the 'gut' in English.

While in most of the other sign languages the timeline is associated primarily with the shoulder, in KSL it was commonly located at the side of the eyes. This is unusual, but not entirely unexpected. Signs referring to the timeline often vary in location even within the same sign language. Other locations observed are at the side of the body, at the cheek, and at the forehead.

In KSL 48 out of 601 total signs are categorized as having unknown (??) iconicity. This is a higher ratio of unknown iconicity signs than the other sign languages, which, given all the difficulties, is exactly what I expected. Likely, this number would be decreased if a native user of KSL was analyzing the data or if there was an etymological dictionary available like in ASL. Even still, 92% of the signs located on the body in KSL have iconic (88.9%) or non-arbitrary (3.1%) motivation. This shows that, for KSL, there is a strong tendency for signs located on the body to have iconic or non-arbitrary motivation.

## CHAPTER 8

### A FRAMEWORK FOR ANALYZING ICONICITY AND A NEW RELATIVE OF ICONICITY

#### 8.1 An Iconicity Chart

Iconicity is complex. It is one thing to intuitively grasp that there is an association between form and meaning, and it is another thing to show exactly how the form relates to the meaning step by step, parsing out exactly how each parameter is contributing to the iconicity of the sign. It is useful to do this in chart form.

Let's start with a simplified version of an iconicity chart for the ASL sign BIRD pictured below in figure 15 below.



Figure 15: BIRD (ASL)<sup>82</sup>

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<sup>82</sup> This is a repeat of figure one for ease of reference.

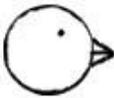
Table 7: Simplified chart: BIRD (ASL)

Sign	Form	Iconic Relationship	Iconic Base	→	Meaning
BIRD (ASL)	(parameters)	resemblance	bird's beak	metonym	"bird"

The left-most column gives the sign in gloss form. The next column lists each of the parameters that form the sign (here it is condensed). The iconic relationship column describes how the parameters are related to the iconic base of the sign (the mental image behind the form). In the simplest case, we can say the relationship is just one of resemblance, but more detail can be added later. The → column is the relationship between the iconic base and the meaning. In this case the picture of a bird's beak is related metonymically with the meaning "bird". The bird's beak is a part of the bird that represents the whole bird.

Such a chart can be developed in more detail, as in Table 8.

Table 8: Iconicity Chart: BIRD (ASL)

Sign	Form	Iconic Relationship <sup>83</sup>	Iconic Base	→	Meaning	
BIRD (ASL)	HS: 'g'	resemblance	narrow beak <sup>84</sup>	 (bird's beak)	metonym	"bird"
	Ori: palm away from self	resemblance	beak facing forward			
	Mov: open/close	resemblance	beak opening and closing			
	Loc: mouth	resemblance (ap)	bird's mouth			

In this chart the "form" column has a row for each of the relevant parameters in the sign: handshape (HS), orientation (Ori), movement (Mov), and location (Loc). Each parameter is

<sup>83</sup> In this column, more detail is given to the nature of the resemblance between form and meaning for the location parameter because that is what has been described in detail in this thesis. The other parameters are simply related by the term resemblance because that is the most general relationship between form and meaning for iconicity.

<sup>84</sup> We know this is a beak because we know the meaning of the sign. If we did not know the meaning of the sign, the handshape could represent any number of things. This sign is not fully transparent.

linked to the iconic base by a relationship of resemblance. All the parameters are working together to form one complete image of a bird's beak, but it is also possible to show what role each parameter is playing in making up that image. Here, the location row adds more detail about the nature of the resemblance. The categories of iconicity described in section 3.1 are different types of resemblance relevant to the location parameter in a sign. In this case, the use of the location is an analogous part, where the mouth of the signer represents the mouth of the bird.

As mentioned, in this sign all the parameters are working together to form related to a single iconic base. I am calling this multi-parameter iconicity. The change of any of the parameters would change the whole image. For example, the ASL signs BIRD and DUCK are minimal pairs and differ only in handshape. The two-fingered beak-like handshape for BIRD simply adds a 3rd finger. This change in handshape changes the iconic contribution of the handshape parameter from “narrow” to “wide”.

In other signs, the individual parameters can make one or more contributions to the iconic base of the sign. Take, for example, the ASL sign I-CALL-YOU:

Table 9: Iconicity Chart: I-CALL-YOU (ASL)

Sign	Form	Iconic Relationship	Iconic Base		→	Meaning
I-CALL-YOU (ASL)	HS: 'y'	resemblance	phone shape	holding a phone at the cheek	mty.	"I call you"
	Ori: palm toward self	resemblance	phone orientation			
	Loc1: cheek, mouth, and ear <sup>85</sup>	resemblance (iup)	phone location			
		convention with resemblance <sup>86</sup> (bp for self)	1st person	"I to you" (source-goal agreement) <sup>87</sup>	direct corr.	
		convention with resemblance (as) <sup>88</sup>	source			
	Loc2: neutral space	convention with resemblance	2nd person			
		convention with resemblance	goal			
	Mov: straight path	(null) <sup>89</sup>				

This sign has clearly has a much more complex relationship between its form and meaning, but it is still very iconic. Perhaps the easiest way of explaining this chart is that there are two images in the iconic base that are working together. The first image is the signer holding a phone to their cheek, and the second image is a source-goal agreement from the 1st to 2nd person. For the first image, the chart is similar to the BIRD chart 9.1.2. All the parameters are

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<sup>85</sup> The body location for this sign meaningfully spans three locations: the ear, cheek, and mouth. All the locations are used in the operation of a telephone.

<sup>86</sup> In this example the location of the chest is conventionally associated with the 1st person, but it is also iconic. This is why it is labelled "convention with resemblance".

<sup>87</sup> For this sign, the source to goal agreement is unidirectional "I to you" because the sign is located on the body. For other directional verbs that aren't located on the body, such as THROW (ASL), it is important to separate the source and goal from their pronominal referents because the 1st person could be the goal rather than the source.

<sup>88</sup> This is the use of the cheek as a position rather than as the cheek itself. This is similar to using the cheek as a position on the timeline.

<sup>89</sup> Null means that the parameter in question does not seem to be contributing to the iconic base or the meaning.

being used together to form one image, which is a person holding a phone to their cheek. For the second image of the source-goal agreement, each of the parameters contain individual meaning, and, in this case, each parameter actually contains multiple distinct meanings simultaneously. Notice that there are two locations in this sign. Location 1 is the cheek, and location 2 is the part of neutral space referencing the 2nd person. Location 1 is subdivided into three parts: this is three different uses of the same parameter. One aspect of the image is the phone at the signer’s cheek. Another involves the use of the body as 1st person (cf. Meir et al. 2006). The third is the use of the location as the grammatical source for the source-goal agreement. Location 2 is subdivided into two parts. The first is the use of the neutral space as the 2nd person, and second is its use as the grammatical goal. The first image is related to the meaning metonymically, and the second image is related by direct correspondence, since the “I to you” source-goal agreement is part of the meaning of the sign.

Some signs have a more complex iconicity chain associating the iconic base to the meaning. These signs often have a metaphorical relationship between their iconic base and meaning. Example of this is the sign STUBBORN in ASL which pictures a donkey’s ear and is metaphorically tied to a character trait.

Table 10: Iconicity Chart: STUBBORN (ASL)

Sign	Form	Iconic Relationship	Iconic Base		→			Meaning
STUBBORN (ASL)	HS: ‘b’	resemblance	wide ear	donkey’s ear	mty.	“donkey”	mtph.	“stubborn”
	Ori: palm away from self	resemblance	ear facing forward					
	Mov: close	resemblance	ear flapping					
	Loc: temple	resemblance(ap)	at donkey’s head					

The sign STUBBORN and DONKEY are signed the same way. Both signs picture a donkey’s ear flapping as their iconic base, but while DONKEY can simply be related to its meaning by metonymy, STUBBORN requires another step of a metaphorical relationship. In English there is

the idiom “stubborn as a mule”, where the animal is metaphorically associated with the character trait. The metaphor here in ASL is analogous to the English one.

## 8.2 Form to Form Resemblance – A Relative of Iconicity?

There is one interesting phenomenon that looks and functions a lot like iconicity which needs to be handled somewhat differently in such an analysis.

I call it “form-to-form resemblance”, and it comes up quite often in the languages in this thesis. In form-to-form resemblance, a symbol’s form does not resemble its meaning, but rather its form resembles another linguistic form (which in turn may have an iconic relationship to its meaning). In fact, it could be considered as a close cousin to iconicity, because it is non-arbitrary, which is why it is included along with iconicity in the analyses in this thesis.

I start with an example. Take the ASL sign UNCLE:

Table 11: Iconicity Chart: UNCLE (ASL)

Sign	Form	Iconic Relationship	Iconic Base	→			Meaning
				metonym	written English “uncle”	convention without resemblance	
UNCLE (ASL)	HS: ‘u’	convention with resemblance	English letter ‘u’	metonym	written English “uncle”	convention without resemblance	“male sibling of your parent”
	Loc: forehead	language-specific association <sup>90</sup>	BOY (ASL) <sup>91</sup>	direct correspondence <sup>92</sup>			
	Ori + Mov: twist	(null)					

In this sign, the handshape parameter and location parameter are working separately. Because of this, the iconic base is also not one unified image, but a collection of multiple

<sup>90</sup> This language-specific association is historically iconic, but is synchronically conventional. It is discussed in detail in section 4.2.2.

<sup>91</sup> An entire iconicity chart could be inserted here for the sign BOY (which originally had the general meaning of masculine gender regardless of age), but that would make the chart unnecessarily large.

<sup>92</sup> Since one of the meanings of BOY is simply masculine gender, this is direct correspondence.

images. The handshape is in some sense iconic for the English letter ‘u’, which is associated metonymically with the written<sup>93</sup> English word “uncle”. It is worth noting that the English word “uncle” is associated to its meaning by arbitrary convention with no iconicity. For the orientation and movement parameters in this sign, the two parameters are likely filler so that the sign is phonologically well-formed. They do not seem to be connected in any way to meaning. Interestingly, the sign UNCLE has regional variants with different movements, such as a small circle. It seems plausible that variation is more likely in semantically null parameters.

There are a few difficulties with the iconicity of the handshape here. I mentioned that the handshape is “in some sense” iconic for the English letter ‘u’, because it’s clear that the manual letter resembles the letter ‘u’. However, this is technically not iconic, since the definition of iconicity is that the form resembles the meaning, and here the form is not resembling the meaning but rather a form in another language. This is a new type of resemblance that I have not seen discussed elsewhere. I am calling it “form to form resemblance”.<sup>94</sup> In this sign, the manual letter ‘u’ is associated with the English letter ‘u’ by a form to form resemblance, and the English letter ‘u’ is metonymically related to the English word “uncle”, but the word “uncle” is not iconically related to its meaning since there is no resemblance between the form and meaning. The handshape in UNCLE is resembles English word “uncle” but does not resemble the actual meaning of UNCLE which is “the male sibling of your parent”.

This form to form resemblance occurs in most (but not all) of the manual letters of the alphabet in ASL and the corresponding initialized signs, but it also occurs with many other

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<sup>93</sup> It’s important to distinguish that this is the written form of English, iconicity can be taken from the lipread form of English if two words are lipread the same. An example of this latter one would be the CABBAGE/GARBAGE pair of signs that both derive their iconicity from a head of cabbage but are lipread the same.

<sup>94</sup> I had been toying with the idea of calling this “iconicity of form” because of its similarity to iconicity, but this would likely have been more confusing than helpful.

signs. For the ASL numbers, some are iconic (numbers 1-5), some have a form to form resemblance with their corresponding Arabic numerals (eg.: 0, 6, 9, 11), others have a form resembling another type of form: 7, 8, and 9<sup>95</sup> are made by analogy to the number 6, and the ASL sign 100<sup>96</sup> is made by analogy to the number 1 and the Latin word “centum”, which means one hundred.

There are families of signs that are derived from an original sign, such as the ASL gender signs like UNCLE. These are all examples of form to form resemblance. For example, many signs in ASL that refer to groups of people are located at the ipsilateral and contralateral sides of the upper chest and are often initialized. Examples are STAFF, MEMBER, COMMITTEE, BOARD, CONGRESS, and many others. Many of these signs have a form to form resemblance for the English words the manual letters represent, but they are also founded on a form to form resemblance of location. I believe they are all derived from the sign WE, which is iconic.

Signs borrowed from other sign languages can be considered a type of form to form resemblance. A borrowing may not be an exact copy of the sign, but the borrowed sign is still related to the sign from the source language by a form to form resemblance. In some cases the iconicity from the source language is still retrievable in the language of borrowing, but this is not always the case, especially when the borrowed sign has some language-specific associations or culture specific iconic motivations. An example of this is that Kenyan Sign Language has borrowed the initialized sign PARENTS from ASL.<sup>97</sup> The sign is located at the forehead and the chin in ASL because those are the locations of the signs FATHER and MOTHER and are the

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<sup>95</sup> Note that 9 has two different types of form to form resemblances: it is formed by analogy to the manual number 6 and also resembles the form of the Arabic numeral in handshape (but not orientation).

<sup>96</sup> The ASL sign 100 is a combination of the number 1 and the letter ‘c’.

<sup>97</sup> In specifically selecting sign languages that are not related to one another there’s not as many complex examples of borrowing as there are in sign languages like Kenyan Sign Language, which is related to ASL.

locations of the masculine and feminine gender in ASL. In Kenyan sign language the location for the masculine gender is the chin, iconically associated with beards, and the feminine gender is at the ipsilateral upper chest being iconically associated with the breast. The forehead is not tied to a gender at all and the chin is tied to the opposite gender in Kenyan Sign Language as it is in ASL. This iconicity is likely to be opaque to many Kenyans unless they know ASL, and especially since they may not even know that the sign is borrowed from ASL.

Iconicity is a complex phenomenon. Intuitive understandings of iconicity can be misleading. This form to form resemblance in signs can easily be mistaken to be iconicity of meaning, although it seems to be a closely-related phenomenon which, as I've demonstrated, can be incorporated into the same analytical framework. Iconicity charts like those presented here can help to show in detail the step-by-step association from form to meaning in a sign. They can show which parameters are iconic, which are not iconic, and which exhibit a form to form resemblance. These charts are also able to also show the iconicity of agreement within an inflected verb. With further development this style of chart should be able to show every meaning that each parameter holds within a sign. Such charts also highlight the importance of the iconic base within an iconic sign. The form is primarily related to the iconic base and secondarily related to the meaning, rather than directly mapped to the meaning. The different types of iconicity are easily incorporated into the chart as types of resemblance. Presumably all the other parameters can be analyzed into different categories of resemblance as has been done here.

## CHAPTER 9

### CONCLUSION AND APPLICATIONS

Based on the previous chapters, the tendency for signs located on the body to have iconic or non-arbitrary motivation seems to hold true very consistently. Across these four sign languages 92.0-98.1% of the signs located on the body have iconic (86.7%-90.0%) or non-arbitrary (3.1%-8.1%) motivation. The data supports the claim that universally, there is a strong tendency for signs located on the body to have an iconic or non-arbitrary motivation especially in their historical form. Table 12 below is a summary of this data.

Table 12: Percentage Total Motivated Signs

	<b>ASL</b>	<b>Auslan</b>	<b>HKSL</b>	<b>KSL</b>
<b>Iconic</b>	90.0%	86.7%	88.0%	88.9%
<b>Non-Arbitrary</b>	8.1%	6.5%	6.5%	3.1%
<b>Total</b>	98.1%	93.2%	94.5%	92.0%

The three non-arbitrary sign categories are identified in section 3.1 as language-specific association (lsa), borrowing (bor), and gesture (ges). Iconicity is defined as a relationship of resemblance between form and meaning. These three categories have a relationship that is similar to iconicity, but falls outside of the standard definition. There is a relationship of resemblance between one form and a related form. This is a new kind of relationship that is discussed further in section 8.2.

The percentages of iconic and non-arbitrary signs tend to be higher with sign languages I am more familiar with and with access to language informants or etymological information. It is reasonable then to expect that with better information, most sign languages would be closer to the 98.1% mark like ASL. I cannot claim that universally *all* signs located on the body are

iconic or non-arbitrary in their historical forms, there always are a few exceptions, but the tendency is very strong.

## **9.1 Ideas for Further Research**

Since a cross-linguistic analysis of body locations has provided so much good information, it seems natural that this kind of analysis could be extended to all the different sign language parameters in order to come up with something along the lines of a universal catalogue of sign language iconicity.

I also suspect that this type of analysis could be applied to all locations for signs with the exception of the front middle neutral signing space, not just those on the body, with similar results. Based on informal observation, it seems that signs with no iconic tie to location tend to be located in the front middle of the neutral signing space, which would be the default location, and any deviation from that location, such as the non-dominant hand, and even with other locations in neutral space (above, below, or to one side), almost always requires a motivation.

## **9.2 Application: Analyzing Iconicity/Etymology**

In this thesis I analyzed the iconic use of location for thousands of signs in four different sign languages. After a while common patterns clearly emerged, and thus it became easier to differentiate between more and less probable explanations for iconicity. Based on this experience, this section offers helpful principles for analyzing the iconicity and etymology of signs to recover either the historic or synchronic iconic base of the sign.

Recovering the iconicity of a sign can be difficult. It is inherently subjective and after-the-fact, unless one is able to directly interview the person who coined the sign and ask them what iconic base they were thinking of. Even if that was possible, it still wouldn't be a flawless method because, as the sign is passed from signer-to-signer the form can change, and the iconic

base can be re-interpreted<sup>98</sup>. However, there are a few principles that can help in this process of analysis.

The first principle is to check the historical form, if possible. A sign that was historically iconic may have lost its iconicity in its current form. For example, the ASL sign BRAG, which is signed with both hands in the A-handshape tapping at either side of the waist, is iconically opaque because the waist has little to do with speaking, pride, or the self. However, according to Shaw and Delaporte (2015:32), this sign came from a French sign ÉGOÏSME which was signed at the chest with only one hand. The chest is extensively used to refer to the self. In fact the historical form, which uses the A-handshape to tap the chest two or three times, is simply a reduplication of the sign MYSELF. In the historical form the handshape and location both have clear iconicity. What is unclear is why the sign got lowered to the waist and became two-handed.

This example shows why, before theorizing about iconicity, one should if possible check any available historical records to see how the sign used to be formed, and what it used to mean. This is made easier for ASL with Shaw and Delaporte's (2015) etymological dictionary of ASL. Whenever a sign isn't in their dictionary, it can be sometimes found in their typical sources such as Long (1918), Clark (1885) or Michaels (1923).

A second principle is to account for all the phonological parameters when establishing initial iconicity, although natural phonological processes may erase some of the iconicity of a sign over time. Often a problematic explanation of iconicity will fit some of the parameters, but not all. This is especially problematic when a clearly meaningful (i.e. marked) parameter is skipped. The previous example of BRAG works well because there is historical evidence that: it used to be signed at the chest, which is a location associated with the self; the handshape was

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<sup>98</sup> An example of this is the ASL sign OLD mentioned in footnote 32. A few more examples of this are given later in the fourth principle.

(and still is) the A-handshape which is used reflexively to refer to one's self; the historical orientation is meaningfully pointing towards the chest; and there are no non-manual markers to account for in this sign. The change from the chest to the waist is not common and is likely the main shift that renders the iconic base opaque, but lowering of signs is a known phonological pattern, so it is not entirely unusual. Likely the orientation changed with this shift of location so that it wouldn't strain the wrist. The fact that the sign changed from one-handed to two-handed and symmetrical may also be due to the location shift. Signs at the waist are often two-handed and symmetrical at the ipsi and contralateral sides. Further, a one handed sign at the middle of the waist may look obscene. This explanation of BRAG seems to be a good one because it accounts for all the parameters in a plausible manner both in terms of original iconicity and natural phonological changes.

Mark Mandel (1977:102) records a few examples of folk etymologies of the ASL sign BLACK that violate this second principle. The first is that the sign BLACK pictures the forehead of a black person. However, this is unlikely since the index finger is used to trace thin objects instead of broad objects like a forehead. Another unlikely etymology is that it depicts ashes applied to the forehead for Ash Wednesday. This also violates the second principle because ashes are applied to the forehead in a cross pattern rather than in a line and with the thumb rather than the index finger. The iconic base is better represented as tracing the eyebrows because eyebrows are typically thin black (or dark colored) objects that go across the forehead that almost everyone has. Likely there was a slight phonological shift from an uncommon location, the eyebrows, to a common nearby location, the forehead.

A third principle is that the explanation should be based on sight rather than other possible explanations. Deaf people and sign languages are highly visual, and iconicity is a form to meaning relationship, so visual explanations take preference over non-visual ones. A good example of a visual explanation is the homonymy of the ASL signs CABBAGE and GARBAGE in

some dialects. The sign CABBAGE is formed with a bent-B handshape tapped twice at the forehead.<sup>99</sup> The sign GARBAGE is signed the same way. While it may be tempting to link the signs based on a desire to throw the former in the latter, there is a better explanation for the homonymy. The sign CABBAGE is clearly iconic: it depicts a leaf on a head (of cabbage). The signer's head looks like a head of cabbage, the bent-B handshape with the palm facing inward orientation looks like a leaf of cabbage, and the movement is small (cabbages don't tend to move much), and is a basic movement associated with nouns. None of these parameters make sense visually for 'garbage'. However, the words 'cabbage' and 'garbage' look the same if being lip-read. Deaf people's perception of English is often based on lip-reading. Further, this visual association to English is not without precedent, it also occurs with the sign CENTS, which is signed at the same location as the sign THINK because it makes 'sense'.

The fourth principle is to recognize that iconic associations may change as the culture changes. The iconic base of a sign can be reanalyzed when the iconicity becomes dated or lost and a change in iconic base can result in a change in the form of the sign to match. For some signs the change in form and the reason for change is obvious. In Long (1918:42) the sign for TELEPHONE depicts using an old style "crank" telephone, where the separate earpiece is held to the ear and the mouthpiece is held in front of the mouth. This kind of telephone is no longer used, so the sign changed accordingly. Currently the Y-handshape is held at the cheek with the thumb reaching the ear and the pinkie reaching the mouth to represent the combined handpiece. This sign is still commonly used even though that style of phone is now less commonly used. I have seen CELLPHONE signed with a C-handshape held at the cheek to mimic holding a smartphone, and others have reported seeing the U-handshape used the same

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<sup>99</sup> This is the variant in the Gallaudet ASL Dictionary. There are other variations with an open-5 handshape and with a side-to-side wrist movement, but these variations don't change the iconicity significantly.

way. The motivation for the change of signs is obvious: the form of the phone changes and the form of the sign changes to match.

For a less obvious reanalysis, the sign SUMMER, which is signed at the forehead (palm facing down) with the index finger flexing twice. The iconic base currently pictures wiping sweat off one's forehead. This makes good sense because it is a common action associated with summertime heat. This is, however, a reanalysis. The original French sign AOÛT 'August' pictured a laurel wreath on the head because August is when laurel crowns would be presented to the best students (Shaw and Delaporte:269). At some point this sign extended to all of summer instead of just August, and the iconic base changed from a laurel crown to wiping sweat. Because almost no one is aware of the correspondence between summer and laurel wreaths in America anymore it would be amiss to say that the sign SUMMER iconically represents a laurel wreath. That is the historical image, but the current image is what signers are familiar with presently. In the categories of iconicity described in this thesis, the iconic base changed from a wearable to a mimetic action.

The fifth principle is to be aware of common patterns of iconicity. Much of what is outlined in this thesis about the categories of iconicity for the location parameter would be included in this last principle. There are common patterns within each sign language and across sign languages. Borrowing from the dominant written language of the country is a common strategy of iconicity for each of the sign languages analyzed in this thesis. In ASL this is often done through initialization where the handshape associated with the English gloss is used for the sign. In HKSL, this came up a few times when signs were located at the mouth because the written Chinese character included the symbol of a mouth. Another common pattern is that items worn on a particular part of the body are often pictured in order to refer to something closely associated with them. Often clothing can refer to the professionals who wear that clothing, such as a badge for the ASL sign POLICE. Also in ASL, there is the language specific association of the masculine gender at the top of the head and the feminine gender at the lower half. Knowing the language specific associations is important.

These principles do not guarantee a perfect iconic or etymological explanation, but an explanation that which follows each of these principles is going to be much more plausible than an explanation that does not.

## **APPENDICES**

## APPENDIX A

### (ASL) GALLAUDET DICTIONARY DATA

The data on ASL is taken from *The Gallaudet Dictionary of American Sign Language* (Valli 2005). The ASL glosses in this table are the glosses given for each of the signs on the CD insert rather than the glosses given in the book.

In these four appendices, I give detailed analyses of the data from the four dictionaries, which show the basis for the summary charts presented in the main text.

For all the tables in these four appendices, certain general conventions of labelling are used that I will outline here. In the English gloss column, if a gloss is followed by an asterisk (\*), that means the sign has two or more locations, and thus also appears in the table that includes the second location. Both locations are listed in the location column. For the location column, the first major body location is given first and if there is a second major location that is given afterward. Some locations need further specification. If pertinent, after the major location(s), a sublocation is given separated by a comma.

The Metonym / Metaphor column is optional data I added when it seemed the connection between form and meaning was still unclear from the category of iconicity. The information in this column is not meant to be exhaustive. There were certain common metonymic or metaphorical extensions that were commonly necessary to bridge the gap between form and meaning. If there are multiple steps necessary, the two parts are separated by a “for”. For example “person for character” means the sign is associated to a person first and then that person is associated with a specific character.

For any column, if there is a single question mark (?) that means the thing marked is uncertain for some reason. Anything marked in parentheses is a note added for clarification.

Table 13: ASL Location: Head

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Adult	head, side	qop: height	
Attention	face, in front	fop: seeing	
Back-of-mind	head, back	fop: cognition	
Bald	head, top	qop: bald	
Beautiful	face, in front	bp: face	appearance
Barber	head, top, above	iup: scissors	
Blonde	head, top	qop: blonde	
Cabbage	head, side	ap: head of cabbage	
Camera	face, in front	iup: camera	
Careless	face, in front	fop: seeing	
Catholic	face, in front	ma: cross on forehead	religion
Comb-hair	head, top, side	iup: comb	
Comb	head, top, side	iup: comb	
Confused	face, in front	fop: cognition	
Consider	face, in front	fop: cognition	
Cousin	head, side	lsa: male/female gender	
Crazy	head, side	fop: cognition	
Curly	head, side	qop: curly	
Dark	face, in front	fop: seeing	
Dizzy	face, in front	fop: seeing	
Education	head, side	fop: cognition	
Face	face, in front	bp: face	
Facial-Expression	face, in front	fop: facial expression	
Female-Haircut	head, side	eap: haircut	
Fond	face, in front	fop: facial expression	emotion: love
Freckles	face, in front	bp: freckles	
Front	face, in front	asp: front	
Frown	face, in front	fop: facial expression	emotion: sadness
Future	head, side	asp: central	timeline
Generation	head, side	asp: central	timeline
Grouchy	face, in front	fop: facial expression	emotion: anger
Guess	face, in front	fop: seeing	
Hair	head, side, hair	bp: hair	
Hairbrush	head, side	iup: hairbrush	
Haircut	head, side	eap: haircut	
Halloween	face, in front	iup: wearable	
Handsome	face, in front	bp: face	appearance
Harsh	face, in front	fop: facial expression	emotion: anger
Hat	head, top	iup: wearable	
Head	head, side, top to bottom	bp: head	
Height2	head, top	qop: height	
Helmet	head, sides	iup: wearable	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Isolated	head, side (unclear)	?fop: cognition	
Later	head, side	asp: central	timeline
Lion	head, top	ap: lion's mane	creature
Look-like	face, in front	bp: face	appearance
Looks	face, in front	bp: face	appearance
Mad	face, in front	fop: facial expression	emotion: anger
Male Haircut	head, sides	eap: haircut	
Mirror	face, in front	iup: mirror	
Mourn	face, in front	fop: facial expression	emotion: sadness
Odd	face, in front	fop: seeing	
Pajamas*	face, in front	fop: seeing/cognition	
Pale*	chest, face, in front	bp: face	appearance
Pay Attention	face, in front	fop: seeing	
Pillow	head, side	iup: pillow	
President	head, sides	iup: wearable	
Pretty	face, in front	bp: face	appearance
Rabbi Hair	head, side	bp: hair	
Scarf*	head, top, above, chin, in front	iup: wearable	
Scissors/shears	head, side	iup: scissors	
Shade	face, in front	fop: seeing	
Shampoo	head, sides	iup: shampoo	
Shower	head, top, above	eap: shower	
Skunk	head, top	ap: skunk stripe	creature
Sleep	face, in front	fop: seeing/cognition	
Sleepy	face, in front	fop: seeing/cognition	
Stealth	face, in front	fop: seeing	
Straight	face, in front	asp: front	
Sulk	face, in front	fop: facial expression	emotion: sadness
Sweat	head, side	fop: sweat	
Teach	face, in front	fop: cognition	
Trouble	face, in front	fop: seeing	
Tutor	face, in front	fop: cognition	
Ugly	face, in front	bp: face	appearance
Vain	head, sides	bp: face	appearance
Wash-Face	face, in front	eap: washing	
Wild	head, side	fop: cognition	
Worry	face, in front	fop: seeing	
Wow	face, in front	fop: facial expression	emotion: awe

Table 14: ASL Location: Forehead/Temple

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Agree	temple	fop: cognition	
Because	temple	fop: cognition	
Believe	forehead	fop: cognition	
Bison	forehead	ap: horns	creature
Black	forehead	qop: black	
Blackberry	forehead	qop: black	
Blank-Out	forehead	fop: cognition	
Blockhead	forehead	fop: cognition	
Boy	forehead	iup: wearable	male
Boyfriend	forehead	iup: wearable	male
Brain	temple	bp: brain	
Brother-in-Law	forehead	iup: wearable	male
Brother	forehead	iup: wearable	male
Bull	forehead	ap: horns	creature
Capital	forehead	iup: wearable	person
Clever	forehead	fop: cognition	
Concept	temple	fop: cognition	
Conductor	forehead	iup: wearable	person
Confuse	temple	fop: cognition	
Cousin (male)	temple, side	iup: wearable	male
Cow	forehead	ap: horns	creature
Crazy-for	temple	fop: cognition	
Crown	forehead	iup: wearable	
Decide	temple	fop: cognition	
Deer	forehead	ap: antlers	creature
Devil	temple	ap: devil horns	creature
Dime	temple	bor: English "cents"	
Disagree	temple	fop: cognition	
Disobey	temple	fop: cognition	
Disturbed	temple	fop: cognition	
Donkey	forehead	ap: donkey ears	creature
Dont-know	forehead	fop: cognition	
Dream	forehead	fop: cognition	
Eight-cents	temple	bor: English "cents"	
Eyebrow	eyebrow	bp: eyebrow	
Fantasy	forehead	fop: cognition	
Faint	forehead	fop: cognition	
Faith	forehead	fop: cognition	
Faithful	forehead	fop: cognition	
Father-in-Law	forehead	iup: wearable	male
Father	forehead	iup: wearable	male
Federal	temple	iup: wearable	person
Fireman	forehead	iup: wearable	person

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Flipping-Out	temple	fop: cognition	
For	forehead	fop: cognition	
Forehead	forehead	bp: forehead	
Forget	forehead	fop: cognition	
Gentleman*	forehead	iup: wearable	male
Goat*	forehead	ap: goat horns	creature
Government	temple	iup: wearable	person
Governor	temple	iup: wearable	person
Grandfather	forehead	iup: wearable	male
Greet	forehead	ges: salute	
Headache	forehead, in front	eap: illness	
Hello	forehead, in front	ges: salute	
High/Hallucination	temple	fop: cognition	
Honor	forehead	ma: bowing	
Horse	temple	ap: horse ears	creature
Husband	forehead	iup: wearable	male
Idea	temple	fop: cognition	
Imagination	temple	fop: cognition	
Inform-all	forehead	fop: cognition	
Inform	forehead	fop: cognition	
Inform-me	forehead	fop: cognition	
Intend	temple	fop: cognition	
Invent	temple	fop: cognition	
Know	temple	fop: cognition	
Know-That	temple	fop: cognition	
Learn	forehead	fop: cognition	
MR (Mentally Retarded)	temple	fop: cognition	
Male (Boy)	forehead	iup: wearable	male
Man*	forehead	iup: wearable	male
Manhole	forehead	iup: wearable	male
Meditation	temple	fop: cognition	
Memorize	forehead, in front	fop: cognition	
Mischievous	forehead	ap: devil horns	creature for character
Miscommunication	forehead, in front	fop: cognition	
Misunderstand	forehead, in front	fop: cognition	
Moon	forehead	bp: face	man in the moon
Mull-over	temple, in front	fop: cognition	
Narrow-minded	temple	fop: cognition	
Nephew	forehead	iup: wearable	male
Nickel	temple	bor: English "cents"	
Nightmare*	temple	fop: cognition	
Not-funny	forehead	fop: cognition	
Not-interested	forehead	fop: cognition	
Nun	forehead	iup: wearable	person

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Obey*	forehead	ma: bowing	
Open-minded	temple	fop: cognition	
Opinion	forehead	fop: cognition	
Paranoid	temples	fop: cognition	
Paranoid2	temples	fop: cognition	
Parents*	chin, forehead	iup: wearable	male
Penny	temple	bor: English "cents"	
Philosophy	forehead, in front	fop: cognition	
Politics	temple	iup: wearable	person
Pretend	temple	fop: cognition	
Puzzled	temple, in front	fop: cognition	
Quarter	temple	bor: English "cents"	
Ram	temple	ap: ram horns	creature
Reason	temple, in front	fop: cognition	
Remember	temple	fop: cognition	
Remind	temple	fop: cognition	
Respect	forehead	ma: bowing	
Rooster	forehead	ap: rooster crest	creature
Scar-in-mind	forehead	fop: cognition	
Scout	forehead	ges: salute (scout)	person
Shock	temple	fop: cognition	
Sick*	forehead	eap: illness	
Son*	forehead	iup: wearable	male
Step-Brother	forehead	iup: wearable	male
Step-Father	forehead	iup: wearable	male
Stubborn	temple	ap: donkey ear	creature for character
Student	forehead	fop: cognition	
Stupid	forehead	fop: cognition	
Summer	forehead	ma: wiping sweat	
Suppose	temple	fop: cognition	
Suspect	temple	fop: cognition	
Theory	temple, in front	fop: cognition	
Think	temple	fop: cognition	
Think-the-world-of	temple	fop: cognition	
Thinking	temple	fop: cognition	
Too-long	temple	asp: central	timeline
Uncle	temple, side	iup: wearable	male
Understand	temple, in front	fop: cognition	
Vice-President	temple	iup: wearable	person
What-for?	temple	fop: cognition	
Why?	forehead	fop: cognition	
Wisdom	forehead	fop: cognition	
Wonder	forehead	fop: cognition	
Worship	forehead	fop: cognition	

Table 15: ASL Location: Eyes

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Awake	eyes, in front	fop: opening	
Blind	eyes, below	fop: seeing	
Blink	eye, in front	fop: blinking	
Contact Lenses	eye, in front	iup: wearable	
Cry	eye, below	fop: crying	
Doubt	eye, in front	fop: seeing	
Eyelash	eyes, above	bp: eyelash	
Eyes	eyes, below	bp: eyes	
Frown2	eyes, in front	fop: facial expression	
Glance	eye, in front	fop: seeing	
Glasses	eyes, side	iup: wearable	
Look-at	eyes, in front	fop: seeing	
Look-at-me	eyes, in front	fop: seeing	
Look-back	eyes, in front	fop: seeing	
Look-down	eyes, in front	fop: seeing	
Look-for	eyes, in front	fop: seeing	
Mask	eyes, in front	iup: wearable	
Notice	eye, below	fop: seeing	
Onion	eye, side	fop: crying	
Owl	eyes	ap: owl eyes	
Patch (eye)	eye, covering	iup: wearable	
Photographer	eyes, in front	fop: seeing	
Predict	eyes, below	fop: seeing	
Prophet	eyes, below	fop: seeing	
Raccoon	eyes	ap: raccoon eyes	
See	eye, below	fop: seeing	
Shock	eye, in front	fop: opening	surprise
Skeptical	eye, in front	fop: seeing	
Sun	eye	fop: seeing	
Surprise	eye, below	fop: opening	surprise
Telescope	eye, in front	iup: telescope	
Vision	eyes, in front	fop: seeing	
Visit	eyes, below	fop: seeing	
Wink	eye, ipsi	fop: winking	

Table 16: ASL Location: Ears

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Audiologist	ear, side	fop: hearing	
Audiology	ear, side	fop: hearing	
Birthday	ear	ma: pulling ear	

Coconut	ear	fop: hearing	
Deaf*	ear, cheek	fop: hearing	
Deaf2	ear	fop: hearing	
Ear	ear	bp: ear	
Earache	ear, side	eap: illness	
Earmuffs	ear, side	iup: wearable	
Earrings	ear	iup: wearable	
Gold	ear	iup: wearable	color (or material)
Hearing-Aid	ear, behind	fop: hearing	
Listen	ear	fop: hearing	
Loud	ear	fop: hearing	
Noise	ear, in front	fop: hearing	
Noisy	ear	fop: hearing	
Operator	ear	iup: headset	person
Put-on-hearing-aid	ear	iup: hearing aid	
Radio	ear, side	fop: hearing	
Silver	ear	iup: wearable	color (or material)
Thunder	ear	fop: hearing	

Table 17: ASL Location: Nose

<b>English Gloss</b>	<b>Location</b>	<b>Category of Iconicity</b>	<b>Metonym / Metaphor</b>
Blow-Nose	nose	fop: blowing nose	
Boring	nose, side	lsa: neg	
Bug	nose	lsa: neg	creature
Bull	nose	iup: bull ring	creature
Circus	nose	iup: clown nose	
Cold	nose	eap: illness	
Doll	nose	bp: face	doll
Don't-care	nose	lsa: neg	
Don't-mind	nose	lsa: neg	
Eagle	nose	ap: eagle beak	creature
Elephant	nose, in front	ap: elephant trunk	creature
False.	nose	lsa: neg	
Fool	nose	lsa: neg	
Fool2	nose	lsa: neg	
Foolish	nose	lsa: neg	
Fox	nose	ap: fox nose	creature
Fun	nose	lsa: humor	
Funny	nose	lsa: humor	
Handkerchief	nose, in front	iup: handkerchief	
Ignore	nose	fop: smell	
Immature	nose	lsa: neg	
Investigate	nose	fop: sight	
Kid	nose, under	fop: runny nose	person
Lousy	nose	ma: throwing snot	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Mosquito	nose	ap: mosquito proboscis	creature
Mosquito3	nose	ap: mosquito proboscis	creature
Mouse	nose	ap: mouse nose	creature
Nose	nose	bp: nose	
Interested-in*	chest, nose	bp: face	person
Interest-None	nose	bp: face	person
Penis (informal)	nose	ap: penis	
Rat	nose	ap: rat nose	creature
Ridiculous	nose	lsa: humor	
Rose	nose	fop: smell	
Runny Nose	nose, under	fop: runny nose	
Flower	nose	fop: smell	
Silly	nose	lsa: humor	
Smell	nose, in front	fop: smell	
Sneeze	nose	fop: sneeze	
Stink	nose, in front	fop: smell	
Stink2	nose, grasping	fop: smell	
Strict	nose	bor: "hard nose"	
Witch	nose	ap: hooked nose	creature
Wolf	nose, in front	ap: wolf snout	creature

Table 18: ASL Location: Cheek

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Apple	cheek	fop: chewing	
Ashamed	cheek	eap: blushing	emotion: shame
Aunt	cheek	lsa: female	
Bar	cheek, in front	fop: drinking	
Beard	cheek	bp: beard	
Bed	cheek	ma: folding hands to sleep	
Bedroom	cheek	ma: folding hands to sleep	
Bee	cheek	eap: sting	
Blush*	mouth, cheek	eap: blushing	
Brush-Makeup	cheek	iup: makeup	
Call-on-phone	cheek	iup: phone	
Candy	cheek	fop: eating	
Carrot	cheek, in front	fop: eating	
Cat	cheek	ap: whiskers	creature
Cheek	cheek	bp: cheek	
Chewing gum	cheek	fop: chewing	
Chuckle	cheek	fop: facial expression	
Consume	cheek	fop: eating	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Cousin	cheek, side	lsa: female	
Daughter*	chin, forearm	lsa: female	
Deaf*	ear, cheek	fop: speaking	
Dimple	cheek	bp: dimple	
Dormitory	cheek, bottom to top	fop: eating, ma: sleeping	
Embarrassed	cheek	eap: blushing	emotion: shame
Everyday	cheek	asp: central	timeline
Experience	cheek	fop: cognition	
Fat	cheek	qop: fat	
Fruit	cheek	fop: eating	
Giggle	cheek	fop: facial expression	
Girl	cheek	iup: wearable	female
Girlfriend	cheek	lsa: female	
Hang-up (phone)	cheek	iup: phone	
Home*	chin, side, cheek	fop: eating, ma: sleeping	
Homework	cheek	fop: eating, ma: sleeping	
Jaw	cheek	bp: jaw	
Jealous	cheek	ges: bite finger	
Leather	cheek	ap: leather	
Mattress	cheek	ma: folding hands to sleep	
Measles	cheeks	eap: illness	
Menstruation	cheek	qop: red	
Mosquito2	cheek	eap: bite, ma: slap	
Neat/Cool	cheek	??	
Nerve/Brazen	cheek	eap: tooth extraction	
Niece	cheek, side	lsa: female	
Peach	cheek	ap: peach fuzz	
Picture	cheek	bp: face	
Pimples	cheek	eap: illness	
Pleasant (friendly)	cheek	?eap: cool breeze	
Powder (make-up)	cheek	iup: makeup	
Recently	cheek	asp: central	timeline
Rub	cheek	eap: rub	
Rubber	cheek	qop: rubbery	
Secretary	cheek	ma: taking pen from ear	
Sex (gender)	cheek, top to bottom	ap: upper and lower half of head	
Shame	cheek	eap: blushing	emotion: shame
Shave	cheek	eap: shaving	
Shy	cheek	eap: blushing	emotion: shame
Sister-in-law	cheek	lsa: female	
Sister	cheek	lsa: female	
Skin	cheek	bp: skin	
Sleep	cheek	ma: folding hands to sleep	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Step-Mother	cheek	lsa: female	
Step-Sister	cheek	lsa: female	
Sting	cheek	eap: sting	
Tan	cheek, top to bottom	qop: tan	
Telephone	cheek	iup: phone	
Tiger	cheek	ap: tiger stripes	creature
Tobacco	cheek	fop: chewing	
Tomorrow	cheek	asp: central	timeline
Vegetable	cheek	fop: eating	
Virgin	cheek	lsa: female	
Whiskers	cheek	ap: whiskers	
Wife	cheek	lsa: female	
Wine	cheek	qop: red	
Will	cheek, side	asp: central	timeline
Yesterday	cheek, bottom to top	asp: central	timeline

Table 19: ASL Location: Mouth

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Alcoholic Drink	mouth	fop: drinking	
Announce	mouth	fop: speaking	
Answer	mouth	fop: speaking	
Bad	mouth	ma: blowing a kiss	
Bachelor	mouth, both sides	fop: speaking	
Balloon	mouth, in front	iup: balloon	
Beer	mouth, side	fop: drinking	
Belong	mouth	fop: speaking	
Bless	mouth	fop: speaking	
Bird	mouth	ap: beak	
Blood	mouth	qop: red	
Blush*	mouth, cheek	qop: red	
Breakfast	mouth	fop: eating	
Brown	mouth, side	qop: brown	
Brush-Teeth	mouth, teeth	ma: brushing teeth	
Cafeteria	mouth, both sides	fop: eating	
Cereal	mouth	fop: eating	
Cigar	mouth, side	fop: smoking	
Cocktail	mouth	fop: drinking	
Corn	mouth, in front	fop: eating	
Curse	mouth	fop: speaking	
Dare	mouth, in front	fop: speaking	
Delicious	mouth	fop: eating	
Dentist	mouth, teeth	bp: teeth	person
Dining-Room	mouth	fop: eating	
Dinner	mouth	fop: eating	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Drink	mouth	fop: drinking	
Drunk	mouth, in front	fop: drinking	
Duck	mouth, in front	ap: beak	
Eat	mouth	fop: eating	
Fall-in-love	mouth	?fop: kissing	love
Famous	mouth	fop: speaking	fame
Fasting	mouth	fop: eating	
Feast	mouth, in front	fop: eating	
Feed	mouth	fop: eating	
Finally	mouth	?fop: speaking	
Flood	mouth	fop: drinking	
Flow	mouth	fop: drinking	
Flute	mouth	iup: musical instrument	
Glass	mouth, teeth	qop: hard	
Good-Luck	mouth	ma: blowing a kiss	
Good-Morning	mouth	ma: blowing a kiss	
Good-Night	mouth	ma: blowing a kiss	
Gossip	mouth	fop: speaking	
Grocery-Store	mouth	fop: eating	
Hearing/Public	mouth	fop: speaking	
Hide	mouth	fop: speaking	
Hot	mouth, in front	fop: eating	
Humble	mouth	fop: speaking	
Ice cream	mouth	fop: eating	
Innocent	mouth	?fop: speaking	character
Kiss	mouth	fop: kissing	
Laugh	mouth, sides	fop: facial expression	
Liar	mouth, in front	fop: speaking	
Lie	mouth, in front	fop: speaking	
Lipreading	mouth, in front	bp: lips	
Lips	mouth	bp: lips	
Lipstick	mouth	iup: lipstick	
Marijuana	mouth, side	fop: smoking	
Mouth	mouth	bp: mouth	
Mustache	mouth, above lip	bp: mustache	
Napkin	mouth, in front	iup: napkin	
Nuts	mouth, teeth	fop: eating	
Oral	mouth, in front	fop: speaking	
Orange	mouth, in front	fop: eating	
Order	mouth, in front	fop: speaking	
Patient	mouth	fop: speaking	
Pencil	mouth	iup: pencil	
Pickle	mouth, side	fop: eating	
Picnic	mouth, in front	fop: eating	
Pills	mouth	fop: eating	

<b>English Gloss</b>	<b>Location</b>	<b>Category of Iconicity</b>	<b>Metonym / Metaphor</b>
Pipe	mouth	iup: pipe	
Pizza	mouth	fop: eating	
Promise	mouth	fop: speaking	
Puff	mouth, side	fop: smoking	
Rattlesnake	mouth, in front	ap: snake fangs	
Reporter	mouth, in front	fop: speaking	
Reigns	mouth, sides	iup: wearable	creature
Restaurant	mouth, sides	fop: eating	
Scream	mouth, in front	fop: speaking	
Scuba Diving	mouth	iup: snorkel	
Secret	mouth	fop: speaking	
Shut-up	mouth	fop: speaking	
Single	mouth, sides	fop: speaking	
Smile	mouth, in front	fop: facial expression	
Smoking	mouth	fop: smoking	
Snake	mouth, in front	ap: snake fangs	
Snorkeling	mouth, side	iup: snorkel	
Speech (oral)	mouth, in front	fop: speaking	
Spicy	mouth, in front	fop: eating	
Spit	mouth, in front	fop: spitting	
Stamps	mouth	iup: stamp	
Straw	mouth	iup: straw	
Strawberry	mouth	fop: eating	
Suck (on candy)	mouth, in front	fop: eating	
Take-a-Pill	mouth, in front	fop: eating	
Teeth	mouth, teeth	bp: teeth	
Thermometer	mouth, side	iup: thermometer	
Thief	mouth, in front	iup: wearable	
Tomato	mouth	qop: red	
Tongue	mouth, tongue	bp: tongue	
Toothbrush	mouth, teeth, in front	iup: toothbrush	
Trombone	mouth	iup: musical instrument	
Trumpet	mouth, in front	iup: musical instrument	
Using-a-straw	mouth	fop: drinking	
Vomit	mouth, in front	fop: vomiting	
Watermelon	mouth, in front	fop: eating	
Wet	mouth	fop: drinking	
Whisper	mouth	fop: speaking	
Whistle	mouth	iup: musical instrument	
Who	mouth	bor: English "who"	

Table 20: ASL Location: Chin

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Age	chin, below	bp: beard	age
Candy cane	chin	fop: eating	
Candy	chin	fop: eating	
Chin	chin	bp: chin	
Cute	chin	fop: eating	character
Best	chin	ma: blowing a kiss	
Better	chin	ma: blowing a kiss	
Birthday*	chin	??	
Color	chin	qop: red	
Communicate	chin	fop: speaking	
Creek	chin	fop: drinking	
Deny	chin	ges: biting thumb	
Desert	chin	fop: drinking	
Dialogue	chin	fop: speaking	
Dirty	chin, under	ma: pig rooting	creature for quality
Disappoint	chin	fop: taste	
Discontented*	chin, under, chest	ges: biting thumb	
Dry	chin	fop: drinking	
Dryer	chin	fop: drinking	
Fair	chin	ma: blowing a kiss	
Farm	chin	?fop: eating	
Farmer	chin	?fop: eating	
Favorite	chin	fop: taste	
Fed-up	chin, under	fop: eating	
Filthy	chin, under	ma: pig rooting	creature for quality
Frog	chin, under	ap: frog throat	
Frustrate	chin	ma: door shut in face	
Frustrate2	chin	ma: door shut in face	
Full	chin, under	fop: eating	
Gay	chin	fop: sex act	
Goat*	chin	ap: goat beard	creature
Grandmother	chin	lsa: female	
Grass	chin, under	fop: eating	
Home*	chin, side, cheek	fop: eating	
Honey	chin	fop: eating	
Honey2	chin	fop: eating	
Lady*	chin, chest	lsa: female	
Lake	chin	fop: drinking	
Lemon	chin	fop: eating	
Lesbian	chin	fop: sex act	
Letter	chin	iup: stamp/seal	
Lick	chin	fop: licking	
Light	chin	asp: lightbulb filament	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Lighthouse	chin	asp: lightbulb filament	
Lights on	chin	asp: lightbulb filament	
Lights out	chin	asp: lightbulb filament	
Lonely	chin	fop: speaking	
Lucky	chin	ma: blowing a kiss	
Lunch	chin	fop: eating	
Lunch2	chin	fop: eating	
Metal	chin	qop: hard	
Microphone	chin, in front	iup: microphone	
Minor (age)	chin, under	bp: beard	age
Miscommunication	chin	fop: speaking	
Miss	chin	fop: taste	emotion
Mistake	chin, under	fop: speaking	
Mother	chin	lsa: female	
Mother-in-law	chin	lsa: female	
Napkin2	chin, in front	iup: napkin	
Nightmare*	chin	ma: blowing a kiss	
Not	chin	ges: biting thumb	
Nothing	chin	ges: biting thumb	
Old	chin, below	bp: beard	age
Old Testament	chin, below	bp: beard	age
Parents*	chin, forehead	lsa: female	
Pig	chin, under	ma: pig rooting	creature
Pineapple	chin	fop: eating	
Pink	chin	qop: red	
Prefer	chin	fop: taste	
Puddle	chin	fop: drinking	
Red	chin	qop: red	
Redberry	chin	qop: red	
River	chin	fop: drinking	
Say	chin	fop: speaking	
Scarf*	head, above, chin, in front	iup: wearable	
Senior Citizen	chin, sides	bp: beard	age
Soon	chin	asp: central	timeline
Sour	chin, side	fop: taste	
Skilled/Expert	chin	ma: blowing a kiss	
Stingy	chin	ges: biting fingers	envy
Suffer	chin	fop: speaking	
Sugar	chin	fop: eating	
Talk	chin	fop: speaking	
Taste	chin	fop: eating	
Tattle	chin, under	fop: speaking	
Tell	chin	fop: speaking	
Thank-you	chin	ma: blowing a kiss	
Thick	chin	asp: thin/thick	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Thin	chin, in front	asp: thin/thick	
Treasure/precious	chin	ges: biting fingers	envy
True	chin	fop: speaking	
Twins	chin, both sides	??	
Umpire	chin	iup: wearable	
Vinegar	chin, side	fop: drinking, or taste	
Warm	chin, in front	fop: breathing	
Water	chin	fop: drinking	
Water-Fountain	chin	fop: drinking	
Waterfall	chin	fop: drinking	
Who2	chin	bor: English "who"	
Woman*	chin, chest	iup: wearable	
Wrong	chin	fop: speaking	

Table 21: ASL Location: Neck

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Bowtie	neck, in front	iup: wearable	
Broke	neck, side	?ma: chopping neck	
Choke-myself	neck	eap: choking	
Collar	neck	iup: wearable	
Curious	neck	??	
Giraffe	neck	ap: giraffe neck	creature
Mumps	neck, sides	eap: illness	
Neck	neck	bp: neck	
Necktie*	neck to chest	iup: wearable	
Perfume	neck, ipsi to contra	iup: wearable	
Pitch (voice)	neck	fop: speaking	
Priest	neck	iup: wearable	person
Stuck	neck	eap: choking	
Swallow	neck	fop: swallow	
Thirsty	neck	fop: drinking	
Throat	neck	bp: throat	
Sore-Throat	neck, in front	eap: illness	
Tie-necktie	neck	iup: wearable	
Tuxedo	neck	iup: wearable	
Vodka	neck, side	fop: drinking	
Voice	neck	fop: speaking	

Table 22: ASL Location: Shoulders

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Ancestors	shoulder, above	asp: central	timeline
Angel	shoulder, top	ap: wings	
Back	shoulder, back	bp: back	
Backpacking	shoulder, top	iup: wearable	
Before	shoulder, above	asp: central	timeline
Boss	shoulder, top	iup: wearable	person
Capital	shoulder, top	iup: wearable	person
Coach	shoulder, top	iup: wearable	person
Exercise	shoulder, above	ma: lifting weights	
Gym	shoulder, above	ma: lifting weights	
Historic/Ancient	shoulder, above	asp: central	timeline
Fault	shoulder, top	fop: carrying	responsibility
Fly	shoulder, top	ap: wings	
Past	shoulder	asp: central	timeline
Pat	shoulder	eap: pat	
Recover	shoulder	?	
Religion	shoulder, ipsi	?	
Responsibility	shoulder, ipsi	fop: carrying	responsibility
King*	shoulder to waist	iup: wearable	person
Kingdom*	shoulder to waist	iup: wearable	person
Last Night	shoulder, above	asp: central	timeline
Last Week	shoulder, above	asp: central	timeline
Last Year	shoulder, above	asp: central	timeline
Loaf-to-Laze	shoulders, front	fop: carrying	responsibility
Long Ago	shoulder, above	asp: central	timeline
Lord*	shoulder to waist	iup: wearable	person
Queen*	shoulder to waist	iup: wearable	person
Royal*	shoulder to waist	iup: wearable	person
Since	shoulder, ipsi	asp: central	timeline
Tradition	shoulder, above	asp: central	timeline

Table 23: ASL Location: Chest

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Accept	chest	bp: chest	self
Act	chest	ma: pulling curtain	
Actor	chest	ma: pulling curtain	
Address	chest	fop: blood flow	
Admit	chest	bp: chest	self
Afraid	chest	eap: emotion: fear	
Aggravate	chest	eap: emotion: anger	
Aggravated	chest	eap: emotion: anger	
Ambition	chest	bp: chest	self

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Animal	chest	fop: breathing	creature
Apply	chest, grasping shirt	ma: taking shirt	
Bat	chest	ap: bat wings	creature
Bath	chest	ma: scrubbing body	
Bathrobe	chest	ma: scrubbing body, iup: wearable	
Bathing suit*	chest, waist	iup: wearable	
Bathtub	chest	ma: scrubbing body	
Bear	chest	ap: bear claws	creature
Benefit	chest, side	ma: putting in pocket	
Beside	chest, side	bp: side	
Bikini*	chest, waist	iup: wearable	
Blanket (n/v)	chest	iup: wearable	
Blouse	chest	iup: wearable	
Body	chest	bp: body	
Bra	chest	iup: wearable	
Brave	chest	bor: French 'cœur' (heart)	
Breasts	chest	bp: breasts	
Breathe	chest	fop: breathing	
Buttons	chest	iup: wearable	
Chest	chest	bp: chest	
Clothes	chest	iup: wearable	
Coat	chest	iup: wearable	
Committee	chest	bp: chest	self
Complain	chest	eap: emotion: anger	
Cough	chest	fop: coughing	
Cough2	chest	fop: coughing	
Deflated-Ego	chest	bp: chest	self
Depressed	chest	eap: emotion: sadness	
Depressed2	chest	eap: emotion: sadness	
Diet	chest	bp: body	
Discontented*	chin, under, chest	bp: chest	self
Do-You-Mind?	chest	eap: emotion: anger	
Don't-Like	chest	eap: emotion: love	
Drama	chest	ma: pulling curtain	
Dress	chest	iup: wearable	
Ego	chest	bp: chest	self
Ego-inflated	chest	bp: chest	self
Emotion	chest	eap: emotion	
Enjoy	chest	eap: emotion: love	
Event	chest	eap: emotion: happiness	
Excited	chest	eap: emotion: happiness	
Expression	chest	eap: emotion	
Fancy	chest	iup: wearable	
Fear	chest	eap: emotion: fear	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Feel	chest	eap: emotion	
Fine	chest	iup: wearable	
Gang	chest, ipsi	??	
Gentleman*	chest	iup: wearable	
Gym	chest	??	
Happy	chest	eap: emotion: happiness	
Have	chest	bp: chest	self
Hug	chest	eap: hug	
Hungry	chest	eap: hunger	
I	chest	bp: chest	self
Inspired	chest	eap: emotion	
Interested-in	chest	bp: chest	self
Interested-in*	chest, nose	bp: chest	self
Jewelry (necklaces)	chest	iup: wearable	
Joy	chest	eap: emotion: happiness	
Lady*	chin, chest	iup: wearable	
Late	chest, side	asp: central	timeline
Leather	chest, ipsi	ap: leather	
Legislature	chest, contra to ipsi	bp: chest	self
Life	chest	fop: blood flow	
Lightweight	chest	bp: body	
Like	chest	eap: emotion: love	
Live	chest	fop: blood flow	
Living Room	chest	iup: wearable	
Lungs	chest	bp: lungs	
Man*	chest	iup: wearable	
Me too	chest, in front	bp: chest	self
Member	chest, ipsi to contra	bp: chest	self
Mine	chest	bp: chest	self
Monkey	chest, sides	ma: monkey scratching	creature
My	chest	bp: chest	self
My-fault	chest	bp: chest	self
Myself	chest	bp: chest	self
Necklace	chest	iup: wearable	
Necktie*	neck to chest	iup: wearable	
Nipples	chest, contra to ipsi	bp: nipples	
Obey*	chest, in front	bp: chest	self
Our	chest, ipsi to contra	bp: chest	self
Ourselves	chest, ipsi to contra	bp: chest	self
Pajamas*	chest	iup: wearable	
Pale*	chest	qop: white	
Pearls (necklace)	chest	iup: wearable	
Physical	chest	bp: body	
Please	chest	bp: chest, eap: emotion	self
Pneumonia	chest	eap: illness	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Poetry	chest	bp: chest, eap: emotion	self
Poke	chest, side	eap: poke	
Polite	chest	iup: wearable	
Princess*	chest, contra to ipsi to waist	bp: breasts	female
Proud	chest, bottom to top	bp: chest, eap: emotion	self
Purse	chest, side, armpit	iup: purse	
Rabbi Robes	chest	iup: wearable	
Relieved	chest	eap: emotion: stress	
Rest	chest	ma: fold arms to rest	
Retire	chest	ma: thumbs in overalls	resting
Revival	chest	eap: emotion: happiness	
Revive	chest	fop: blood flow	
Rib	side, ipsi	bp: rib	
Ribs	side, ipsi	bp: rib	
Satisfy	chest	bp: chest	self
Scared	chest, in front	eap: emotion: fear	
Senate	chest, ipsi to contra	bp: chest	self
Sensitive	chest	eap: emotion	
Shirt	chest, grasp shirt	iup: wearable	
Side	side, ipsi	bp: side	
Stripes	chest	iup: wearable	
Skeleton	chest	ma: skeleton with arms folded in coffin	
Soldier	chest	iup: rifle	
Sophisticated	chest	iup: wearable	
Sorry	chest	bp: chest, eap: emotion	self
Sweater	chest	iup: wearable	
T-shirt	chest	iup: wearable	
Tank-top	chest	iup: wearable	
Tend	chest	eap: emotion	
Tickle	sides	eap: tickling	
Tired	chest	fop: breathing	
Undress	chest	iup: wearable	
Unhappy	chest	eap: emotion: sadness	
Uniform	chest	iup: wearable	
Vacation	chest	ma: thumbs in overalls	resting
We	chest	bp: chest, eap: emotion	self
Well (Health)	chest	??	
White	chest	qop: white	
White-Person	chest	qop: white	
Woman*	chin, chest	iup: wearable	
Young	chest	fop: blood flow	
Zipper*	waist to chest to waist	iup: wearable	

Table 24: ASL Location: Heart

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Apprehensive	heart	bp: heart	emotion: fear
Attitude	heart	bp: heart	personality
Badge	heart	iup: wearable	
Character	heart	bp: heart	personality
Detective	heart	iup: wearable	person
Guilt	heart	bp: heart	personality
Heart-attack	heart	eap: illness	
Heart (body part)	heart	bp: heart	
Heart (emotional)	heart	bp: heart	
Heart-beat	heart	fop: heartbeat	
Hurt	heart	bp: heart	emotion: hurt
Lazy	heart	bp: heart	personality
Missionary	heart	bp: heart	religion
Personality	heart	bp: heart	personality
Pin	heart	iup: wearable	
Promise	heart	ges: cross-heart	
Religion	heart	bp: heart	religion
Sweetheart	heart	bp: heart	emotion: love

Table 25: ASL Location: Arm

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Arm	upper arm to forearm	bp: arm	
Authority	upper arm to forearm	bp: bicep	power
Basket	forearm to upper arm, back	iup: basket handle	
Boots	forearm	ap: legs	
Cheat	forearm, under	asp: surface	cover
Coke (soda)	forearm	iup: hypodermic needle	pun: "coke" can refer to both soda or cocaine
Computer	forearm	bp: bicep	power
Daughter*	forearm	fop: cradling	
Deteriorate	upper arm to forearm	asp: length	
Drugs	forearm	iup: hypodermic needle	
Energy	upper arm to forearm	bp: bicep	power
Episcopal	forearm	iup: wearable (sleeves)	
Foundation	forearm, under	asp: surface	
Give-Shot	forearm, under	iup: hypodermic needle	
Hospital	upper arm	iup: wearable	
Improve	forearm, back	asp: length	
Improve	forearm to upper arm	asp: length	
Injection	upper arm	iup: hypodermic needle	
Lamb	forearm	fop: cradling	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Left-Arm	forearm	bp: arm	
Long	forearm, back	asp: length	
Nerve	forearm, front	bp: nerves	
Parliament	forearm, under	iup: wearable (sleeves)	
Patient (medical)	upper arm	iup: wearable	
Poetry	forearm	?ma: conduct music	
Powerful	forearm	bp: bicep	power
Right Arm	forearm	bp: arm	
Run (hose)	forearm	iup: wearable, ap: legs	
Sing	forearm	?ma: conduct music	
Singer	forearm	?ma: conduct music	
Sleeves	upper arm to forearm	iup: wearable	
Sleeves-Long	upper arm to forearm	iup: wearable	
Sleeves-Short	upper arm	iup: wearable	
Son*	forearm	fop: cradling	
Stage	forearm, back	asp: surface	
Steal	forearm	asp: surface (under)	cover
Stockings	forearm	iup: wearable and ap: legs	
Table	forearm	asp: surface	
Tattoo	upper arm	iup: wearable	
Wastebasket	forearm, side	iup: basket handle	
Whale	forearm	asp: surface	creature

Table 26: ASL Location: Elbow

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Autumn	elbow	asp: length	tree
Country	elbow	ma: harvesting	
Country2	elbow	ma: harvesting	
Cracker	elbow	??	
Elbow	elbow	bp: elbow	
Foreign	elbow	ma: harvesting	
Patch (clothes)	elbow	iup: wearable	
Poor	elbow	iup: wearable	
Punish	elbow	ma: lifting by collar and striking with rod	
Tempt	elbow	asp: surface	cover

Table 27: ASL Location: Wrist

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Bandage	wrist, back	iup: wearable	
Bracelet	wrist, back	iup: wearable	
Clock	wrist, back	lsa: time	
Cut	wrist, back	eap: cut	
Doctor	wrist	ma: check pulse	
Duty	wrist, back	?	
Nurse	wrist	ma: check pulse	
Psychiatrist	wrist	ma: check pulse	
Slave	wrist, back	ma: bound hands	
Time	wrist, back	lsa: time	
Vein	wrist	bp: vein	
Watch	wrist, back	iup: wristwatch	
What-time?	wrist, back	lsa: time	
Wrist	wrist	bp: wrist	
X-o'clock	wrist, back	lsa: time	

Table 28: ASL Location: Stomach

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Become-fat	stomach	bp: fat	
Belt	stomach	iup: wearable	
Birthday*	stomach, uterus	fop: giving birth	
Disgust	stomach	eap: illness	emotion: disgust
Pregnant	stomach	bp: stomach	
Sick*	stomach	eap: illness	
Sick-upset (stomach)	stomach	eap: illness	
Stomach	stomach	bp: stomach	
Upset	stomach	eap: illness	emotion: anger

Table 29: ASL Location: Waist

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
Bathing suit*	waist, ipsi	iup: wearable	
Brag	waist	bp: chest	chest for self
King*	shoulder to waist	iup: wearable	person
Kingdom*	shoulder to waist	iup: wearable	person
Lord*	shoulder to waist	iup: wearable	person
Navy	waist, contra to ipsi	iup: wearable	person
Bikini*	chest, waist	iup: wearable	
Pager	waist, ipsi	iup: wearable	
Pants	waist	iup: wearable	
Penguin	waist, sides	ap: penguin wings	

Penis (formal)	waist	bp: penis	
Pocket	waist, sides	iup: wearable	
Prince*	shoulder to waist	iup: wearable	person
Princess*	chest, contra to ipsi to waist	iup: wearable	person
Queen*	shoulder to waist	iup: wearable	person
Royal*	shoulder to waist	iup: wearable	person
Skirt	waist	iup: wearable	
Underwear	waist	iup: wearable	
Waist	waist	bp: waist	
Zipper*	waist to chest to waist	iup: wearable	

Table 30: ASL Location: Legs

<b>English Gloss</b>	<b>Location</b>	<b>Category of Iconicity</b>	<b>Metonym / Metaphor</b>
Lap	legs, front	bp: lap	
Leg	leg, side	bp: leg	
Shorts	leg, front	iup: wearable	

## APPENDIX B

### AUSLAN SIGNBANK DATA

Multiple glosses are given in the Auslan Signbank ([www.auslan.org.au](http://www.auslan.org.au)) and they are all included below in the English gloss column. Each group of glosses should serve as a unique identifier if other researchers need to look up the sign in the Signbank.

Table 31: Auslan Location: Head

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
accommodation, hostel, hotel, motel, boarder, billet, dormitory, stay over, accommodate, board	side	ma: sleeping	
age, how old?	face, in front	bp: face	age
age, old	face, in front	bp: face	age
angel, saint, halo, angelic, saintly	top, above	iup: wearable	person
face, looks, look like, take after, seem, appear, resemble	face, in front	bp: face	
face, features, looks, appearance alt	face, in front	bp: face	
shame, embarrassment, blushing, ashamed, embarrassed, embarrass, blush, shameful	face, in front	fop: facial expression	emotion: shame
air, breeze, breezy, airy, atmosphere, mood	face, in front	eap: feel air on face	
attention, blinkers, attend, attentive, single minded	face, in front	fop: seeing	
autumn, cool, fresh, freshen	face, in front	eap: feel air on face	
ceiling, awning, covering, shade, room, overhead, shaded	top, above	asp: height	
bald, baldness	top	bp: hair	
barber	side	eap: shave	person
court, judge, trial, lawyer, solicitor, barrister, tried, legal	sides	iup: wearable	person
bedroom	side	ma: sleeping	
befuddlement, disorientation, derangement, craziness, delirium, befuddled, disoriented, deranged, crazy, demented, delirious	sides	fop: cognition	
beret	top	iup: wearable	
boarding school	side	ma: sleeping	
misunderstanding, misunderstand, bewilder	top, above	bor: English idiom: "over the head"	
nastiness, bitch, nasty, mean	face, in front	fop: facial expression (possibly fop: seeing)	emotion: unkind
blonde, blond	side	bp: hair	person

boss, foreman, manager, captain, superior, chief	side	asp: height	rank for person
bossy, domineering, overbearing, boss	side	asp: height	rank for character
plait, braid	side	bp: hair	
plait, braid, plaited, braided	side	bp: hair	
bream	top	ap: dorsal fin	creature
wind, breeze, windy, airy	face, in front	eap: feel air on face	
brightness, bright, brighten	face, in front	fop: seeing	
horns, bull, devil	top	ap: horns	creature
bun, hair bun	top, back	bp: hair	
statue, bust	face, in front	asp: statue bust	
taxi, cab	top	ap: light on top of cab	
camera, photograph	face, in front	iup: camera	
centurion, Roman	top	iup: wearable	person
minister, chief executive, CEO, president, principal, headmaster, headmistress	sides	asp: height	rank for person
chastened, humiliated	top	ma: dog ears drooping	
chef, kitchen	top	iup: wearable	person
chrome, chromium, gleam	sides	fop: seeing	
cochlear	side	iup: wearable	
crest, cockscomb, punk, cockatoo	top, back to front	ap: crest	
comb	side	iup: comb	
concentration, concentrate	sides	fop: seeing	
crown, coronation	sides	iup: wearable	
crown, coronation, coronate	sides	iup: wearable	
crankiness, grumpiness, grouchiness, grump, grouch, irritability, cranky, cross, grumpy, grouchy, irritable, disagreeable	face, in front	fop: facial expression	emotion: unkind
craziness, insanity, madness, looniness, loony, loopy, crazy, insane, mad	side	fop: cognition	
crewcut	top	bp: hair	
curls, curly	side	bp: hair	
fire brigade, firefighter	top, back to front	iup: wearable	person
firefighter, fireman, fire brigade*	chin to back of head	iup: wearable	person
wash face, face washer, face cloth, face flannel, flannel, hand towel	face, in front	bp: face	
facial expression, express, expressive	face, in front	fop: facial expression	
fan	face, in front	eap: feel air on face	
dizziness, giddiness, dizzy, giddy, drunk	face, in front	fop: cognition	
gleeful	face, in front	fop: facial expression	emotion: happy
handsome, good-looking	face	bp: face	appearance

helmet, hard hat	top	iup: wearable	
hat, cap	top	iup: wearable	
head, hat	top	bp: head	
style, class, sophistication, affluence, prestige, distinguished, prestigious, reputable, affluent, wealthy, highbrow, formal	side	bp: hair	social status
hair	side	bp: hair	
hairdressing, hairdresser, hair cut	side	bp: hair	person
hair spray, spray	side	iup: hairspray	
half hour	face	asp: clockface	time
stupid, stupidity, idiocy	top	fop: cognition	
drunkard, tipsy, merry, drunk, inebriated, sloshed, pissed	face, in front	fop: cognition	
front, in the front, in front of, face, front up to	face, in front	asp: front	
mentally disabled, mental disability, intellectually disabled, intellectual disability	top	fop: cognition	
narrow-mindedness, small-mindedness, intolerance, narrow-minded, small-minded, intolerant	sides	fop: cognition	
monarch, sovereign, king, queen, royalty, royal	top	iup: wearable	person
logic, logical	side	fop: cognition	
make the bed	side	ma: sleeping	
minutes	face, in front	asp: clockface	time
pope, mitre	side to top	iup: wearable	person
black, Negro, Aborigine, aboriginal	face	qop: black	
nightdress, nightie, pyjamas*	side, chest to waist	ma: sleeping	
matron, nun	top to shoulder	iup: wearable	person
old-fashioned*	face, in front	bp: face	age
common knowledge, common, old hat, used to	top	fop: cognition	
accommodation, hostel, hotel, motel, boarder, billet, dormitory, stay over, accommodate, board	side	ma: sleeping	

Table 32: Auslan Location: Forehead

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
forgetfulness, forgetful, absent-minded	temple	fop: cognition	
experience, familiarity, skill, experienced, familiar, skilled	forehead	fop: cognition	
invention, concoction, fantasy, fiction, guesswork, speculation, make up, invent, concoct, contrive, ad lib, guess	forehead	fop: cognition	

adult	temple	asp: height	person
flight attendant, flight steward, air-hostess	forehead	iup: wearable	person
intention, aim, goal, objective (aim), ambition, intend, strive, ambitious	forehead, in front	fop: cognition	
antlers, deer, reindeer	temples	ap: antlers	creature
disbelief, disbeliever, sceptic, atheist, non-believer, atheism, disbelieve, unconvinced, sceptical	temple	fop: cognition	
grudge, revenge, vengeance, avenge	temple	fop: cognition	
prize, award, souvenir, memory, memorise, remember (a reward for memory, or a souvenir)	temple	fop: cognition	
christening, baptism, christened, baptised	forehead	ma: christening	
belief, conviction, creed, believe, convinced	temple	fop: cognition	
believe in	temple	fop: cognition	
tabula rasa, no idea, blank mind	forehead	fop: cognition	
boo-boo, oops	temple	fop: cognition	
brain	temple	bp: brain	
genius, intellect, brilliant, brainy	temple	fop: cognition	
brilliant	temple	fop: cognition	
open-mindedness, broad-mindedness, tolerance, open-minded, broad-minded, tolerant, liberal	forehead	fop: cognition	
busybody	temple	fop: cognition	person
conductor, cap, visor	temple	iup: wearable	person
craziness, recklessness, crazy, reckless, careless, dreamy, intoxicated	temple, side	fop: cognition	
Catholicism, Catholic, Christian	forehead	ma: crossing forehead	
cow, cattle, bull	forehead	ap: horns	creature
change mind, reconsider, second thoughts, reconsideration	temple, side	fop: cognition	
well-known, famous, celebrity	temple, side	fop: cognition	fame/status
hopeless, lousy, childish, puerile	temples	fop: cognition	
christening, baptism, christen, baptise, christened, baptise	forehead	ma: christening	
clever, smart, brilliant, intelligent, wise, intelligence, wisdom, cleverness, smartness	temples	fop: cognition	
oblivious, vacant, ignorant, clueless, unaware	forehead	fop: cognition	
teaching, instruction, education, coach, teach, instruct, educate, educational	forehead	fop: cognition	person
silliness, crudeness, grossness, coarseness, ridiculous, absurd, silly, crude, gross, coarse	temple	fop: cognition	
cockroach	temples	ap: antennae	creature

cogitation, conscience, thoughtful, conscientious	temple	fop: cognition	
commemoration, keepsake, souvenir, memento, recollection, remembrance, memorial, commemorate, recall	temple	fop: cognition	
committee	temple	fop: cognition	group
common knowledge, common, old hat, used to	temple	fop: cognition	
understanding, comprehension, understand, comprehend	forehead	fop: cognition	
imagine, visualise, envisage, conceive, image, concept, imagination, conception, picture	forehead, in front	fop: cognition	
worry, anxiety, concern, fret, worried, anxious, concerned, fretful	temple, side	fop: cognition	
confusion, mix up, confuse, confused, mixed up	temple, side	fop: cognition	
conscience	temple, side	fop: cognition	
consideration, reflection, rumination, consider, wonder, ponder, reflect, ruminate	temple, side	fop: cognition	
convert, conversion	temple	fop: cognition	
country, nation, nationality, countryside	temple	??	
crazy	temple	fop: cognition	
enthusiastic, enthusiastic about, keen, keen on, crazy about	temple	fop: cognition	
creation, creative, imaginative, create, imagine	temple	fop: cognition	
cub, salute	temple	ges: salute	
curl, curly, ringlet	temple	bp: hair	
daydream	temple	fop: cognition	
decision, decide	temple	fop: cognition	
go blank (forget), forget, dementia	temple	fop: cognition	
determination, obsession, determined, obsessed, obsessive	temple	fop: cognition	
enlightenment, enlightened, enlighten	temple	fop: cognition	
telepathy, ESP	forehead, front	fop: cognition	
faith, belief, believe*	forehead, heart	fop: cognition	
experience, familiarity, skill, experienced, familiar, skilled	forehead, heart	fop: cognition	
girl (older sign)	forehead, middle	lsa: female	
girlfriend	forehead, middle	lsa: female	
university, mortarboard, graduate	forehead, front	iup: wearable	person/place
headache	temple	eap: illness	
hi, hello	forehead, side	ges: salute	
hide-and-seek	forehead	fop: seeing	
idea, idea (get idea)	temple	fop: cognition	
idiot, idiotic	forehead, side	fop: cognition	
ignoramus, moron, thick	temple	fop: cognition	

ignorance, dimwit, dunce, ignorant	temple	fop: cognition	
not clever, ignorance, inexperience, immaturity, simpleton, ignoramus, dim witted, ignorant, uneducated, ill-informed, inexperienced, unwise	forehead, across	fop: cognition	
imagine, imagination	temple	fop: cognition	
influence, influential	temple	fop: cognition	
knowledge, know, knowledgeable, yeah	temple	fop: cognition	
know finish (been there, done that), learn my lesson	forehead	fop: cognition	
learning, learn	forehead, middle	fop: cognition	
information, explanation, description, inform, explain, describe, make known, let know	forehead	fop: cognition	
lifesaver, lifeguard	forehead	iup: wearable	
lion, mane	temple	ap: mane	creature
memory, remember, recall, memorise, recollect, remembrance, recollection, memorisation	forehead	fop: cognition	
mental	forehead, across	fop: cognition	
mind, mental, crazy, silly	temple	fop: cognition	
minor, unimportant, insignificant	temple	??	
devil, Satan, evil, mischievous	forehead	ap: horns	creature
misinterpret, misunderstand, misinterpretation, misunderstanding	forehead, side	fop: cognition	
mull over, think, thinking	temple	fop: cognition	
mum, mummy, mother	forehead, side	bp: hair	female
name, reputation, call (name), named, called	forehead, side	lsa: name	
nickname, sobriquet, call (name), name, called (named), named	forehead, side	lsa: name	
not know, don't know	forehead, side	fop: cognition	
not mind, don't mind	temple	fop: cognition	
rabbit, bunny, bunny rabbit, hare	temple	ap: rabbit ears	creature

Table 33: Auslan Location: Eyes

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
recognition, recognise, acknowledgment, acknowledge	eye, under	fop: seeing	
alertness, astonishment, alert, wide-awake, astonished, impressed	eye	fop: opening	
telescope, astronomy, astronomer	eye, in front	iup: telescope	
wakefulness, consciousness, wake, awaken, awake, conscious, aware	eye	fop: opening	
care, careful, beware	eye, under	fop: seeing	
simpleton, bewildered	eyes, in front	fop: seeing	
biased, one-eyed	eye, over	fop: seeing	
binoculars, field glasses	eyes	iup: binoculars	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
black eye	eye	eap: bruise	
blind, screen, awning, eye-guard	eyes, in front	fop: seeing	
blink, wink, pretend	eye	fop: blink	
braille	eyes, in front	fop: seeing	
bull's-eye	eye	bor: English: bull's eye	
thief, burglar	eye	iup: wearable	person
look after, take care, carer	eye, below	fop: seeing	
checking, testing, trialing, trial, assessment, check-up, check, test, try out, assess	eye, below	fop: seeing	
obvious, plain, evident, clear, obviously, plainly, evidently, clearly	eye, below	fop: seeing	
VDU, visual display unit, display screen, computer screen	eyes, below	fop: seeing	
contact lenses	eyes, in front	iup: wearable	
contraction, contract	eye, in front	fop: contraction	
tears, crying, weeping, cry, weep	below	fop: crying	
dark, darkness, darken	eyes, in front	fop: seeing	
glasses, spectacles*	nose-to-ear	iup: wearable	
eyeball, glass eye	eye, front	bp: eye	
goggles	eye, around	iup: wearable	
grandmother, gran, nana, nan	eye, below	??	
examine, have a look, let's see	eye, below	fop: seeing	
visit, inspection, visitor, inspect	eye, below	fop: seeing	
intention, aim, goal, objective (aim), ambition, intend, strive, ambitious	eye, in front	fop: seeing	
eye-popping, ogle at, keen on	eye, eyebrow	fop: seeing	
kidding	eye, under	ges: eye-pulling	
sheep, mutton, lamb	eye, under	ap: sheep ears	creature
look, regard, observation, watch (look), observe, stare	eye, below	fop: seeing	
search, look for, seek	eye, below	fop: seeing	
mask	eye, around	iup: wearable	
miss, overlook, miss out, missing	eye, below eye	fop: seeing	
wonder, delight, marvel, miracle, wonderful, delightful, astonishing, marvellous, terrific, miraculous, holy, divine	eye, below eye	fop: seeing	
prettiness, attractiveness, pretty, good-looking, attractive	eye, below	fop: seeing	
natural, normal, of course, naturally	eye, below	fop: seeing	
nightly	eye, in front, across	fop: seeing	
not see, see not, don't see, overlook	eye, below	fop: seeing	
untried, new, novelty, novel	eye, below	fop: seeing	
observation, observe	eye, below	fop: seeing	
notice, observe	eye, below	fop: seeing	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
overlook, disregard, neglect, omission, omit	eye, side	fop: seeing	
onion	eye, in front	fop: crying	
opaque	eye, below	fop: seeing	
optometrist, optician	eye, below	fop: seeing	person
owl	eye, in front	ap: owl eyes	creature

Table 34: Auslan Location: Ears

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
headphone, earphone, audiologist, audiology	ear, side of head	iup: wearable	
auditory-verbal*	mouth, ear	fop: hearing	
telephone, phone, call (telephone)	ear	iup: phone	
cherry	ear, side	??	
deaf, deaf and dumb, deaf mute*	ear, mouth	fop: hearing	
deaf club	ear	fop: hearing	
deafen	ear, side	fop: hearing	
ear, ear lobe	ear	bp: ear	
earache	ear	eap: illness	
earring	ear	iup: wearable	
Alsatian, German shepherd	ear	ap: ears	creature
hear, listen, hear of, hear about	ear	fop: hearing	
hear about, hear of, listen, hear	ear	fop: hearing	
hearing, hear about	ear	fop: hearing	
hearing-aid, hearing aid	ear	fop: hearing	
hearing dog*	ear, chin	fop: hearing	
hearing impaired	ear	fop: hearing	
loud, noisy	ear	fop: hearing	
mobile phone	ear	iup: phone	
film, movie, picture, cinema, movie theatre	ear, side of head	fop: hearing	
sound, noise, noisy	ear	fop: hearing	

Table 35: Auslan Location: Nose

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
able, can, could, may	nose	lsa: possibility/luck	
luck, chance, lucky, fortunate, luckily, fortunately, accidentally	nose	lsa: possibility/luck	
amphetamine	nose, under	ma: snorting drugs	
bad luck, misfortune, shame, unfortunate, unfortunately	nose	lsa: possibility/luck	
bear, koala	nose	ap: nose	creature
joke, fake, bluff, artificial	nose	??	humor
fart, farting, smell, odour, break wind, smelly	nose, in front	fop: smell	
brevity, insignificance, trivia, brief, trivial, insignificant, briefly	nose	asp: central	timeline
budgerigar	nose	ap: beak	creature
none of one's business, none of your business, business (none of your business)	nose	bor: English: "nosy"	
improbable, implausible, cannot, can't, may not, unable, couldn't	nose	lsa: possibility/luck	
carrot	nose	asp: length	
of course, certainly, obviously	nose	??	
clown	nose	iup: wearable	humor
cold (illness), flu, influenza	nose	eap: illness	
sticky-beak, curiosity, nosey, pry, curious	nose	bor: English: "nosy"	
democracy	nose	??	
parrot, eagle	nose	ap: beak	creature
eldest	nose, side	??	
elephant, trunk (elephant)	nose	ap: trunk	creature
hero, star (filmstar), goodies, filmstar	nose	??	
rubbish (waste), garbage, waste (rubbish)	nose, front	fop: smell	
flower, garden, gardening, gardener, florist, nursery	nose, sides	fop: smell	
petrol, gasoline	nose, front	fop: smell	
glasses, spectacles*	nose-to-ear	iup: wearable	
handkerchief	nose	iup: handkerchief	
impossible, impossibility	nose	lsa: possibility/luck	
intuition, sense, intuit, intuitive	nose, side	ges: tapping side of nose	
undetected, invisible, disappear, missing, disappearance	nose	fop: seeing	
kid	nose, under	bor: ASL: KID	
possibility, potential, possible, probable, likely, possibly	nose	lsa: possibility/luck	
nose, nasal	nose	bp: nose	
smell, odour	nose	fop: smell	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
fun, oops	nose	iup: wearable	humor
oyster	nose, side	??	creature

Table 36: Auslan Location: Cheek

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
acne	cheek	eap: illness	
afternoon, good afternoon*	cheek, chin	??	
toilet, washroom, bathroom, amenities	cheek, top to bottom	??	
every, always	cheek	asp: central	timeline
fun, amusement, strangeness, queerness, weirdness, oddity, funny, humorous, strange, odd, weird, queer	cheek	??	
telephone call, answer telephone	cheek	iup: phone	
attempt, try	cheek, top to bottom	??	
beach, picnic	cheek	fop: eating	
meat, flesh, beef, steak, butcher, butcher's	cheek	bp: meat	
before	cheek	asp: central	timeline
black, blacken	cheek	qop: black	
bow (archery), aim (arrow)	cheek	ma: pulling bowstring	
lolly, sweets, candy	cheek	fop: eating	
comic, comic book, cartoon	mouth, side	fop: speaking	
cat, pussy, pussy-cat, whiskers	cheek	ap: whiskers	creature
champion	cheek	??	
cheat	cheek	fop: eating	
cheek, rudeness, impertinence, impudence, insolence, cheeky, rude, impertinent, impudent, insolent	cheek	bor: English: 'cheeky'	
chocolate	cheek	fop: eating	
exact, purity, clarity, accuracy, precision, exactness, spotless, pure, clear, clarify, precise, accurate	cheek	??	
corn, cob	cheek, side	fop: eating	
make-up, cosmetics	cheek	iup: wearable	
cued-speech	cheek, in front	ma: cued-speech	
cheat, cheating, foul play, scar, sly, cunning, cheat, playful	cheek, top to bottom	eap: scar	
cutthroat razor, razor, shave	cheek	eap: shaving	
day, daytime, date	cheek	asp: central	timeline
tidiness, orderliness, neatness, propriety, decency, tidy, orderly, neat, proper, decent, clean	cheek	??	

wilfulness, obstinacy, deliberate, intentional, wilful, headstrong, obstinate, deliberately, intentionally, wilfully, on purpose	cheek	bor: English: 'cheeky'	
exquisite, magnificent, delightful	cheek	bp: face	appearance
not matter, matter not, doesn't matter, never mind, anyway, however, despite	cheek	??	
simplicity, simpleton, simple, easy, simplify, simply, briefly, only, just	cheek	??	
shaver, electric shaver, shave*	cheek, chin	eap: shaving	
lady, woman, lady-like, feminine, womanly, female	cheek	bp: face	?appearance for female
fashion, magic, fashionable, modern, magical	cheek	bp: face	appearance
girl	cheek, contra	bp: face	?appearance for female
heater	cheek	??	
hero, heroine, star*	chin, cheek	bp: face	appearance
hippopotamus	cheek	ap: hippo's mouth	creature
telephone, phone, call (telephone), handset	cheek	iup: phone	
jam, preserve, honey	cheek	fop: eating	
week, last week	cheek	asp: central	timeline
yesteryear, last year	cheek	asp: central	timeline
lemon	cheek	fop: eating	
niece	cheek, contra	bp: face	?appearance for female
nude, nudist	cheek, around	bp: skin	
rude, offensive	cheek	bor: English: 'cheeky'	
painful, sore, ouch	cheek	eap: pain	

Table 37: Auslan Location: Mouth

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
glue, paste, adhesive, sticker, label, adhere	mouth	fop: licking	
promise, admission, admit	mouth	fop: speaking	
face mask, anaesthetic, anaesthetist	mouth	iup: wearable	person
ask, request, enquire, enquiry	mouth	fop: speaking	
ask around, make enquiries, enquire	mouth	fop: speaking	
auditory-verbal*	mouth, ear	fop: speaking	
distasteful, disagreeable, dislike, distaste, aversion	mouth, side	fop: taste	
garlic, bad breath	mouth	fop: breathing	
balloon	mouth	iup: balloon	
duck, beak, bill, goose, geese, quack	mouth	ap: beak	creature
drink, beverage, glass (cup), cup	mouth	fop: drinking	

telltale, informer, dobber, blabbermouth, confess, tell tales, inform, dob, blab, confession, pimp	mouth	fop: speaking	person
blood, bleeding, bleed	mouth	qop: red	
shout, yell, bark, blow, blow out	mouth, in front	fop: speaking	
breakfast*	mouth, armpit	fop: eating	
breath (n)	mouth	fop: breathing	
toothbrush, brush teeth	mouth, in front	iup: toothbrush	
chewing gum, chew gum, bubblegum	mouth	fop: chewing	
feast, smorgasbord, buffet	mouth	fop: eating	
yell, call (yell), call out	mouth, side	fop: speaking	
gossip, rumour, blab, chatterbox, chatter	mouth, side	fop: speaking	person
tale, yarn, story, chatterbox	mouth	fop: speaking	
chick	mouth	ap: beak	creature
chicken-pox*	mouth	ap: beak	creature
children, kids	mouth	??	
chilli	mouth, in front	fop: eating	
song, singing, singer, choir, hymn, sing	mouth, side	fop: speaking	person
cigarette, smoke (cigarette), fag (cigarette)	mouth	fop: smoking	
scavenge, come across, appropriate, keep, pocket, adoption, adopt	mouth	??	
saying, telling, rendition, say-so, comment, say, tell, mention, declare	mouth	fop: speaking	
privacy, private, confidential, privately	mouth	fop: speaking	
corn, cob, corn cob, bone	mouth, side	fop: eating	
swearing, swear words, swear, curse	mouth	fop: speaking	
deaf, deaf and dumb, deaf mute*	mouth, ear	fop: speaking	person
dear me, oh my god, Jesus!, ouch	mouth, in front, nmm	ma: clenching mouth	
dentist, extraction, extract	mouth, side	bp: teeth	person
false teeth, dentures	mouth, nmm	iup: dentures	
description, definition, describe, define	mouth, in front	fop: speaking	
enquiry, inquiry, enquire, inquire	mouth, in front	fop: speaking	
letter, Epistle	mouth, in front	fop: licking	
fellatio, cock-sucking, fellate, suck off	mouth, in front	ma: fellatio	
dentist, filling	mouth, side	bp: teeth	person
finish (cigarette), smoke (cigarette)	mouth, side	fop: eating	
hook, fishing hook, addiction, addicted, hooked	mouth, in front	fop: eating	
thin, skinny, lean, gaunt, narrow	mouth, in front	asp: thin	
gospel	mouth, side	fop: speaking	
grapes, sultanas	mouth	fop: eating	

marijuana, pot (marijuana), grass (marijuana), weed (marijuana), joint (marijuana), dope (marijuana), smoke (marijuana)	mouth	fop: eating	
thankful, grateful, appreciate, appreciative, appreciation, gratefulness, thank	mouth, front	bor: ASL: THANK-YOU	
marijuana, hashish, dope (marijuana), smoke (marijuana), hash (marijuana)	mouth	fop: smoking	
ice-cream, ice-cream cone, ice-block, icy-pole	mouth, in front	fop: eating	
drink, imbibe	mouth, in front	fop: drinking	
innocent, inexperienced, naive, wide-eyed, green (inexperienced)	mouth*	??	
interval, interim, brief, temporary, provisional, while, during, briefly, momentary, fleeting	mouth, in front	??	
interviewer, interview, reporter	mouth	fop: speaking	person
keep quiet	mouth, lips	ges: zip lips	
kiss	mouth, lips	fop: kissing	
kiwi	mouth, in front	ap: beak	creature
law, lawyer, legal	mouth, in front	fop: speaking	person
lie, liar	mouth	fop: speaking	person
lip	mouth, lips	bp: lip	
lip reading, speech reading, oralism, lip read, oral	mouth, in front	fop: speaking	
lipstick	mouth, in front	iup: wearable	
spite, malice, spiteful, malicious	mouth	fop: speaking	
melon, watermelon	mouth, in front	fop: eating	
mouse, mice	mouth, in front	??	creature
mouth, mouthing	mouth, in front	bp: mouth	
mug, stein	mouth	fop: eating	
wolf, fox, muzzle, snout	mouth, face	ap: snout	creature
snack food, nibblies, nibbles, nibble	mouth	fop: eating	
none of your business*	mouth, chest	fop: speaking	
not care, don't care, dismiss, reject	mouth? face?	bor: ASL: DON'T-CARE	
opera, opera singer	mouth, side	fop: speaking	person
orange	mouth, side	fop: eating	
orange juice	mouth, side	fop: eating	
shame, outrage, obscenity, disgust, revulsion, shameful, disgusting, revolting, rude	mouth, side	fop: speaking	

Table 38: Auslan Location: Chin

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
afternoon, good afternoon*	cheek, chin	lsa: noon	
agape, flabbergasted	chin	ma: jaw dropping	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
alcoholic, alcoholism	chin	fop: drinking	
amazing! incredible!	chin	fop: speaking	
announce, notify, advise, proclaim, report, announcement, notification, proclamation	chin	fop: speaking	
apology, forgiveness, apologise, forgive	chin	fop: speaking	
apple, fruit	chin, under	fop: eating	
awful, dreadful, horrible	chin	??	
banquet, feast	chin	?iup: wearable	
bark, growl	chin, side	fop: speaking	
battery	chin	fop: licking	
beauty, loveliness, prettiness, beautiful, lovely, pretty, beautify	chin	bp: face	appearance
beer, booze, alcohol, pub, hotel	chin	fop: drinking	
bet, wager, challenge, dare	chin	fop: speaking	
bird, chicken, fowl, poultry, birdie	chin	ap: beak	creature
bishop	chin	ma: kissing ring	
bite	chin	fop: biting	
bootmaker	chin	??	
boredom, bore, boring, bored, trivial, insignificant	chin	??	
boy	chin	lsa: male	
boyfriend	chin	lsa: male	
boyfriend, girlfriend	chin	lsa: male	
boyfriend, girlfriend, couple, go steady	chin	lsa: male	
brown	chin	qop: brown	
cafe, cafeteria, canteen	chin	fop: eating	
chin	chin	bp: chin	
Christmas, Santa Claus, Father Christmas	chin	bp: beard	person
coat-hanger	chin	asp: place to hang coat	
contemplate, mull over, ponder, think	chin	ma: stroke chin	cognition
cousin	chin, side	??	
cute	chin	bor: ASL: CUTE	
double talk, lies, bullshit, lie	chin	fop: speaking	
electricity, power, electric, electronic, electrical	chin	asp: lightbulb filament	
fake, forgery, imitation, copy, impostor, forged, forge, imitate, artificial, deceive, betray	chin	?fop: speaking	
firefighter, fireman, fire brigade*	chin to back of head	iup: wearable	person
full, enough, sufficient, suffice, fed up	chin, under	bor: ASL: FED-UP	
gentleman*	chest, chin	bp: beard	male
get lost, good riddance	chin	fop: speaking	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
gibberish, speechless, dumbfounded, puzzled	chin	fop: speaking	
giggle, laugh	chin	fop: laughing	
goat	chin	ap: beard	creature
hearing dog*	ear, chin	fop: speaking	
hero, heroine, star*	chin, cheek	??	
hot, hotness, temperature, heat	chin	fop: eating	
in case	chin, side	?fop: speaking	
instant, moment, temporary, briefly, momentarily, suddenly	chin, in front	asp: central	timeline
jealousy, envy, jealous, envious	chin	ges: finger-biting	
joke, gag, joker, jest	chin	fop: speaking	
kookaburra	chin	ap: beak	creature
laughter, mirth, humour, comedy, hilarity, laugh, cheerful, humorous, hilarious	chin	fop: laughing	
laughter, mirth, humour, comedy, hilarity, laugh, cheerful, humorous, hilarious	chin	fop: laughing	
lesbian	chin	bor: ASL: LESBIAN	
letter, missive, correspondence, application, correspond, apply	chin	ma: wet with mouth	
light, light up, lighten, illuminate	chin	asp: lightbulb filament	
light, light up, lighten, illuminate	chin, in front	asp: lightbulb filament	
lighten, light, pale	chin, in front	asp: lightbulb filament	
little, few, soon	chin	??	
lizard	chin, under	ap: tongue	creature
lunch, sandwich	chin	fop: eating	
man, men, male, masculine	chin	bp: beard	male
meanness, miser, mean, stingy, miserly	chin	qop: hardness	
microphone, announcer, radio journalist, TV journalist, announcement, announce	chin, under	iup: microphone	person
nephew	chin	lsa: male	
nice	chin	??	
noon	chin	lsa: noon	
not care, care not, don't care, careless, indifference, reckless, negligent, clumsy, reckless, indifferent, clumsiness, neglect, recklessness, carelessness	chin, under	??	
not enough, insufficient	chin	bor: ASL: FED-UP	
nut, peanut	chin	fop: eating	
pleading, begging, plead, beg	chin	fop: speaking	
possession?	chin	fop: speaking	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
price, cost, charge, how much	chin	??	
rock, stone, stony, rocky, metal, iron, metallic, stony, rocky	chin	qop: hardness	
saccharine, sweet, likeable, agreeable	chin	fop: taste	
shaver, electric shaver, shave*	cheek, chin	iup: shaver	
shyness, timidity, bashfulness, shy, timid, bashful	chin	??	
sign-name, name-sign	chin, side	??	
snake, hiss, bitch, bitchy	chin	ap: tongue	creature
sour, bitter	chin	fop: eating	
speechless, flabbergasted, dumbfounded, open-mouthed, gape, agape	chin	ma: jaw dropping	
suppose, if, pretend, assume, pretence, assumption, estimate, estimation, say (for instance), for example	chin, side	?fop: speaking	
tightness, endurance, tight, tighten	chin	??	
user, cadger, scrounger, bludger, use, cadge, scrounge, bludge	chin	??	
vomit, chunder, vomiting, throw up*	chest to chin	fop: vomit	

Table 39: Auslan Location: Neck

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
abattoir, slaughter	neck, contra to ipsi	ma: cut-throat	butchering
thirst, wish, attraction, thirsty, desire, covet, desirable, horny, sexy, randy	neck	fop: drinking	desire
beaded necklace, beads	neck, contra to ipsi	iup: wearable	
bow tie	neck, in front	iup: wearable	
butcher	neck, side	ma: cut-throat	butchering
carburettor	neck	fop: breathing	
choke, stuck, trapped	neck	eap: choke	
chops (cut of meat)	neck, side	ma: cut-throat	butchering
fat, overweight, chubby, obese	neck, sides	qop: fat	
priest, father, vicar, clergy, minister, dog-collar	neck	iup: wearable	person
collar, collared	neck	iup: wearable	
thirst, thirsty, crave, hanker, keen, lust	neck	fop: drinking	desire
criminal, scoundrel, cut-throat, crime, Mafia	neck, side	bor: English: 'cutthroat'	person
cruel, vicious, ruthless, cutthroat, cruelty, ruthlessness, harshness, abuse, slit throat	neck, side	bor: English: 'cutthroat'	

obliged, committed, obligation, commitment, oblige, commit	neck, side	ma: dragged by neck	
selfishness, egotism, selfish, egotistic, greed, greedy	neck	fop: drinking	desire
slave, slavery, enslave	neck, side	ma: dragged by neck	person
giraffe	neck, front	ap: giraffe neck	creature
hangover, hungover	neck, side	bor: English: 'hangover'	
risk, risky, hazardous, perilous, doubtful	neck	bp: neck	death
scarf, head scarf	neck, in front	iup: wearable	
hanging, hang	neck, side	ma: hanging	
kill, killer, killing, slay	neck, side	ma: cut-throat	butchering for death
sex, sexuality, lust, sexy, horny	neck, side	fop: drinking	desire
mumps	neck, side	eap: illness	
murder, murderer, murder, slay	neck, side	ma: cut-throat	butchering for death
neck, throat	neck	bp: neck	

Table 40: Auslan Location: Shoulders

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
history, ancestors	shoulder, over	asp: central	timeline
history, olden, ancient, historical, formerly	shoulder, over	asp: central	timeline
burden	shoulder	fop: carrying	responsibility
callisthenics, gymnastics, exercises	shoulders	ma: shoulder touch	
government	shoulder	bor: ASL: BOSS	
interruption, disturbance, irritation, hassle, disruption, interrupt, disturb, irritate, hassle, disrupt	shoulder, below	ma: tapping on shoulder	
trouble-free, hassle-free	shoulder	fop: carrying	responsibility
necklace	chest to shoulder	iup: wearable	
not prior to, not before then	shoulder, above	asp: central	timeline
matron, nun	head, shoulder	iup: wearable	person

Table 41: Auslan Location: Chest

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
acceptance, resignation, acceptability, accept, acceptable	chest	bp: chest	self
fear, fright, scared, frightened, afraid, scare, frighten	chest	eap: emotion	anxiety/fear
life, alive, living	chest	fop: blood flow	life
clothes, clothing, garments, apparel, wear, clothe, get dressed, wearing, dress, dress up	chest	iup: wearable	
are	chest	bp: chest	self

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
asthma, asthmatic, panting, pant	chest	eap: illness	
bath, bathtub, bathe	chest	eap: washing	
swimsuit, one-piece, bathing suit	stomach to chest	iup: wearable	
behaviour, behave	chest	bp: chest	self
bequest, inheritance, will, bequeath, inherit	chest	bp: chest	self
tunic, bib	chest	iup: wearable	
bikini*	chest, waist	iup: wearable	
blanket	chest	iup: wearable	
shirt, blouse, collar, T-shirt	chest	iup: wearable	
boast, vanity, brag, vain	chest	bp: chest	self
pride, boastfulness, proud, brag, boast	chest	bp: chest	self
body, trunk (body), physical	chest	bp: body	
boobs, tits	chest	bp: breasts	
breast, breasts, bosom, breastfeeding, breastfeed	chest, contra to ipsi	bp: breasts	
bra, brassiere	chest	iup: wearable	
bravery, courage, brave, courageous	chest	bor: French cœur 'heart'	
free, freedom, rest, break (pause), relax, retired, retiree, retirement, liberty, available	chest	bor: ASL: VACATION	
breathing, lungs, breathe, respiratory, respiration	chest	fop: breathing	
busty	chest	bp: breasts	
button up	chest, top to bottom	iup: wearable	
relief, calm, calmness, relieved	chest	eap: emotion	content
cardigan, vest, waistcoat	chest	iup: wearable	
hiker, camping, hiking, rucksack, back pack, camp	chest	iup: wearable	
why, because, since, as, cause, reason	chest, ipsi	??	
chest	chest	bp: chest	
chicken-pox*	chest	eap: illness	
close shave, close call, close	chest, ipsi	??	
clothes, clothing, garments, apparel, wear, clothe, get dressed, wearing, dress, dress up	chest	iup: wearable	
comfortable	chest	eap: emotion	content
compassion, mercy, compassionate, merciful	chest	eap: emotion	love
satisfaction, satisfy, satisfied, content	chest	eap: emotion	content
cough	chest	fop: cough	
roughness, crudeness, uncouthness, vulgarity, violence, rough, crude, uncouth, vulgar, violent	armpit	??	
breakfast*	mouth, armpit	??	
cuddle, hug, embrace	chest	eap: hug	

<b>English Gloss</b>	<b>Location</b>	<b>Category of Iconicity</b>	<b>Metonym / Metaphor</b>
cure, recovery, cured, heal, healed	chest	bp: chest	health
deny, innocent	chest	bp: chest	self
not responsible, no responsibility, deny responsibility	chest	bp: chest	self
deodorant, underarm	armpit	iup: wearable	
patient, endure, put up with, calm, patience, endurance, calmness	chest	eap: emotion	content
enjoyment, enjoy, enjoyable	chest	eap: emotion	happy
fitness, fit (healthy)	chest	bp: chest	health
tired, tire, tiredness, exhausted, fatigue, exhaustion, weariness, weary, exhaust	chest	fop: breathing	
feel, sense, think, feeling, sensation, emotion	chest, stomach, side	eap: emotion	
impression, feeling, sensation, emotion, sense, think	chest	eap: emotion	
gentleman*	chest, chin	iup: wearable	
morning, Good morning	stomach, chest, side	??	
gorilla	chest	ma: beat chest	creature
round trip, return journey, day tripper, commuter, laps, return ticket, day student, commute, go-to-and-fro	chest	bp: chest	self
health, well-being, healthy, fit (healthy)	chest	bp: chest	health
health, well, healthy, How are you	chest	bp: chest	health
indigestion, heartburn	chest, middle	eap: illness	
hiccup, hiccough	chest, middle	fop: hiccup	
me, I	chest,	bp: chest	self
idleness, loafing, loafer, idle, loaf, free, available	chest	bor: ASL: VACATION	
excitement, interest, keenness, excited, interested, keen, exciting, interesting, excite	chest	eap: emotion	happy
fascination, fascinated, intrigued, fascinate, intrigue*	chest, stomach	bp: chest	self
invite into, admit, guest, usher, usherette	chest, in front	bp: chest	self
zipper, jacket, windcheater, track suit	chest	iup: wearable	
joy	chest, upper and lower	eap: emotion	happy
jumper, sweater, pullover	chest	iup: wearable	
maid, servant, kitchen-hand, kitchen, staff	chest, ipsi	??	
why-not, let's	chest	??	
life, live, alive, living	chest	fop: blood flow	life
like, enjoy, enjoyment	chest	bp: chest	self
fascination, fascinated, intrigued, fascinate, intrigue*	chest, upper and lower	bp: chest	self
life, alive, living	chest	fop: blood flow	life

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
lounge chair, armchair	chest	bor: ASL: VACATION	
lounge, lounge room	chest	bor: ASL: VACATION	
soldier, army, military*	chest, stomach	ma: holding a rifle	person
myself, ourselves, independently	chest	bp: chest	self
naked, nude	chest to waist	iup: wearable	
necklace	chest to shoulder	iup: wearable	
tie, necktie	chest	iup: wearable	
need	chest to waist, side	??	
nervousness, anxiety, nervous, anxious, frustration, frustrated	chest	eap: emotion	anxiety/fear
nightdress, nightie, pyjamas*	face, chest to waist	iup: wearable	
no harm	chest	??	
none of your business*	mouth, chest	bp: chest	self
not responsible, no responsibility, deny responsibility	chest	bp: chest	self
oh	chest	eap: emotion	
fine, okay	chest	bor: ASL: FINE	
open-necked	chest	iup: wearable	
our, ours	chest	bp: chest	self
ourselves	chest	bp: chest	self

Table 42: Auslan Location: Heart

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
amateur	heart	bp: heart	love
army	heart	iup: wearable	
character, personality, emotion, personal, at heart, heart (at heart), personally	heart	bp: heart	personality
attitude	heart	bp: heart	personality
badge	heart	iup: wearable	
heartbeat, love, beat (heart), throb, fall in love	heart	bp: heart	love
brooch	heart	iup: wearable	
button	heart	iup: wearable	
heart, feelings, hearts, cardiac	heart	bp: heart	love
heart attack, cardiac arrest	heart	eap: illness	
promise, vow, commitment, oath, honesty, honest, honestly, truthfully	heart	ges: cross-heart	
council	heart	iup: wearable	person
courage, bravery, guts, hero, heroine, courageous, brave	heart	bp: heart	personality
guilt, remorse, guilty, culpable, sin, sinner	heart	bp: heart	emotion
detective	heart	iup: wearable	person
emotion, emotional	heart	bp: heart	emotion

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
faith, belief, believe*	forehead, heart	bp: heart	emotion
generous, kind	heart	bp: heart	love
kindness, good-heartedness, kind, good-hearted	heart	bp: heart	love
indulgence, soft-heartedness, kindness, indulge, spoil, soft-hearted, kind-hearted	heart	bp: heart	love
lover, love	heart	bp: heart	love
medal	heart	iup: wearable	
Messiah*	heart, waist	bor: ASL: MESSIAH	
prefect, name tag, label, stereotype	heart	iup: wearable	
offence, touchiness, sensitivity, offend, touchy, sensitive, hurt, offended	heart	bp: heart	emotion

Table 43: Auslan Location: Arms

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
administration	upper arm	iup: wearable	
amputation, amputee, amputate	upper arm	eap: amputation	
antiseptic, dab	ndh to forearm	iup: antiseptic	
arm	forearm	bp: arm	
artillery	forearm	asp: surface	
bankruptcy, bankrupt, failure, fail, loss, lose	forearm to elbow, under	asp: length	
blood pressure	upper arm	iup: wearable	
blood sample	upper arm	eap: draw blood	
bone	forearm	bp: bone	
spider, insect, bug, beetle, crawl	ndh to forearm	asp: surface	
lump, bump	forearm	eap: illness	
cabbage, chop, mince, mincemeat, shred	ndh to forearm	asp: surface	
toad, cane toad	ndh to forearm	asp: surface	
worm, caterpillar, grub, crawl	ndh to forearm	asp: surface	
conceal, hide	ndh to forearm, under	asp: surface	cover
confidence, confident	upper arm to ndh	bp: arm	power
corporal	upper arm	iup: wearable	
sunrise, dawn, daybreak, rise	forearm	asp: surface	
muscle, strength, energy, might, power, muscular, muscle-bound, strong, powerful, empower	upper arm	bp: bicep	power
first aid	upper arm	iup: wearable	
goose pimples, goose bumps, goose flesh, thrill, frisson, hair-raising, thrilled, thrilling, spine-chilling, frightening	forearm	eap: goosebumps	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
green, grass	forearm	asp: surface	
grasshopper, frog	forearm	asp: surface	
harvest	forearm, above	asp: surface	
syringe, hypodermic needle, injection, jab, inoculation, vaccination, drug addict, heroin, inoculate, vaccinate, shoot up, inject, immunisation, immunise	upper arm	iup: syringe	
conceal, hide	forearm, under	asp: surface	cover
stash, hide away, conceal, secrete, cache, save, savings, treasure	forearm, under	asp: surface	cover
jungle	forearm	asp: surface	
left, left side, left arm, left hand	upper arm	bp: left arm	
rocket, lift off, launch, take off	forearm	asp: surface	
long time, long ago	forearm	asp: length	
long sleeve shirt, long sleeved	upper arm, forearm	iup: wearable	
mortification, humiliation, discouragement, mortified, mortify, humiliated, humiliate, discouraged, discourage	forearm	??	
nerve	forearm to upper arm	bp: nerve	

Table 44: Auslan Location: Elbow

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
elbow	elbow	bp: elbow	
felling, logging, fell, chop (tree), chop down, log	elbow, under	ma: chopping tree	

Table 45: Auslan Location: Wrist

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
bracelet, bangle	wrist	iup: wearable	
blockage, obstacle, trap, seizure, stoppage, prevention, block (stop), obstruct, trapped, stuck, prevent, bind	wrist	iup: wearable	
apprentice, apprenticeship, apprenticed, bonded	wrist	iup: wearable	
borrowing, lending, borrow, lend	wrist	iup: wearable	
cuff	wrist	iup: wearable	
jail, gaol, prison, prisoner, inmate, imprison, jailed, imprisoned	wrist	iup: wearable	
habit, addiction, habitual, addicted, hooked, habitually	wrist	iup: wearable	
left handed	wrist	bp: left hand	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
free, release, liberate, freedom, liberation	wrist	iup: wearable	

Table 46: Auslan Location: Stomach

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
stomach, tummy, belly, abdomen	stomach	bp: stomach	
anger, annoyance, complaint, angry, cross, annoyed, complain	stomach	eap: emotion	anger
frustration, anxiety, frustrated, anxious	stomach	eap: emotion	anxiety
stomach, belly, gut, beer gut	stomach	bp: stomach	
bowel, defecate, poo	stomach	fop: defecation	
caesarean, hysterectomy	stomach	eap: surgery	
complaint, grievance, gripe, anger, whinge, complain, grumble, gripe, angry	stomach	eap: emotion	anger
pregnancy, pregnant, conceive	stomach	fop: pregnancy	
delicious, yummy, scrumptious	stomach	fop: eating	
farm, farmer	stomach	bp: stomach	person
morning, Good morning	stomach, chest, side	fop: eating	
irritated, frustrated, irritation, frustration	stomach, chest, side	eap: emotion	anger
jeans	stomach, waist	iup: wearable	
toilet, lavatory, loo, wee, wee-wee	stomach	fop: defecation	
live, reside	stomach	??	
medal, medallion, pendant	stomach	iup: wearable	
soldier, army, military*	chest, stomach	ma: holding a rifle	person
monkey	stomach	ma: scratching stomach	creature
nausea, queasiness, nauseous, queasy, uneasiness	stomach	eap: illness	
grudge, grievance, resentment, niggle, resent, niggled	stomach	eap: emotion	anger
not want, don't want	stomach	??	
swimsuit, one-piece, bathing suit	stomach to chest	iup: wearable	
vomit, chunder, vomiting, throw up*	stomach to chest	fop: vomit	

Table 47: Auslan Location: Waist

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
afford, pay for, fare, pay	waist, ipsi	iup: wearable (pocket)	money
apron	waist	iup: wearable	

swimming costume, swimming briefs, bathers, briefs, bikini briefs, underpants, panties, knickers	waist	iup: wearable	
belt	waist	iup: wearable	
bikini*	chest, waist	iup: wearable	
birth, reproduction, breeding, breeder, born, reproduce, breed	waist	fop: birth	
briefs, pants, panties, knickers	waist	iup: wearable	
seat-belt (plane), buckle	waist	iup: wearable	
business, business	waist, ipsi	??	
corset	waist	iup: wearable	
hip	waist, ipsi	bp: hip	
jeans	stomach, waist	iup: wearable	
kilt	waist	iup: wearable	
Messiah*	heart, waist	bor: ASL: MESSIAH	
naked, nude	chest to waist	iup: wearable	
serviette, napkin	waist	iup: wearable	
nappy (diaper)	waist	iup: wearable	
sailor, navy	waist, back	iup: wearable	person
nightdress, nightie, pyjamas*	face, chest to waist	iup: wearable	

Table 48: Auslan Location: Legs

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
leg, thigh	leg, thigh	bp: leg	

## APPENDIX C

### HKSL BROWSER DATA

For the HKSL data below, links are included on the English glosses to the video of each sign in the [HKSL browser](#).

Table 49: HKSL Location: Head

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">BEAR</a>	top	ap: bear ears	creature
<a href="#">BLACK</a>	top, side	qop: black, color	
<a href="#">BLACK PEPPER*</a>	top, side	qop: black, color	
<a href="#">BUS STOP</a>	side	ma: pulling cord to stop bus	
<a href="#">CARTOON</a>	face, in front	fop: seeing	
<a href="#">CHEF</a>	sides	iup: wearable	person
<a href="#">CLASSMATE</a>	face, in front	fop: seeing (reading)	
<a href="#">CLASSROOM</a>	face, in front	fop: seeing (reading)	
<a href="#">CLOSE WINDOWS</a>	face, in front	fop: seeing	
<a href="#">CLOUDY</a>	face, in front	fop: seeing	
<a href="#">CURLY-HAIRED</a>	side	bp: hair	---
<a href="#">DARK</a>	face, in front	fop: seeing	
<a href="#">DINNER*</a>	face, mouth, in front	fop: seeing	
<a href="#">FENCING</a>	face	iup: wearable	activity
<a href="#">FIREMAN</a>	head, top	iup: wearable	person
<a href="#">FOG</a>	face, in front	fop: seeing	
<a href="#">GOODNIGHT</a>	face, in front	fop: seeing (sleep)	
<a href="#">HAIR</a>	side, hair	bp: hair	
<a href="#">HEAD</a>	side	bp: head	
<a href="#">HEAT STROKE</a>	face, in front	fop: cognition (dizzy)	
<a href="#">HUSBAND</a>	side	iup: wearable, earring	female
<a href="#">IMAGINE</a>	side	fop: cognition	
<a href="#">INVENT</a>	top, above	fop: cognition	
<a href="#">KNIT HAT</a>	top, side	iup: wearable	
<a href="#">LATE AT NIGHT</a>	face, in front	fop: seeing	
<a href="#">LION</a>	side	ap: mane	creature
<a href="#">LONG-HAIRED</a>	side	bp: hair	
<a href="#">METHOD</a>	top, above	fop: cognition	
<a href="#">MOLE ON THE CHEEK*</a>	head top side, cheek	qop: black	
<a href="#">MONKEY</a>	head, stomach, side	ma: monkey scratching head and side	creature
<a href="#">NUDE PICTURES</a>	face, in front	iup: camera	
<a href="#">PAJAMAS*</a>	side, lean	ma: sleep	
<a href="#">RABBIT</a>	head, top	ap: rabbit ears	creature
<a href="#">RED CARROT*</a>	chin; head, top	ap: rabbit ears	creature

<a href="#">SHAMPOO (ONE'S) HAIR</a>	head, sides	bp: hair	
<a href="#">SHORT-HAIRED</a>	head, top	bp: hair	
<a href="#">SON</a>	head, side	iup: wearable, earring	female
<a href="#">SOY SAUCE</a>	top, side	qop: black	
<a href="#">SPERM</a>	head, side	iup: wearable, earring	female
<a href="#">SUGGEST</a>	head, top	fop: cognition	
<a href="#">TELEVISION</a>	face, in front	fop: seeing	
<a href="#">UGLY-LOOKING</a>	face, in front	bp: face	appearance
<a href="#">YOUNGER BROTHER</a>	chin; head, side	iup: wearable, earring	female

Table 50: HKSL Location: Forehead

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">ADAPT</a>	temple (var 3 is temple as well)	fop: cognition	
<a href="#">ADDICTED</a>	temple	fop: cognition	
<a href="#">ASSAULT ON POLICE OFFICERS</a>	forehead	gesture: salute	person
<a href="#">BRAIN</a>	temple	fop: cognition	
<a href="#">CATTLE</a>	temple	ap: horns	creature
<a href="#">CELEBRITY*</a>	forehead, chin	bp: face	appearance for celebrity
<a href="#">CHIEF EXECUTIVE</a>	forehead	iup: wearable	person
<a href="#">COMMEMORATE</a>	forehead	fop: cognition	
<a href="#">COMPUTER</a>	temple	fop: cognition	
<a href="#">CONSERVATIVE</a>	forehead	fop: cognition	(close-minded)
<a href="#">CONSIDER</a>	temple	fop: cognition	
<a href="#">DEER</a>	temple	ap: antlers	
<a href="#">DIFFICULT</a>	temple	fop: cognition	
<a href="#">DON'T UNDERSTAND</a>	temple	fop: cognition	
<a href="#">DOZE OFF</a>	temple	fop: cognition	
<a href="#">EMPEROR/RULER</a>	forehead	iup: wearable	person
<a href="#">EXAGGERATE</a>	temple	fop: cognition	
<a href="#">EXECUTIVE MEETING</a>	forehead	iup: wearable	person
<a href="#">FAMOUS</a>	temple	bp: face	appearance for celebrity
<a href="#">FATHER'S DAY*</a>	mouth, forehead	??	
<a href="#">FEVER</a>	forehead	eap: fever	
<a href="#">FORGET</a>	forehead	fop: cognition	
<a href="#">GOVERNMENT</a>	forehead	iup: wearable	person
<a href="#">HAT/CAP</a>	forehead, in front	iup: wearable	
<a href="#">HINDUISM</a>	forehead, between eyes	iup: wearable for religion	
<a href="#">HOSPITAL</a>	forehead	iup: wearable	person
<a href="#">HOT</a>	forehead	fop: sweat	
<a href="#">INPATIENT CARE</a>	forehead	iup: wearable	person
<a href="#">INTEND</a>	temple	fop: cognition	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">JEANS*</a>	temple, waist	ap: horns	creature
<a href="#">KNOW</a>	temple	fop: cognition	
<a href="#">KNOW WHAT TO DO</a>	temple	fop: cognition	
<a href="#">KNOWN TO EVERYONE</a>	temple	fop: cognition	
<a href="#">LEARN</a>	temple	fop: cognition	
<a href="#">LIBERAL STUDIES</a>	temple	fop: cognition	
<a href="#">MATURE</a>	forehead	fop: cognition	
<a href="#">MEMORY</a>	forehead	fop: cognition	
<a href="#">MEMORY CARD</a>	forehead	fop: cognition	
<a href="#">MILK*</a>	temple, mouth	ap: horns	creature
<a href="#">MILK POWDER</a>	temple, mouth	ap: horns	creature
<a href="#">MILK TEA</a>	temple, mouth	ap: horns	creature
<a href="#">NARROW-MINDED</a>	temple, in front	fop: cognition	
<a href="#">NEVER FORGET</a>	forehead	fop: cognition	
<a href="#">NEXT YEAR</a>	temple	asp: central	timeline
<a href="#">NOON</a>	forehead	asp: clockface	time of day
<a href="#">OPEN-MINDED</a>	forehead	fop: cognition	
<a href="#">OPPOSITION</a>	forehead	iup: wearable	person
<a href="#">POLICE STATION</a>	forehead	gesture: salute	person
<a href="#">PONDER</a>	forehead	fop: cognition	
<a href="#">PRO-ESTABLISHMENT</a>	forehead	iup: wearable	person
<a href="#">PUT ON RECORD</a>	forehead	fop: cognition	
<a href="#">QUEEN*</a>	ear, forehead	iup: wearable	person
<a href="#">REALIZE (ONE'S FAULT)</a>	temple	fop: cognition	
<a href="#">RECALL IN A SUDDEN</a>	temple	fop: cognition	
<a href="#">RECKLESS DRIVING</a>	temple	ap: horns	creature
<a href="#">RED WINE</a>	chin; forehead, in front	fop: cognition	
<a href="#">REGRET</a>	forehead	fop: cognition	
<a href="#">REMEMBER</a>	forehead	fop: cognition	
<a href="#">RESEARCH</a>	temple	fop: cognition	
<a href="#">SHORT-HAIRED ABOVE THE EARS</a>	temple	bp: hair	
<a href="#">SILLY</a>	forehead	fop: cognition	
<a href="#">SMART</a>	temple	fop: cognition	
<a href="#">STUDY</a>	forehead	fop: cognition	
<a href="#">SULTRY</a>	forehead	fop: sweat	
<a href="#">SUMMER</a>	forehead	fop: sweat	
<a href="#">THINK/WANT</a>	temple	fop: cognition	
<a href="#">TOMORROW</a>	temple	asp: central	timeline
<a href="#">UNDERSTAND/KNOW</a>	forehead, top	fop: cognition	
<a href="#">UNIQUE (IDEA)</a>	temple	fop: cognition	
<a href="#">UNLUCKY/UNFORTUNATE</a>	forehead	asp: above	God
<a href="#">HEADACHE</a>	temple	eap: headache	

Table 51: HKSL Location: Eyes

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">BLIND</a>	eye, below	fop: seeing	---
<a href="#">BROWN</a>	eye, below	qop: brown	---
<a href="#">CAMCORDER</a>	eye, in front	iup: camera	---
<a href="#">CAMERA</a>	eye, in front	iup: camera	---
<a href="#">COFFEE</a>	eye, side	fop: eye opening	awake
<a href="#">EYE</a>	eye, below	bp: eye	---
<a href="#">HOUSEFLY</a>	eye	ap: fly eye	creature
<a href="#">INCREASE (ONE'S) KNOWLEDGE</a>	eye	fop: seeing	learning
<a href="#">LOOK OUT OF THE CORNER OF (ONE'S) EYES</a>	eye, side	fop: seeing	
<a href="#">MIRACLE</a>	eye, side	fop: eye opening	surprise
<a href="#">PISTOL (SHOOTING)</a>	eye, in front	iup: pistol	
<a href="#">SEE (SOMEONE) THROUGH</a>	eye, below	fop: seeing	
<a href="#">SHORT-SIGHTED</a>	eye, below	fop: seeing	
<a href="#">SMALL-EYES</a>	eye, in front	bp: eye	---
<a href="#">SPECIAL</a>	eye, ipsi	fop: eye opening	surprise
<a href="#">SUDDENLY</a>	eye, below	fop: seeing	surprise
<a href="#">SUNGLASSES</a>	eye, in front	iup: wearable	
<a href="#">VERTIGO</a>	eye, below	fop: seeing	
<a href="#">VIDEO TAKING</a>	eye, in front	iup: camera	
<a href="#">QUICK</a>	eye	fop: seeing	surprise

Table 52: HKSL Location: Ears

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">CANNOT HEAR</a>	ear, side	fop: hearing	
<a href="#">DAUGHTER</a>	ear	iup: wearable, earring	female
<a href="#">EAR</a>	ear	bp: ear	
<a href="#">EAR CHECKUP</a>	ear	iup: wearable, headphones	
<a href="#">HARD-OF-HEARING</a>	chin, ear	fop: hearing	
<a href="#">LOUD</a>	ear	fop: hearing	
<a href="#">MOBILE PHONE</a>	ear	iup: phone	
<a href="#">NOISY</a>	ear	fop: hearing	
<a href="#">NUN</a>	ear	iup: wearable, earring	female
<a href="#">QUEEN*</a>	ear; forehead	iup: wearable, earring	female
<a href="#">REFUSE TO LISTEN</a>	ear	fop: hearing	
<a href="#">WIFE</a>	ear	iup: wearable, earring	female
<a href="#">WOMAN</a>	ear	iup: wearable, earring	female
<a href="#">YOUNGER SISTER</a>	chin; ear	iup: wearable, earring	female

Table 53: HKSL Location: Nose

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">CONTEMPT</a>	nose	lsa: neg	
<a href="#">CURRY</a>	nose	fop: smell	
<a href="#">DISCRIMINATION</a>	nose	lsa: neg	
<a href="#">EAGLE</a>	nose	ap: beak	
<a href="#">ELEPHANT</a>	nose	ap: elephant trunk	
<a href="#">FRAGRANT</a>	nose	fop: smell	
<a href="#">GASOLINE</a>	nose	fop: smell	
<a href="#">HUMOROUS</a>	nose	lsa: neg	
<a href="#">INHALE</a>	nose	fop: inhale	
<a href="#">MUSTARD</a>	nose	fop: smell	
<a href="#">NEW</a>	nose, side	??	
<a href="#">NEW TERRITORIES</a>	nose, side	??	
<a href="#">NOSE</a>	nose	bp: nose	
<a href="#">PEPPER</a>	nose	fop: sneezing	
<a href="#">PLASTIC</a>	nose	??	
<a href="#">PLASTIC PIPE</a>	nose	??	
<a href="#">SACRIFICE (ONESELF)</a>	nose; chest	lsa: neg	
<a href="#">SESAME OIL*</a>	cheek, nose	asp: seeds, qop: oily	
<a href="#">UPSTREAM</a>	nose, under	fop: smell	
<a href="#">OIL PAINTING</a>	nose	qop: oily	
<a href="#">PAINT</a>	nose	qop: oily	

Table 54: HKSL Location: Cheek

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">AGED</a>	cheek	bp: drooping jowl	old
<a href="#">APPLE</a>	cheek	fop: eating	
<a href="#">BLUE</a>	cheek	qop: blue	
<a href="#">CALL THE POLICE</a>	cheek	iup: phone	
<a href="#">CAT</a>	cheek	ap: whiskers	creature
<a href="#">CREAM</a>	cheek	fop: eating	
<a href="#">DIAL</a>	cheek	iup: phone	
<a href="#">DISCRETION</a>	cheek	bp: face	reputation
<a href="#">FACE</a>	cheek	bp: face	
<a href="#">FRUIT*</a>	chin, cheek	fop: eating	
<a href="#">GRANDFATHER*</a>	cheek, mouth	bp: drooping jowl	old
<a href="#">GRANDMOTHER*</a>	cheek, mouth	bp: drooping jowl	old
<a href="#">LIFE</a>	cheek	??	
<a href="#">LUCKILY/A CLOSE CALL</a>	cheek	gesture	
<a href="#">MOLE ON THE CHEEK*</a>	head top side, cheek	bp: mole	
<a href="#">OLD</a>	cheek	bp: drooping jowl	
<a href="#">ONE WEEK</a>	cheek	asp: central	timeline

<a href="#">PHONE</a>	cheek	iup: phone	
<a href="#">PRESBYOPIA</a>	cheek	bp: drooping jowl	old
<a href="#">RICE</a>	cheek	fop: eating	
<a href="#">RICE VERMICELLI</a>	cheek, mouth	fop: eating	
<a href="#">SCAR (ON FACE)</a>	head top side, cheek	bp: scar	
<a href="#">SERIOUS</a>	cheek	fop: facial expression	
<a href="#">SESAME OIL*</a>	cheek, nose	bp: pores	look alike: pores = seeds
<a href="#">SHOW OFF</a>	cheek, nose	bp: face (rel: discretion)	reputation
<a href="#">SMARTPHONE</a>	cheek	iup: phone	
<a href="#">SOUR</a>	cheek	fop: puckering cheek	
<a href="#">STRICT</a>	cheek	fop: puckering cheek	character
<a href="#">SUGAR</a>	cheek	fop: eating	
<a href="#">TELEPHONE (YOU)/CALL (YOU) AGREEMENT</a>	cheek	iup: phone	
<a href="#">VINEGAR</a>	cheek	fop: puckering cheek	
<a href="#">WEEK</a>	cheek	asp: central	timeline

Table 55: HKSL Location: Mouth

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">A TOOTH FOR A TOOTH/TAKE REVENGE</a>	mouth	bp: tooth	idiom
<a href="#">ACCOUNT</a>	mouth	fop: speaking	
<a href="#">ASK</a>	mouth	fop: speaking	
<a href="#">BAD IN TASTE</a>	mouth	fop: tasting	
<a href="#">BALLOON</a>	mouth	iup: balloon	
<a href="#">BIRD</a>	mouth	ap: beak	part for creature
<a href="#">BISCUIT</a>	mouth	fop: eating	
<a href="#">BITE</a>	mouth	fop: biting	
<a href="#">BLACK PEPPER*</a>	mouth	fop: eating	
<a href="#">BLEED</a>	mouth, below lips	qop: red	
<a href="#">BLOOD</a>	mouth	qop: red	
<a href="#">BREAD</a>	mouth	fop: eating	
<a href="#">BRUSH (ONE'S) TEETH</a>	mouth, teeth	bp: tooth	
<a href="#">CAKE</a>	mouth	fop: eating	
<a href="#">CHICKEN FILLET</a>	mouth	ap: beak	creature
<a href="#">CHILLI SAUCE</a>	mouth, in front	fop: eating	
<a href="#">CIGAR</a>	mouth	fop: smoking	
<a href="#">COKE</a>	mouth	fop: drinking (or lipreading?)	
<a href="#">DANGEROUS DRUGS</a>	mouth, in front	fop: eating	
<a href="#">DINNER*</a>	face, mouth, in front	fop: eating	
<a href="#">DRAGON</a>	mouth, moustache	ap: moustache	creature
<a href="#">DUCK</a>	mouth	ap: bill	creature
<a href="#">EAT</a>	mouth	fop: eating	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">EAT (RICE)</a>	mouth	fop: eating	
<a href="#">EXEMPTION</a>	mouth, side	fop: speaking	
<a href="#">FAMILY</a>	mouth	lsa: family	
<a href="#">FATHER</a>	mouth	lsa: family	father
<a href="#">FATHER'S DAY*</a>	mouth, forehead	lsa: family	father
<a href="#">FOOD</a>	mouth	fop: eating	
<a href="#">GRANDFATHER*</a>	cheek, mouth	lsa: family	
<a href="#">GRANDMOTHER*</a>	cheek, mouth	lsa: family	
<a href="#">HAMBURGER</a>	mouth	fop: eating	
<a href="#">HOBBY</a>	mouth	borrow: ASL: KISS-FIST	
<a href="#">ICE CREAM CONE</a>	mouth	fop: eating	
<a href="#">ICE LOLLY</a>	mouth	fop: eating	
<a href="#">INTEREST</a>	mouth	??	??
<a href="#">IT'S NOTHING</a>	mouth	gesture: blowing	
<a href="#">JUICE</a>	mouth	fop: drinking	
<a href="#">JUSTIFIED</a>	mouth, ipsi	fop: speaking	(speech good)
<a href="#">KEEP AS A SECRET</a>	mouth	fop: speaking	
<a href="#">KNOW NOTHING</a>	mouth	??	
<a href="#">LABOR HOLIDAY</a>	mouth	??	
<a href="#">LANGUAGE</a>	mouth	fop: speaking	
<a href="#">LAUGH</a>	mouth	fop: laugh	
<a href="#">LAUGH LOUDLY</a>	mouth, below	fop: laugh	
<a href="#">LEAK (INFORMATION)/DISCLOSE</a>	mouth	fop: speaking	
<a href="#">LET GO</a>	mouth, ipsi	fop: speaking	
<a href="#">LIGHTER</a>	mouth (double location mouth and NDH)	iup: cigarette, lighter	
<a href="#">LIP READ</a>	mouth	fop: speaking	
<a href="#">LIPSTICK</a>	mouth	iup: lipstick	
<a href="#">LOVE (SOMETHING) ARDENTLY</a>	mouth	borrow: ASL: KISS-FIST	
<a href="#">MAIL BOX</a>	mouth	ma: wetting stamp/seal	
<a href="#">MALL</a>	mouth, both sides	borrow from written Chinese '商店'	
<a href="#">MATERNAL GRANDFATHER</a>	mouth, both sides	bp: moustache	
<a href="#">MEDICINE</a>	mouth	fop: eating	
<a href="#">MILK*</a>	mouth	fop: drinking	
<a href="#">MINIBUS</a>	mouth	fop: speaking	
<a href="#">MOONCAKE</a>	mouth	fop: eating	
<a href="#">MOTHER</a>	mouth	lsa: family	
<a href="#">MOTHER'S DAY</a>	mouth	lsa: family	
<a href="#">MOUTH</a>	mouth	bp: mouth	
<a href="#">MSG</a>	mouth	fop: eating	
<a href="#">NOODLES</a>	mouth	fop: eating	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">PAPAYA</a>	mouth, in front	fop: eating	
<a href="#">PARENTS</a>	mouth	lsa: family	
<a href="#">PASSWORD</a>	mouth, ipsi	fop: speaking	
<a href="#">NOSY</a>	mouth, sides	bp: moustache	
<a href="#">PEPSI</a>	mouth	fop: drinking	
<a href="#">PIG</a>	mouth	ap: snout	creature
<a href="#">PIGEON</a>	mouth, ipsi	ap: beak	creature
<a href="#">PIPE</a>	mouth, side	iup: pipe	
<a href="#">PLUM</a>	mouth, ipsi	fop: eating	
<a href="#">PORK</a>	mouth	ap: snout	creature
<a href="#">RABBIT-TOOTHED</a>	mouth	bp: tooth	
<a href="#">REFEREE</a>	mouth	iup: whistle	person
<a href="#">RELATIVES</a>	mouth, ipsi	lsa: family	
<a href="#">RICE VERMICELLI</a>	cheek, mouth	fop: eating	
<a href="#">SALT</a>	mouth	fop: eating	
<a href="#">SANDWICH</a>	mouth	fop: eating	
<a href="#">SAY</a>	mouth, ipsi	fop: speaking	
<a href="#">SHOW RESPECT TO YOU</a>	mouth, ipsi	fop: speaking	
<a href="#">SNAKE</a>	mouth	ap: tongue	
<a href="#">SOFT DRINK</a>	mouth	fop: drinking, iup: straw	creature
<a href="#">SOY MILK</a>	mouth	fop: drinking	
<a href="#">SPEAK</a>	mouth	fop: speaking	
<a href="#">SWEET</a>	mouth	fop: eating	
<a href="#">TALK</a>	mouth	fop: speaking	
<a href="#">TASTE</a>	mouth	fop: tasting	
<a href="#">TELL</a>	mouth	fop: speaking	
<a href="#">TONGUE</a>	mouth, tongue	bp: tongue	
<a href="#">TOOTH</a>	mouth, teeth	bp: tooth	
<a href="#">TOOTHPICK</a>	mouth, teeth	iup: toothpick	
<a href="#">TURKEY (BIRD)</a>	mouth	ap: beak	creature
<a href="#">UNJUSTIFIED</a>	mouth, ipsi	fop: speaking	
<a href="#">VOMIT</a>	throat to mouth	fop: vomiting	
<a href="#">YAWN</a>	mouth, ipsi	fop: yawning	

Table 56: HKSL Location: Chin

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">ACCUSE</a>	chin	fop: speaking	
<a href="#">ADVERTISEMENT</a>	chin, in front	fop: speaking	
<a href="#">AFTERNOON</a>	chin	ap: clockface?	time of day
<a href="#">AFTERNOON TEA</a>	chin	ap: clockface?	time of day
<a href="#">APPEAL</a>	chin	fop: speaking	
<a href="#">APPLY FOR LEAVE</a>	chin	fop: speaking	
<a href="#">BE ATTRACTED TO</a>	chin, below	iup: hook in mouth	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">BEARD</a>	chin	bp: beard	
<a href="#">CANCER</a>	chin	bor: Chinese character: mouth ‘癌’	
<a href="#">CELEBRITY*</a>	forehead, chin	bp: face	appearance for celebrity
<a href="#">COMPLAIN</a>	chin, under	fop: speaking	
<a href="#">CORN</a>	chin	fop: eating	
<a href="#">EAST</a>	chin	??	
<a href="#">FOREVER</a>	chin	asp: central	timeline
<a href="#">FORGE</a>	chin	??	
<a href="#">FRUIT*</a>	chin, cheek	fop: eating	
<a href="#">GOOD AFTERNOON</a>	chin	asp: clockface	time of day
<a href="#">GOOD MORNING</a>	chin	asp: clockface	time of day
<a href="#">GUILTY*</a>	chest, chin	??	
<a href="#">HARD-OF-HEARING</a>	chin, ear	fop: speaking	
<a href="#">HAVE</a>	chin	??	
<a href="#">HAVE TRIED</a>	chin	??	
<a href="#">INTERVIEW</a>	chin, under	??	
<a href="#">LIKE</a>	chin	??, fop: eating?	
<a href="#">MORNING</a>	chin	asp: clockface	time of day
<a href="#">MUTTON</a>	chin	ap: sheep beard	creature
<a href="#">NO WAY OUT</a>	chin, sides	??	
<a href="#">ONE DOLLAR</a>	chin, under (neck?)	??	
<a href="#">PATERNAL GRANDFATHER</a>	chin	bp: beard	
<a href="#">PENCIL</a>	chin	??	
<a href="#">PINK</a>	chin	bor: ASL: RED	
<a href="#">PLAINTIFF</a>	chin, below	fop: speaking	
<a href="#">POLITE</a>	chin	fop: speaking	
<a href="#">PRIMARY ONE</a>	chin	??	
<a href="#">PURPLE</a>	chin	bor: ASL: RED	
<a href="#">RED</a>	chin	bor: ASL: RED	
<a href="#">RED CARROT</a>	chin, head top	bor: ASL: RED	
<a href="#">RED PACKET</a>	chin	bor: ASL: RED	
<a href="#">RED WINE</a>	chin; forehead, in front	bor: ASL: RED	
<a href="#">REPORTER</a>	chin, under	iup: microphone	
<a href="#">REVEAL</a>	chin	??	
<a href="#">SHAVE (BEARD)</a>	chin	eap: shaving	
<a href="#">SHEEP</a>	chin, below	ap: sheep beard	creature
<a href="#">SING</a>	chin, under	iup: microphone	
<a href="#">SPOON</a>	chin, below	iup: spoon	
<a href="#">SPREAD RUMORS</a>	chin, below	fop: speaking	
<a href="#">SUE</a>	chin, below	fop: speaking	
<a href="#">THIN (PERSON)</a>	chin	qop: thin	
<a href="#">TOMATO</a>	chin; forehead, in front	bor: ASL: RED	
<a href="#">UNREASONABLE</a>	chin, below	fop: speaking	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">WATCH</a>	chin, under	ma: resting chin on hands	
<a href="#">WOOL</a>	chin, below	ap: sheep beard	creature
<a href="#">YOUNG</a>	chin	?? rub chin?	
<a href="#">YOUNGER BROTHER</a>	chin; head, ipsi	lsa: family	
<a href="#">YOUNGER SISTER</a>	chin; ear	lsa: family	

Table 57: HKSL Location: Neck

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">ASSAULT INDECENTLY</a>	neck	eap: touching	sexual harrasment
<a href="#">COUGH</a>	neck, chest?	fop: cough	
<a href="#">CUT (ONE'S) NECK</a>	neck	eap: cut neck	death
<a href="#">DRY</a>	neck	fop: thirst	
<a href="#">GIRAFFE</a>	neck	ap: giraffe neck	
<a href="#">SCARF</a>	neck	iup: wearable	
<a href="#">SEXUAL HARASSMENT</a>	neck	eap: touching	sexual harrasment
<a href="#">SUICIDE</a>	neck	eap: cut neck	death
<a href="#">THROAT</a>	neck	bp: throat	
<a href="#">VOMIT</a>	neck to mouth	fop: vomiting	

Table 58: HKSL Location: Shoulders

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">AGO/BEFORE/IN THE PAST</a>	shoulder, above	asp: central	timeline
<a href="#">ANCIENT TIME</a>	shoulder, above	asp: central	timeline
<a href="#">APPLY FOR GUARANTEE</a>	shoulder	bp: shoulder	responsibility
<a href="#">ASSOCIATION</a>	shoulder, below	iup: wearable	rel: MEMBER
<a href="#">BE RESPONSIBLE FOR</a>	shoulder, below	bp: shoulder	responsibility
<a href="#">BEHIND</a>	shoulder, above	asp: central	behind
<a href="#">COMMITTEES</a>	shoulder, below	iup: wearable	rel: MEMBER
<a href="#">DEMOCRATIC PARTY</a>	shoulder, below	iup: wearable	rel: MEMBER
<a href="#">DRIVING LICENSE</a>	shoulder, below	iup: wearable	
<a href="#">EVERY SATURDAY</a>	shoulder, below	asp: central	timeline
<a href="#">EVERY SUNDAY</a>	shoulder, below	asp: central	timeline
<a href="#">GUARANTEE</a>	shoulder	bp: shoulder	responsibility
<a href="#">GUARANTOR</a>	shoulder	bp: shoulder	responsibility
<a href="#">HANDBAG</a>	shoulder	iup: wearable	
<a href="#">JANITOR</a>	shoulder, below	bp: shoulder	responsibility for low class profession
<a href="#">JUDO</a>	shoulder	ma: shoulder-throw	
<a href="#">MEMBER</a>	shoulder, below	iup: wearable	profession
<a href="#">OUT OF DATE</a>	shoulder, above	asp: central	timeline

<a href="#">QUILT</a>	shoulder, below	iup: wearable	
<a href="#">RECENTLY</a>	shoulder, touch	asp: central	timeline
<a href="#">SHIRT</a>	shoulder to chest	iup: wearable	
<a href="#">YESTERDAY</a>	shoulder, above	asp: central	timeline
<a href="#">ZIP-UP JACKET</a>	shoulder; chest	iup: wearable	
<a href="#">MAID</a>	shoulder	bp: shoulder	responsibility for low class profession
<a href="#">LAZY</a>	shoulder	bp: shoulder	responsibility

Table 59: HKSL Location: Chest

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">BODY</a>	body, whole torso	bp: chest and stomach	
<a href="#">BOSS</a>	chest	??	
<a href="#">CALM</a>	chest	eap: emotion	relief
<a href="#">CENTER (building)</a>	chest	bor: chinese character for heart	
<a href="#">COAT</a>	chest	iup: wearable	
<a href="#">CONFIDENCE</a>	chest	bor: chinese character for heart	
<a href="#">COVER WITH A BLANKET</a>	chest	iup: wearable	
<a href="#">DOCTOR</a>	chest	iup: stethoscope	profession
<a href="#">FORENSIC OFFICER*</a>	forearm, chest	iup: stethoscope	profession
<a href="#">GUILTY*</a>	chest, chin	bp: chest	self
<a href="#">HAPPY</a>	chest	eap: emotion	happy
<a href="#">I</a>	chest	bp: chest	self
<a href="#">IDENTITY</a>	chest, upper, lower	bp: chest	self
<a href="#">IMPATIENT</a>	chest	eap: emotion	anxiety
<a href="#">JOKE</a>	chest	eap: emotion	happy
<a href="#">KIND</a>	chest	bp: heart	self for character
<a href="#">LUNG</a>	chest	bp: lung	
<a href="#">MEND (ONE'S) WAY</a>	chest	bp: chest	self
<a href="#">NAME</a>	chest	iup: wearable	
<a href="#">NERVOUS</a>	chest	eap: emotion	anxiety
<a href="#">PAJAMAS*</a>	chest, ipsi	iup: wearable	
<a href="#">PARATROOPER</a>	chest, stomach, ipsi	iup: rifle	profession
<a href="#">PLAYGROUND</a>	chest	eap: emotion	happy
<a href="#">PREPARE</a>	chest	??	self?
<a href="#">PULMONARY DISEASE*</a>	chest, wrist	eap: disease	
<a href="#">PUT ON CLOTHES</a>	chest, wrist	iup: wearable	
<a href="#">RAINCOAT</a>	chest, ipsi	iup: wearable	
<a href="#">REQUEST</a>	chest	bp: chest	self
<a href="#">REQUIRE REPLY</a>	chest	bp: chest	self
<a href="#">REST</a>	chest, upper arm	ma: folding arms	rest
<a href="#">SACRIFICE (ONESELF)</a>	nose; chest	bp: chest	self
<a href="#">SAME</a>	chest	bp: chest	self

<a href="#">SCARED</a>	chest	eap: emotion	fear
<a href="#">SEEK HELP</a>	chest	bp: chest	self
<a href="#">SHIRT</a>	shoulder to chest	iup: wearable	
<a href="#">SOAP</a>	chest	iup: soap	
<a href="#">SUIT</a>	chest	iup: wearable	
<a href="#">SWEATER</a>	chest, ipsi	iup: wearable	
<a href="#">T-SHIRT</a>	chest, upper arm	iup: wearable	
<a href="#">TANK TOP</a>	chest	iup: wearable	
<a href="#">TIE</a>	chest	iup: wearable	
<a href="#">URGENT</a>	chest	eap: emotion	anxiety
<a href="#">WARDROBE</a>	chest, ipsi	iup: wearable	
<a href="#">WE</a>	chest	bp: chest	self
<a href="#">X-RAY</a>	chest	iup: x-ray	
<a href="#">ZEBRA</a>	chest	ap: stripes	creature
<a href="#">ZIP-UP JACKET</a>	shoulder; chest	iup: wearable	

Table 60: HKSL Location: Heart

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">APOBIOSIS</a>	heart	bp: heart	
<a href="#">JEALOUS</a>	heart	bp: heart	self for character
<a href="#">PATIENCE</a>	heart	bp: heart	self for character
<a href="#">SELF</a>	heart	bp: heart	self
<a href="#">SELF-RELIANCE</a>	heart	bp: heart	self
<a href="#">SELF-REPLY</a>	heart	bp: heart	self

Table 61: HKSL Location: Arms

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">ALL FAIL</a>	forearm, above	asp: length	measure
<a href="#">BRIBE</a>	forearm, below	asp: surface	cover
<a href="#">CHICKEN POX</a>	forearm	eap: chicken pox	
<a href="#">CUTE</a>	upper arm	ma: embrace	
<a href="#">DEFENSE COUNSEL</a>	forearm	iup: wearable	person
<a href="#">ESCAPE</a>	forearm, under	asp: surface	cover
<a href="#">FORENSIC OFFICER*</a>	forearm, chest	iup: wearable	person
<a href="#">GREY</a>	upper arm	??	
<a href="#">IMPROVE GRADUALLY</a>	forearm to upper arm	asp: length	measure
<a href="#">JUDGE</a>	forearm	iup: wearable	person
<a href="#">LIBRARY</a>	forearm, side	asp: surface	
<a href="#">MURDER</a>	forearm, side	asp: length	measure
<a href="#">OFFICIAL SOLICITOR</a>	forearm	iup: wearable	person
<a href="#">ONE SECOND</a>	forearm, (ends at wrist)	watch	time
<a href="#">PROSECUTION</a>	forearm, (ends at wrist)	iup: wearable	person
<a href="#">REMUNERATION</a>	forearm	bp: bicep	work
<a href="#">ROOM</a>	forearm, (ends at wrist)	asp: surface	
<a href="#">SHORT SLEEVE</a>	forearm	iup: wearable	

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">SUNRISE</a>	forearm, side	asp: surface	
<a href="#">T-SHIRT</a>	chest, upper arm	iup: wearable	
<a href="#">THEFT</a>	forearm, below	asp: surface	cover
<a href="#">TIRED</a>	upper arm	bp: upper arm	power
<a href="#">TIRING</a>	upper arm	bp: upper arm	power
<a href="#">TRAFFIC LIGHT</a>	forearm	asp: surface	
<a href="#">WARM</a>	upper arm	ma: warming arms	
<a href="#">ZEBRA CROSSING</a>	forearm	asp: surface	

Table 62: HKSL Location: Elbow

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
(No signs found at the elbow)			

Table 63: HKSL Location: Wrist

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">CLOCK</a>	wrist, back	iup: watch	time
<a href="#">CUT/SCRATCH</a>	wrist, front	eap: cut	
<a href="#">EVERY HOUR</a>	wrist, back	iup: watch	time
<a href="#">EVERY MINUTE</a>	wrist, back	iup: watch	time
<a href="#">ILLNESS/SICK</a>	wrist, front	ma: taking pulse	
<a href="#">LONG-SLEEVED</a>	wrist, back	iup: wearable	
<a href="#">ONE HOUR</a>	wrist, back	iup: watch	time
<a href="#">ONE MINUTE</a>	wrist, back	iup: watch	time
<a href="#">PULMONARY DISEASE</a>	chest, wrist, front	ma: taking pulse	
<a href="#">PUT INTO JAIL</a>	wrist, front	iup: cuffs	
<a href="#">SECOND</a>	wrist, back	iup: watch	time
<a href="#">WATCHES</a>	wrist, back	iup: watch	

Table 64: HKSL Location: Stomach

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">BELT</a>	stomach	iup: wearable	
<a href="#">FAT</a>	stomach, side	bp: fat	
<a href="#">OPERATION</a>	stomach	eap: surgery	
<a href="#">PREGNANT</a>	stomach	eap: pregnant	
<a href="#">MONKEY</a>	head, stomach, side	ma: monkey head, side	creature
<a href="#">STARVE</a>	stomach	fop: eating	
<a href="#">STOMACH</a>	stomach	bp: stomach	
<a href="#">SUSPECT</a>	stomach	bp: stomach	intuition

Table 65: HKSL Location: Waist

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">DRESS</a>	waist, side	iup: wearable	

Table 66: HKSL Location: Legs

English Gloss	Location	Category of Iconicity	Metonym / Metaphor
<a href="#">HAWKER</a>	leg, front	iup: cart	
<a href="#">JEANS*</a>	temple; leg, front	iup: wearable	
<a href="#">PUSH A CART</a>	leg, front	iup: cart	
<a href="#">SHORTS</a>	leg, front	iup: wearable	
<a href="#">TROUSERS</a>	temple; leg, front	iup: wearable	

## APPENDIX D

### KSL DICTIONARY DATA

The data in these tables is taken from [sldict.korean.go.kr](http://sldict.korean.go.kr). The sign glosses are in Korean, followed by an English translation. No English gloss of the signs are included in the dictionary so I translated the Korean through either [translate.google.com](http://translate.google.com) or [papago.naver.com](http://papago.naver.com). Generally, I left the English translation unedited. Many Korean words have homonyms, if one homonym fit the sign perfectly while the others made no sense iconically, I would use the translation that made sense and assume that it was the meaning of the sign. That being said, there are still plenty of translations that are doubtful. I don't have the expertise to give proper translations. The Korean word is the true gloss, the English translation is simply meant to be a helpful tool. Sometimes in the Korean gloss column a Chinese character is given in brackets [], this is information that was included by the makers of the dictionary and is meant to disambiguate the meaning of the Korean word.<sup>100</sup>

Table 67: KSL Location: Head

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
젊다, 청춘	youthful, youth	face	qop: smooth	
젊은이	young people	face	qop: smooth	
청소년	teenager	face	qop: smooth	
검은색	black color*	head, side, chin	qop: black	
박	staying the night, foil	head, side, chin	ma: sleep	
검정, 검다	black, black	head, side, chin	qop: black	
덥다, 더위	hot, hot	head, side	fop: sweating	
못생기다, 못나다, 추하다, 밉다	ugly, ugly, ugly, hate	face	bp: face	appearance
갑자기, 냅다, 별안간, 갑작스럽다	suddenly, let it go, suddenly, suddenly	face	fop: seeing	
개성	individuality	face, in	??	self

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<sup>100</sup> To look up the video for the signs, copy/paste the Korean gloss into the search bar at [sldict.korean.go.kr](http://sldict.korean.go.kr).

		front		
인상,용모,표정	impression, appearance, expression	face	bp: face	
무관심,내외,외면	Indifference, inside and outside, outside	face	fop: seeing	
얼굴,낯,안면	face, face, face	face	bp: face	
우울,울상,시무룩하다	melancholy, depressed, gloomy	face	fop: facial expression	emotion: sadness
낮잠	nap	head, side	ma: sleep	
취하다	drunk	face, in front	fop: seeing	
면접	interview	face	bp: face	
주인공	hero, main character	face, in front	bp: face	movie poster for person
파렴치	unscrupulous	face	fop: facial expression	brazen
청주	rice wine	face	??	
낮,대낮,백주,밝다, 새다,트다, 환하다,흰하다	Daytime, broad daylight, white wine, bright, leaking, light, bright	face, in front	fop: seeing	
자막	subtitles	face, in front	fop: seeing	
땀	sweat	head, side	fop: sweating	
사격	shooting	face, in front	iup: gun sight	
애매하다,	Ambiguous, vague, vague, vague, vague, heal, cloudy, faint, ambiguous, uncertain, vague	face, in front	fop: seeing	
방심	excenter, absence, vacancy	face, in front	fop: seeing	
위선자	dissembler, hypocrite	face	iup: mask	
석방	release (from prison)	face, in front	asp: behind bars	
익히다	to learn	face, in front	iup: book	
교도소,감옥,형무소	prison, jail, prison	face, in front	asp: behind bars	
극장	theater	face, in front	fop: seeing	
망신	discredit	face	bp: face	reputation
가면,탈	mask, mask	face	iup: mask	
동영상,화상,영화	video, image, movie	face, in front	fop: seeing	
죄수	prisoner	face, in front	asp: behind bars	person
철면피	wretch, brazen face	face, in front	fop: facial expression	brazen
황홀,휘황하다, 휘황찬란하다	ecstasy, trance, brilliant, brilliant	face, in front	fop: seeing	
취객	drunk	face, in	fop: seeing	

		front		
아름답다,미	beautiful*	cheek, face	bp: face	appearance
공부,학업	study, academic	head, sides	fop: seeing	
학교	school	head, sides	fop: reading	
밤새다	stay up all night	face, in front	fop: seeing	
부채	fan	head, side	iup: fan	
반	study room?, half?	head, sides	fop: seeing	
운동복,체육복	sportswear*	head, side, chest, ipsi	ma: lifting weights	
바람,바람이 불다	wind, the wind blows	head, lower, sides	eap: feel air on face	
과목,강좌,교과,학과 목	subject course	head, sides	fop: seeing	
개학	school opening	head, sides	fop: reading	
요즘,요사이,요새,요 즈음,최근	these days	head, side	asp: central	timeline
어린이,새끼,아이, 어린아이, 소아	child, baby	head, side	?ma: cooing at baby	
운동선수	athlete	head, side	ma: lifting weights	
학과	department	head, sides	fop: seeing	

Table 68: KSL Location: Forehead

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
미안	sorry	forehead	ma: bow	
죄송하다, 사과	sorry, apology	forehead	ma: bow	
오후, 하오	afternoon, hao(?)	forehead	asp: clockface	time
경찰, 순경, 순사	police, cop, policeman	forehead	iup: wearable	person
오전, 상오	morning, noon	forehead	asp: clockface	time
기술, 재능, 재주	skill, talent, talent	forehead	fop: cognition	
오후, 점심 후	afternoon, after lunch	forehead	asp: clockface	time
실업	unemployment	forehead	fop: cognition	
할머니, 조모	grandmother, grandmother	forehead	??	
다행	relief	forehead, across	ma: wiping sweat from forehead	
열	heat	forehead, across	ma: feeling temperature	
고집	stubborn	forehead	fop: cognition	
오전	morning, noon	forehead	asp: clockface	time
할아버지, 조부	grandfather, grandfather	forehead	??	
고등학교	highschool	forehead	asp: height	
닭	chicken	forehead	ap: crest	creature
고등학생	highschool student	forehead	asp: height	
내밀다, 무소뿔	protrude, rhinoceros horn	forehead	ap: rhino horn	creature
기독교, 예수교	christianity, christianity	forehead	fop: cognition	

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
딱 맞다	to be right	forehead	fop: cognition	
라면	ramen	forehead	ap: crest	creature
기사, 기술자	engineer, engineer		fop: cognition	
배드민턴	badminton	forehead	bor: English 'birdie'	
귀감, 모범, 본받다	model, exemplify, imitate	forehead	fop: cognition	
치료	cure	forehead	eap: illness	
완쾌	full recovery	forehead	eap: illness	
스님, 승려	monk, monk	forehead	iup: wearable	person
경찰관	police officers	forehead	iup: wearable	person
소름	creeps*	forehead, forearm	ap: crest	
낫다, 치유	better, heal	forehead	eap: illness	
경찰서	police office	forehead	iup: wearable	person
가마	palanquin	forehead, eyes, waist	??	
모범생	model student	forehead	fop: cognition	
면역	immune	forehead	eap: illness	
달인	master	forehead	fop: cognition	
집요하다	tenacious	forehead, chin	fop: cognition	
어마어마하다	awesome	forehead	fop: cognition	
경치, 관람, 구경, 풍경	Scenery, viewing, viewing, scenery	forehead	ma: shielding eyes	
찌푸리다, 근심	frown	forehead	fop: facial expression	
고등	high	forehead	asp: height	
고급	advanced	forehead	asp: height	
예수교, 기독교	Jesus, Christianity	forehead	fop: cognition	person
생각, 견해, 사고, 신경, 의견, 의사, 의식, 여기다	thoughts, opinions, accidents, nerves, opinions, doctors, consciousness, here	temple	fop: cognition	
왜, 어째서	why, why	temple	fop: cognition	
계획	plan	temple	fop: cognition	
미련, 어리석다	regret, foolish	temple	fop: cognition	
고민	worry	temple	fop: cognition	
반대	opposition	temple	fop: cognition	
기억, 암기, 외다, 외우다	remember, memorize, memorize, memorize	temple	fop: cognition	
거치다, 방해, 지장	go through, obstruct, hinder	temple	??	
정신	mental	temple	fop: cognition	
그리워하다, 동경, 사모, 그리다, 그립다	Miss, longing, love, draw, draw	temple	fop: cognition	
멍청이, 멍청하다	dumb, dumb	temple	fop: cognition	
조명, 판단	lighting, judgement	temple	fop: cognition	

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
결의	resolution	temple	fop: cognition	
멍하다, 멍하니	blankly, blankly*	temple, mouth	fop: cognition	
냉정	cool	temple	fop: cognition	
멍청하다, 생각 없다	I'm stupid, I don't think	temple	fop: cognition	
바른 정신이 아니다	Not in the right spirit	temple, side	fop: cognition	
심심하다	bored	temple	fop: cognition	
추억, 상기, 추상, 회상	memories, reminder, abstract, recollection	temple	fop: cognition	
훌륭하다, 위대하다	excellent, great	temple	fop: cognition	
의사소통	communication	temple	fop: cognition	
철학자	philosopher	temple	fop: cognition	
혹시	perhaps	temple	fop: cognition	
공감	sympathy	temple	fop: cognition	
느끼다, 느낌, 뉘앙스	feel, feel, nuance	temple	fop: cognition	
개	dog	temple	fop: cognition	
정신적 장애	mental disorder	temple	fop: cognition	
지식	knowledge	temple	fop: cognition	
연구	research	temple	fop: cognition	
기념	commemoration, memory, remembrance	temple	fop: cognition	
뜻밖에, 의외	unexpectedly	temple	fop: cognition	
정부	government*	forehead, shoulders	iup: wearable	
갈망	craving, longing	temple	fop: cognition	
열중, 몰두	enthusiasm, immersion	temple	fop: cognition	
대학교	university	forehead to temple	iup: wearable	
대학원	graduate school	forehead to temple	iup: wearable	
복잡하다, 산만하다	complicated, distracting	temple	fop: cognition	
곤란	difficulty	temple	fop: cognition	
박사	doctor	temple	fop: cognition	
개안, 깨닫다	open eyes, realize	temple	fop: cognition	
맞다, 딱	right, just*	forehead, chin	??	
신	God	forehead, chin	??	
묵도	silence*	mouth, forehead	fop: cognition	
금주	abstinence*	chin, forehead	fop: cognition	
안주	snack (side dishes	chin,	fop: cognition	

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
	consumed with alcohol ie: "bar food")	forehead		
술, 알코올	alcohol*	chin, forehead	fop: cognition	

Table 69: KSL Location: Eyes

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
내일, 명일	tomorrow	eye, side	asp: central	timeline
며칠	a few days	eye, side	asp: central	timeline
나흘	four days	eye, side	asp: central	timeline
일주일, 이레	a week, seven days	eye, side	asp: central	timeline
개안, 깨닫다	open eyes, realize*	temple, eye	fop: opening	
갑자기, 갑작스럽다	suddenly, let it go, suddenly, suddenly	eye, side	fop: seeing	surprise
일개월, 달	month, one month	eye, below	asp: central	timeline
호텔	hotel	eye, side	??	
어제, 어제께, 작일	yesterday	eye, side	asp: central	timeline
미래, 다음, 앞날, 장래, 장차, 향후	future	eye, side	asp: central	timeline
이상하다 [異常-]	it's strange [異常-]	eyes	fop: seeing	
실수 [失手]	mistake [失手]	eyes	fop: seeing	
눈웃음	eye smile	eyes	bp: eyes	
검사 [檢事]	prosecutor [檢事]	eyes	fop: seeing	person
응시하다 [凝視-]	to stare [凝視-]	eyes	fop: seeing	
놀랍다	surprising	eyes	fop: seeing	
울리다	make cry	eyes	fop: crying	
두드러지다	stand out	eye	bp: eyes	
확약 [確約]	commitment [確約]	eyes	fop: seeing	
내려다보다	look down	eyes	fop: seeing	
안과 [眼科]	ophthalmology [眼科]	eyes	bp: eyes	
새신랑 [-新郎]	the new groom [-新郎]	eyes	fop: seeing	new
검찰 [檢察]	prosecution [檢察]	eyes	fop: seeing	person
관리 [管理]	management [管理]	eyes	fop: seeing	
보다, 시각	see, sight	eyes	fop: seeing	
신도시	new town [新都市]	eyes	fop: seeing	new
관리인 [管理人]	manager [管理人]	eyes	fop: seeing	person
인증서 [認證書]	certificate [認證書]	eyes	bp: eyes	
새색시	new poem	eyes	fop: seeing	new
슬픔	sadness	eyes	fop: crying	
경신 [更新]	update	eyes	fop: seeing	new

비전	vision	eyes	fop: seeing	
명확하다, 정확, 똑똑하다, 뚜렷하다, 명료하다, 명백하다, 분명하다, 선명하다, 확실하다, 단연	clear	eyes	fop: seeing	
보살핌	care	eyes	fop: seeing	
입증, 증명	prove	eyes	fop: seeing	
보관소 [保管所]	archive [保管所]	eyes	fop: seeing	
눈곱	eye discharge	eyes	bp: eyes	
점검, 감사, 감시, 감찰, 검토, 검사, 수사, 사찰, 조사, 살펴보다, 살피다	inspection, audit, monitoring	eyes	fop: seeing	
환각범 [幻覺犯]	hallucinogen [幻覺犯]	eyes	fop: seeing	
사진사	photographer [寫眞師]	eyes	iup: camera	person
현행 범인 [現行犯人]	current criminal [現行犯人]	eyes	fop: seeing	
새벽	dawn	eyes, side	fop: seeing	
개월, 몇 개월	months	eye	asp: central	timeline
월세	monthly	eye	asp: central	timeline
월부	monthly installment	eye	asp: central	timeline
월급, 급여, 봉급	salary	eye	asp: central	timeline
밝히다	clarify	eyes, in front	fop: seeing	
시각, 보다	to see, see	eyes, in front	fop: seeing	
울음	weeping	eye, below	fop: crying	
노출	exposure	eye	bp: eyes	
소경, 맹인, 장님	blind	eyes	fop: seeing	
바이러스, 세균	virus, bacteria	eye	iup: microscope	
맹학교	blind school	eyes	fop: seeing	
점안약	eyedrops	eye	iup: eyedropper	
최면	hypnosis	eyes, in front	iup: pendulum	
기면	lethargy	eye, under	fop: eye closing	
안대	eye patch	eye, over	iup: eyepatch	
애가	lament	eye	fop: crying	

Table 70: KSL Location: Ears

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
듣다, 소리, 소식, 청각	to hear, sound, news, hearing	ear	fop: hearing	
정보	information	ear	fop: hearing	
전화번호	phone number	ear	iup: phone	
통신 중계	communication relay	ear	iup: headset	

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
농인, 귀머거리	deaf	ear	fop: hearing	
	telephone	ear	iup: phone	
초문, 금시초문	first sentence	ear	fop: hearing	
라디오	radio	ear	fop: hearing	
호두	walnut	ear	ma: cracking walnut next to ear	
귀	ear	ear	bp: ear	
난청인	hearing impaired	ear	fop: hearing	
난청	hearing loss	ear	fop: hearing	
매미	cicada	ear	fop: hearing	
뉴스	news	ear	fop: hearing	
청각장애	hearing impairment	ear	fop: hearing	
보청기	hearing aid	ear, behind	iup: wearable	
귀걸이	earring	ear	iup: wearable	
깜깜하다, 소식이 없다	there's no news, its dark	ear, side	fop: hearing	
휴대전화, 핸드폰, 휴대폰, 휴대전화기	mobile phone, cell phone	ear	iup: phone	
소란, 소요, 소음, 야단, 요란, 시끄럽다	noise, fuss, hustle	ear	fop: hearing	
농	farm	ear	??	
소라	conch	ear, side	iup: conch to ear	
인공와우	cochlear implant	ear, behind	iup: wearable	
정보	information	ear	fop: hearing	
말고	not, except	ear	ma: cutting ears off	
통신 중계 서비스	communication relay service	ear	iup: headset	
고막	eardrums	ear	bp: ear	
녹음	record	ear	fop: hearing	
귀속형 보청기	attributive hearing aid	ear, behind	iup: wearable	
이어폰	earphone	ear, sides	iup: wearable	
청각 영상	auditory imaging	ear	fop: hearing	
사이렌	siren	ear	fop: hearing	
듣는 이	hearer	ear	fop: hearing	
오디오, 듣다, 소식, 청각	audio, listen, news, hearing	ear	fop: hearing	
난청	hearing loss*	ear, mouth	fop: hearing	
헛소문	groundless rumor, canard	ear, side	fop: hearing	

Table 71: KSL Location: Nose

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
모르는 척하다	pretend not to know	nose	??	
훌륭하다	excellent	nose	bp: nose	good/beauty

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
멋지다, 멋	something looks good, is handsome, or cool	nose	bp: nose	good/beauty
착하다	be good*	stomach, nose	lsa: good	
좋다	to like something, or something that is good	nose	lsa: good	
한숨	sigh	nose	fop: sigh	
있다	to remain at a place, or "there is something/someone"	nose	bp: nose	person
개성 [個性]	personality	nose	bp: nose	person
배우다	to learn	nose	bp: nose	person for learn
돼지	pig	nose	ap: pig snout	creature
혐의 [嫌疑]	charge, allegations [suspicion]	nose	bp: nose	dirty
교과서, 교본	a textbook	nose	bp: nose	person for learn
빈틈없다, 완벽	flawless, perfect	nose	lsa: good	
그냥, 그저	it's just, just.	nose	fop: exhale	insignificant
안되다	doesn't work out	nose	fop: exhale	frustration
천하다 [賤-]	lowly	nose, side	??	
바보, 천치	stupid, idiot	nose	ma: finger wiggle	mocking
샘, 샘내다, 시기, 질투	jealousy, envious, envy, jealousy.	nose	ma: nose wiggle	jealousy
곧다, 단정하다, 똑바르다, 바르다, 반듯하다, 올바르다, 점잖다	straight, neat, straight, straight, straight, correct, gentle	nose	asp: straight	
성병 [性病]	std	nose	??	
안되다	doesn't work out	nose	fop: exhale	difficult
벽차다	overwhelmingly difficult	nose	fop: exhale	difficult
가시, 날카롭다, 뾰족하다, 예리하다, 예민하다	thorn, sharp, pointed, sharp, sensitive	nose	asp: pointed	
휴지	tissue	nose	iup: tissue	
향기롭다, 향	fragrant, incense	nose	fop: smell	
악취	stink	nose	fop: smell	
콧물	snot	nose	bp: snot	
코뿔소	rhinoceros	nose	ap: rhino horn	creature
손수건	handkerchief	nose	iup: handkerchief	
냄새	smell	nose	fop: smell	
경멸, 깔보다, 멸시, 업신여기다	contempt, despise	nose, side	ma: blowing snot	dislike
감기	cold (illness)	nose	ma: wiping nose	illness

Table 72: KSL Location: Cheek

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
예	yes, example	cheek	bor: Korean: 예	
벌	bee*	mouth, in front, cheek	eap: bug bites, ma: slap bug	
부끄럽다, 부끄러움, 수줍다, 수치, 창피	shameful, shy, embarrassed	cheek	fop: facial expression	emotion: shame
못하다, 할 수 없다	can't	cheek	??	
예쁘다, 곱다	pretty, nice	cheek	bp: dimple	
아름답다, 미	beautiful*	cheek, face	bp: dimple	
누구, 누가, 뉘	who	cheek, side	??	
살찌다	getting fat	cheek	qop: fat	
노력, 안간힘, 공들이다, 애쓰다, 힘쓰다	effort, hard work	cheeks	eap: cheek flush	
지방	fat	cheek	qop: oily	
갈색	brown*	cheek, chin, in front	qop: brown	
사자	lion	cheek	ap: mane	creature
김치	kimchi	cheek	qop: blue	
파란색	blue*	cheek, chin, in front	qop: blue	
귀여워하다, 귀엽다	cute	cheek	ma: patting cheek	
의심	suspicion	cheek	?ges: suspicion	
배추	cabbage	cheek	qop: blue	
오이	cucumber	cheek	qop: blue	
파랑, 청색, 파랗다, 푸르다	blue	cheek	qop: blue	
하늘, 개다	sky	cheek	qop: blue	
호랑이, 범	tiger	cheek	ap: tiger stripes	creature
거짓, 허위	false.	cheek	?? false	
녹색, 초록	green	cheek	qop: blue	
초록색	green	cheek, chin, in front	qop: green, ap: leaf on a head (of cabbage)	
아깝다	what a waste	cheek	eap: cheek slap	
내구	durability	cheek	fop: jaw clench	tough
난항, 어려워하다, 어렵다	difficult	cheek	fop: jaw clench	tough
마르다, 야위다, 여위다, 수척하다	skinny	cheek	qop: gaunt cheeks	
과자, 쿠키	sweets, cookies	cheek	fop: chewing	
와인	wine	cheek	bor: ASL: WINE	
녹두	mung bean	cheek, chin	qop: green, ap: leaf on a head (of cabbage)	
감격	effervescence	cheek	eap: bubbly drink	

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
원숭이	monkey	cheek	ma: scratching cheek	
콜라	cola	cheek	asp: pepsi logo	
기름, 숙달, 원활, 능숙하다, 매끄럽다, 미끄럽다, 자주, 빈번히, 낯익다	oil, mastery, smooth, good, smooth, slippery, smooth, frequent, frequent, familiar	cheek	qop: oily	
잎	leaf	cheek	qop: blue, ap: leaf on a head (of cabbage)	
사탕, 알사탕, 캔디	candy	cheek	fop: chewing	
가짜	fake	cheek	?? false	
굉장하다, 심하다	awesome, severe	cheek	??	
가령, 만약	for example, if	cheek	?? false	
풋사과	green apple	cheek	qop: blue, ap: leaf on a head (of cabbage)	
꿀	honey*	cheek, mouth, in front	eap: bug bites, ma: slap bug	
아끼다	grudge	cheek, contra	eap: cheek slap	
모기	mosquito	cheek	eap: bug bites, ma: slap bug	
조롱	mockery	cheek	ges: mocking	
낙엽, 가랑잎, 낙엽이 떨어지다	fallen leaves	cheek	qop: blue, ap: leaf on a head (of cabbage)	
보약	replenishment	cheek, contra	fop: eating	
상하다, 다치다, 부상, 상처, 손상	injured	cheek	eap: cheek strike	
아빠	dad (non-honorific)	cheek, near nose	bp: cheek/nose wrinkles	old
고모 [姑母]	paternal aunt	cheek, near nose	bp: cheek/nose wrinkles	old
부녀 [父女]	father daughter	cheek, near nose	bp: cheek/nose wrinkles	old
부자 [父子]	rich	cheek, near nose	bp: cheek/nose wrinkles	old
모음 [母音]	vowel	cheek, near nose	bp: cheek/nose wrinkles	old
모자 [母子]	mother and son	cheek, near nose	bp: cheek/nose wrinkles	old
어미	mother	cheek, near nose	bp: cheek/nose wrinkles	old

Table 73: KSL Location: Mouth

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
멍하다, 멍하니	blankly, blankly*	temple, mouth	fop: blowing	nothing
천명	appointment	mouth	fop: speaking	
동거	living together, cohabitation	mouth, in front	fop: speaking	
일요일	Sunday	mouth	qop: red	
쉽다, 용이하다, 쉽사리	easy	mouth	??	
가능, 할 수 있다	possible, can	mouth	??	
간, 간장	liver, soy sauce*	mouth, stomach, side	fop: eating	
먹다, 식사	eat, meal	mouth	fop: eating	
사과	apple	mouth	fop: eating	
말씀	words	mouth	fop: speaking	
벌	bee*	mouth, in front	fop: eating	
경고	warning	mouth	fop: speaking	
바다, 해양	sea, ocean	mouth, side	fop: taste	
말, 말하다, 언어	speak, language	mouth	fop: speaking	
침	spit, needle	mouth	fop: spitting	
양치질, 양치	brushing teeth	mouth	ma: brushing teeth	
삼키다	gulping down	mouth to chest	fop: eating	
노래, 음악, 가요	song, music	mouth	fop: singing	
눈	snow, eye	mouth, teeth	qop: white	
연습	practice, exercise	mouth, in front	??	
돌잔치	first birthday party	mouth	??	
감	persimmon, feeling	mouth	fop: eating	
사정, 정액	ejaculation, semen	mouth, teeth	qop: white	
인터뷰	interview	mouth, in front	iup: microphone	
그렇다, 그리하다	yes, yes	mouth	fop: speaking	
누락, 빠지다	omission, fall out	mouth	??	
비, 강우, 비가 내리다	rain	mouth	fop: drinking	
결손, 손해, 손실	loss, damage	mouth	qop: red	
사기	scam	mouth, side	??	
묵도	silence*	mouth, forehead	fop: speaking	
바로	right away, immediately	mouth	asp: central	timeline
비다	be empty	mouth	fop: blowing	nothing-there
수리, 독수리	eagle	mouth	ap: beak	creature

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
구름	cloud	mouth, teeth	qop: white	
수분, 습하다	moisture	mouth	fop: drinking	
바나나	banana	mouth, teeth	qop: yellow	
돌	stone,	mouth	?? Stone	
변호사	lawyer	mouth	??	
도장, 스탬프	seal, stamp	mouth	fop: licking (stamp)	
매수	buying	mouth	??	
매	hawk	mouth	ap: beak	creature
고백, 고해	confession	mouth, in front	fop: speaking	
분홍	pink	mouth, below	qop: pink	
노랑, 노랗다, 누렇다	yellow	mouth, teeth	qop: yellow	
곰	bear	mouth	?ma: licking paws	creature
매음녀, 매춘부, 창녀	prostitute	mouth, side	??	
짜다, 소금	salty, salt	mouth	fop: taste	
돌부처	stone buddha	mouth	??	
백화	all sorts of flowers	mouth, teeth	qop: white	
수증기, 증기	water vapor, steam	mouth	fop: drinking	
노란색, 황색	yellow, yellow	mouth, teeth, mouth	qop: yellow	
보람	reward	mouth, in front	??	
쓰다	write	mouth	ma: put pen in mouth	
앞니	incisor	mouth, teeth	bp: teeth	
파	onion, wave	mouth	fop: eating	
물	water	mouth	fop: drinking	
독, 독하다	poison	mouth, side	fop: taste	
뻘하다	obvious, almost	mouth	??	
꿀	honey*	cheek, mouth, in front	fop: taste	
난청	hearing loss*	ear, mouth	fop: speaking	
냉면	cold noodles	mouth	fop: eating	

Table 74: KSL Location: Chin

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
검은색	black color*	head, side, chin	lsa: color	
꿈, 포부, 꿈꾸다	dream, aspiration, dream	chin	??	
맞다, 딱	right, just*	forehead, chin	??	

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
신	god	forehead, chin	??	
괜찮다, 무방하다	okay, okay	chin	fop: speaking	
기다리다, 대기	wait, wait	chin, under	ma: resting on chin	
사실, 정말, 진짜, 참, 맞다, 정말로	right, true, really	chin	fop: speaking	
당연하다, 마땅하다	naturally, deserved	chin	fop: speaking	
만, 뿐, 다만, 단지, 오로지, 오직, 한낱	only	chin	asp: central	timeline
맛있다, 맛나다, 맛	delicious, taste	chin, in front	fop: taste	
행복, 복	happiness, bless	chin	fop: facial expression	
취미	taste, hobby, fancy	chin	fop: taste	
당연하다, 물론	of course, of course	chin	fop: speaking	
나이, 나잇살, 살, 연령, 연세	age	chin, under	??	
요일	day of the week	chin	asp: central	timeline
가난뱅이	poor man	chin	??	poverty
싫다, 거부, 거절	dislike, reject, hate	chin	?ges: dislike	
분	minute	chin	?asp: clockface	time
웃다, 웃음	laugh, laugh	chin	fop: facial expression	
가난, 곤궁, 궁핍, 빈곤	poverty, hardship	chin, under	??	poverty
금주	abstinence*	chin, forehead	fop: drink	
안주	snack [side dishes consumed with alcohol ie: "bar food"]	chin, forehead	fop: drink	
속다	get fooled	chin	??	
맛없다	not delicious	chin	fop:taste	
푼	paid	chin	??	
콩가루	soybean flour	chin	fop: eating	
실험	experiment	chin	fop: speaking	
당사자	party	chin	fop: speaking	
색깔, 빛깔, 색, 색상, 색채, 컬러	color	chin, in front	lsa: color	
술, 알코올	alcohol*	chin, forehead	fop: drink	
밤	night	chin	??	
개인	individual	chin	??	
불행	unhappiness	chin	fop: facial expression	
거부권	veto	chin	ma: head shake	
콩	soybean	chin	fop: eating	
불평	complain	chin	fop: speaking	
콩나물	beansprout	chin	fop: eating	
노리다	to watch	chin	??	

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
감기	cold	chin	fop: spitting up	
엉덩이, 궁둥이, 볼기, 히프	butt	chin	ap: butt	
끈기, 끈덕지다, 끈질기다	tenacity, tenacious	chin	??	
오징어	squid	chin, under	ap: tentacles	creature
실제, 실정, 실태, 현실	reality, facts	chin	fop: speaking	
팬티	panties, underpants	chin	iup: clothing, ap: butt	
한국어 대응표현 협박, -할 뻔하다	blackmail, threat	chin	fop: speaking	
이따가	later	chin	ma: resting on chin	
갈색	brown*	cheek, chin, in front	lsa: color	
파란색	blue*	cheek, chin, in front	lsa: color	
당하다 [當-]	be beaten [當-]	chin, side	eap: to get hit	
초록색	green	cheek, chin, in front	lsa: color	

Table 75: KSL Location: Neck

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
기침	cough	neck	fop: coughing	
희생자 [犧牲者]	victim	neck	ma: cutting throat	death
싶다, 갈급	want, crave	neck	eap: thirst	desire
산화 [散花]	oxidation, sacrifice	neck	ma: cutting throat	death
사제 [司祭]	priest	neck	iup: collar	person
목소리, 음성, 발음, 목청, 언성, 부르다	voice, voice, pronunciation, voice, voice, call	neck	fop: speaking	
내키다, 싶다, 원하다, 바라다, 소원, 바람, 욕구, 염원, 원	want, want, want, wish, wish, wish, desire, desire, want	neck	eap: thirst	desire
겹치다	to overlap	neck	bp: two tumors on neck	
전세 [傳貰]	a type of lease for an apartment that involves giving a large sum of money at one time (a technical term)	neck	ma: chopping neck	risk
마음에 들다	to like	neck	bor: Korean: 고비를 넘기는 것 "to be over the hump"	
어색하다	it is awkward	neck	bp: neck	
목마르다	thirsty	neck	eap: thirst	
의정부 [議政府]	uijeongbu [議政府]	neck	bp: head	rank

배신 [背信]	betrayal [背信]	neck	eap: biting neck	
체험 [體驗]	experience [體驗]	neck	bor: Korean: 고비를 넘기는 것 "to be over the hump"	
질색 [窒塞]	disgust [窒塞]	neck	ma: recoiling in disgust	
자결, 자살	suicide	neck	ma: cutting throat	death
저혈압 [低血壓]	hypotension [低血壓]	neck, side	fop: blood flow	
대통령 [大統領]	president [大統領]	neck	bp: head	rank for person
고혈압 [高血壓]	high blood pressure [高血壓]	neck	fop: blood flow	
장관 [長官]	minister [長官]	neck	bp: head	rank for person
적 없다	never	neck	bor: Korean: 고비를 넘기는 것 "to be over the hump"	
지원자 [志願者]	applicant [志願者]	neck	eap: thirst	desire
목	neck	neck	bp: neck	
혈압 [血壓]	blood pressure [血壓]	neck	fop: blood flow	

Table 76: KSL Location: Shoulders

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
정부	government*	forehead, shoulders	iup: wearable	
역도	weightlifting	waist, shoulders, overhead	ma: weightlifting	
갱생, 회복	rebirth, recovery	shoulder, ipsi to NDH	asp: length	measure
등	back	shoulder, behind	bp: back	
등	rank	shoulder, contra	iup: wearable	rank
뒤쪽, 뒷머리	back and back	should, above, behind	bp: back	
제일, 가장, 맨, 수석	the best, the most, the man, the senior	shoulder, contra front	iup: wearable	rank
자라다, 발육, 성숙, 성장, 장성	grow, development, maturity	shoulders	asp: length	measure
유도	judo	shoulder, ipsi to NDH	ma: shoulder throw	sport
제자, 모나코, 사도	disciple, apostle*	shoulder to stomach	iup: wearable	person
감당, 사명, 책임, 담당, 소임, 역임, 맡다, 책임지다	handle, mission, responsibility, charge, duty, service	shoulder, ipsi	iup: wearable	responsibility
복귀, 환원, 되돌리다, 그대로	return, reduction, return, as it is	shoulders	asp: length	measure
견빵	hardtack (hard bread, similar to cracker)	shoulder, contra	?qop: hard	
구청	ward office*	shoulder to stomach	iup: wearable	
신사	gentleman	shoulders	?iup: wearable	

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
부자	wealthy	shoulder	??	
과거, 지나다	past	shoulder, above	asp: central	timeline

Table 77: KSL Location: Chest

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
작업복	smock	chest, ipsi	iup: wearable	
이불, 침구, 덮다	quilt, bedding, cover		iup: wearable	
화가 치밀어 오르다	to get angry	chest	eap: emotion	anger
운동복, 체육복	sportswear*	head, side, chest, ipsi	iup: wearable	
알다	know	chest	?bp: chest	self
모르다	I don't know	chest, ipsi	?bp: chest	self
우리, 저희	us, we	chest	bp: chest	self
싫다, 싫어하다	dislike	chest	bp: chest	self
걱정, 근심, 상심, 시름, 염려, 우수, 괴롭다	worry, anxiety, heartache, annoyance, anxiety, excellent, annoying	chest, in front	eap: emotion	fear
나, 내, 제	me, my	chest	bp: chest	self
자신	myself	chest	bp: chest	self
받다, 얻다, 타다	to receive	chest	bp: chest	self
위험, 험하다	danger, its tough	chest	??	
참다, 견디다, 인내, 자제	tolerate, patience, self-control	chest	eap: emotion	
이중	double	chest	bp: chest	self
무섭다, 겁, 겁나다, 두려워하다, 두렵다	scared, terrified, afraid	chest	eap: emotion	fear
기타	guitar	chest	iup: guitar	

Table 78: KSL Location: Heart

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
명예 훼손	defamation	heart	iup: wearable	
이름, 명, 성명, 성함	first name, full name	heart	iup: wearable	

Table 79: KSL Location: Arms

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
수고, 노고, 품	hard work, hard work, product	forearm, top	asp: surface	
안녕하세요, 안녕하십니까, 안녕히 가십시오, 안녕히 계세요	hello, hello, goodbye.goodbye.	forearm, top	lsa: good	
잘하다, 잘	do well	forearm, top	lsa: good	
신문	newspaper	forearm, top	asp: printing press	
간단하다, 간략하다, 간편하다, 단순, 편리, 편의	simple, simple, simple, simple, convenient.	forearm, top	asp: surface	
권위	authority	upper arm	iup: wearable	rank
과대	exaggeration	forearm, top	asp: length	measure
별로, 그다지	not really. not really.	forearm, top	lsa: good	
씩 잘하다	do a great job	forearm, top	lsa: good	
다니다	attend	forearm, side	??	
잘못	fault	forearm, top	lsa: good	
피부병	skin disease	forearm, top	ma: scratch arm	
대령	colonel	forearm, top	iup: wearable	rank for person
내력	history	forearm, top	??	
귀찮다, 불편, 성가시다	it's annoying. it's uncomfortable. it's annoying.	forearm, top	ma: scratch arm	
주사	injection	upper arm	eap: injection	
수영	swimming	upper arm to forearm	asp: surface	
하사	staff sergeant	upper arm	iup: wearable	rank for person
공, 공로	distinguished services	forearm, top	asp: surface	
대위	captain	forearm, top	iup: wearable	rank for person
이사, 완장	director, armband	upper arm	iup: wearable	rank for person
오른쪽, 우측	right (direction)	forearm, top	asp: right	
권리, 권한	right, rights (authority)	upper arm	bp: bicep	power
왼쪽, 좌측, 좌	left (direction)	forearm, top	asp: left	
건어붙이다, 적극	roll up (sleeves)	forearm, top	ma: rolling up sleeves	
무능력, 무자격	incapacity, incompetence	upper arm	bp: bicep	power
실습	practice	forearm, top	??	
특히, 각별, 별, 특별, 특수	especially, each, star, special, special	forearm, top	lsa: good	
고속철도	high speed railway	forearm, top	asp: surface	

낙타	camel	upper arm	asp: camel humps	creature
노트북 컴퓨터	laptop	forearm, top	bor: ASL: COMPUTER	
거세다, 맹렬하다, 진하다, 힘차다	it's strong, it's fierce.	forearm, top	bp: arm	power
횡령죄 [橫領罪]	embezzlement [橫領罪]	elbow	asp: surface	cover
소매	sleeve	forearm to armpit	iup: wearable	
장교	officer	forearm to upper arm	iup: wearable	rank for person
집사	butler	upper arm	iup: wearable	rank for person

Table 80: KSL Location: Elbow

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
(No signs found at the elbow)				

Table 81: KSL Location: Wrist

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
대장	general	wrist, back	iup: wearable	rank for person
가렵다, 긁다	itches, scratch	wrist, back	ma: scratch arm	

Table 82: KSL Location: Stomach

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
필요, 소용	need, use, want	stomach	bp: stomach	heart
설사	diarrhea	stomach	eap: illness	
화나다, 노여움, 노엽다, 노하다, 성나다, 성내다, 화내다	angry	stomach to chest	fop: emotion	anger
배부르다, 부르다	to be full	stomach	bp: stomach	
망설이다, 주저, 머무적거리다, 머뭇거리다, 서슴다	hesitate, hesitate, stay intact, hesitate, hesitate	stomach	fop: emotion	hesitance
회개	penitence	stomach	bp: stomach	heart
쌍생아, 쌍둥이	twins	stomach	fop: birth	
따스하다	warm	stomach to chest	eap: feeling warm	
개구리	frog	stomach	ma: tapping stomach	creature
양심	conscience	stomach	bp: stomach	heart
각오, 결심, 작정	resolution, determination		bp: stomach	heart
아들	son	stomach	fop: birth	
착하다	be good*	stomach, nose	bp: stomach	heart

<b>Korean Gloss</b>	<b>English Translation</b>	<b>Location</b>	<b>Category of Iconicity</b>	<b>Metonym / Metaphor</b>
딸, 여식	son	stomach	fop: birth	
소극적	passive	stomach	ma: keep to oneself	

낳다, 낳다, 태어나다, 분만, 생식, 출산, 출생, 탄생, 해산	give birth	stomach	fop: birth	
자음	consonant, sound of a word	stomach	fop: birth	
사위	son-in-law	stomach	fop: birth	
양보	concession, yield		bp: stomach	heart
소용없다, 쓸데없다, 쓸모없다, 필요 없다	useless, no need	stomach	bp: stomach	heart
배	belly, abdomen, ship	stomach	bp: stomach	
좁다, 웅졸하다, 치사하다	narrow, small, sloppy	stomach	qop: skinny	
배탈	upset stomach	stomach	eap: illness	
용감하다, 용기	brave, courage	stomach	bp: stomach	heart
다급하다, 성급하다, 조급하다	urgent, impatient	stomach	fop: emotion	anger
고향	home town	stomach	fop: birth	
협동	collaboration	stomach	bp: stomach	heart
회개	penitence	stomach	bp: stomach	heart
회개, 회두, 회심	repentance, conversion	stomach	bp: stomach	heart
챔피언	champion	stomach	iup: wearable	person
배부르다	full	stomach	bp: stomach	
재료	material	stomach	bp: stomach	heart
관대하다, 너그럽다	generous	stomach, front to side	bp: stomach	heart
간, 간장	liver, soy sauce*	mouth, stomach, side	bp: liver	
제자, 모나코, 사도	disciple, apostle*	shoulder to stomach	iup: wearable	person
구청	ward office*	shoulder to stomach	iup: wearable	

Table 83: KSL Location: Waist/Leg

Korean Gloss	English Translation	Location	Category of Iconicity	Metonym / Metaphor
가마	palanquin*	forehead, cheeks, legs	iup: palanquin	
가방	bag	waist, side	iup: bag	
게으름, 게으르다, 게으름을 피우다, 나태, 태만	to be lazy	waist	ma: pulling with effort	character
게으름뱅이	lazy person	waist	ma: pulling with effort	character for person
기저귀	diaper	waist	iup: diaper	
넓적다리뼈	thigh bone	leg	bp: thigh	
띠	belt	waist, in front	iup: wearable	

미니스커트	miniskirt	legs	iup: wearable	
바지	pants	waist, in front	iup: wearable	
배변	bowel movement	waist, behind	fop: bowel movement	
볼링	bowling	waist	ma: bowling	
뿌리다	spread, sow	waist, in front	ma: spreading seed	
손가방, 핸드백	handbag, handbag	waist, in front	iup: handbag	
수도	capital	waist	iup: wearable (belt)	
수도원	monastery	waist, in front	iup: wearable (belt)	
수도자	religious	waist	iup: wearable (belt)	
수도회	order, convent	waist	iup: wearable (belt)	
역도	weightlifting	waist, shoulders, overhead	ma: weightlifting	
요통	lumbago, back pain	waist, side	bp: lower back	
잃어버리다, 분실, 잃다	lost, lost, lost	waist	asp: behind	
입다	put on	leg, waist	iup: wearable	
치마	skirt	waist	iup: wearable	
태권도	taekwondo	waist	ma: taekwondo	
테니스, 정구	tennis, tennis	waist	ma: swing tennis racket	
테니스를 치다	play tennis	waist, in front	ma: swing tennis racket	
포복절도	crawling	waist, side	ma: holding the stomach in laughter	
허리	waist	waist, side	bp: waist	
허리띠	waist belt	waist	iup: wearable	
휠체어	bathchair, wheelchair	waist, side	ma: using a wheelchair	

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