The Interaction between Surrogates and Tokens

in American Sign Language

by

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Abstract

Speakers of American Sign Language use surrogates and tokens throughout their discourse. Surrogates allow signers to shift roles (or perspectives) and "become" a character or other entity in their discourse. Tokens allow them to miniaturize entities and bring them into a smaller signing space.

Scott Liddell claims that surrogates and tokens cannot interact or converse with one another. He states that because surrogates are in the "here and now" and tokens are not, they are unable to interact with each other. He also claims that surrogates and tokens are unable to enter each other's signing spaces.

In this research project, I explore examples that show otherwise. I have found examples where surrogates and tokens would be able to converse with one another, should the need arise. I have also found examples of tokens entering surrogate space, giving them the "here and now" feature Liddell says they do not possess.

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And last, but certainly not least, my family and friends for their support.

Dedication

This is dedicated, with much love, to my family and friends.

I am the person I am because of you.

~Dare

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<u>Abbreviations</u>

CL=Classifier

→=denotes movement of articulators (L→R means moves left to right)

L=Left

R=Right

LH=Left Hand

RH=Right Hand

"L"=specific handshape

AIRPLANE=English glosses for ASL are in capital letters

Sign/Handshape Descriptions

Curved hand=Fingers are curved and slightly separated. Palm orientation can differ.

3-Finger Claw=Pinkie and ring finger are bent to touch hand. Thumb, index and middle finger are bent to form a claw shape. Palm orientation can differ.

Small "o" hand shape="O" hand shape, but finger tips touch middle thumb instead of tip of thumb, creating a smaller circle. Palm orientation can differ.

Open claw hand=Fingers are spread out and bent at first and second joints, creating a claw shape. Palm orientation can differ.

1 Introduction

American Sign Language (ASL) is used to communicate with those who are deaf and

hard-of-hearing (NIDCD 2015). It is used throughout Canada and the United States of America.

ASL uses the hands, body and facial expressions to communicate. Users of ASL use their whole

body, including facial expressions to convey their message. ASL users utilize surrogates and

tokens in their discourse. Surrogates allow the signer to shift roles and "become" another entity

in their story. When a signer takes on the role of another entity, anything conveyed is from that

entity's perspective. There are two indicators of a signer taking on the role of another entity in

the discourse: the signer will break eye contact with their addressee and there will be a physical

shift in the signer's body position. Tokens allow signers to produce whole scenes in front of

them, in what is known as token space. These scenes are produce in miniature due to the

location of token space. Multiple entities can be represented by tokens in token space at the

same time. Surrogates and tokens each have their own signing space, along with different

characteristics and rules they must follow.

Scott Liddell has stated that tokens, in token space, give non-present entities a "here and

now" quality (Liddell 2003: 192). He states that surrogates are also used to represent non-

present entities; that signers take on the role of missing entities. Liddell states that tokens are

conceptually separate from surrogates (Liddell 2003). Since signers do not take on a new role in

token space, it is impossible for surrogates and tokens to converse in token space. In token

blends, signers remain signers and do not shift roles to become surrogates (Liddell 2003).

Tokens do not enter the "here and now" space that surrogates occupy, thereby making it

impossible for surrogates and tokens to converse or interact in surrogate space. I will try to show

that this is not the case. Tokens and surrogates can interact with one another, and do so on a regular basis.

Scott Liddell states:

"Because of the nature of a surrogate blend, the signer in a new role may exist conceptually among other surrogates within the setting of the blend. In such a situation it is possible for the signer-as-surrogate to converse with or otherwise interact with another surrogate. Because the signer does not take on a new role as part of creating a token blend, conversing with tokens is impossible. This follows from the nature of the token space. A signer-as-signer does not exist conceptually within a token blend with other tokens. The tokens are conceptually separate, and in cases where the token blend includes a setting, the tokens are conceptually in that setting rather than in the here and how with the signer" (Liddell 2003: 221).

I understand this to mean that surrogates cannot enter token space and tokens cannot enter surrogate space. Because of this restriction, surrogates are unable to interact with tokens. However, I have found evidence that tokens can (and do) enter surrogate space, which in turn allows these two to interact with one another. It is also possible for signers to take on new roles when token blends are formed. Further, there appears to be two types of interactions between tokens and surrogates. In the first type, both the surrogate and token represent only one entity. In the second type, the surrogate and token represent two separate entities.

To begin, I will review topics that are related to surrogates and tokens interacting. These include mental spaces, including blends, surrogates, tokens, body partitioning and simultaneity, different types of classifiers, and how role shift in ASL can be identified. Following that, I will

provide examples of surrogates and tokens interacting in ASL discourse. Lastly, I will draw

some conclusions based on the examples I have found in my data.

2 <u>Literature Review</u>

2.1 Introduction

In the following section, I will review the literature to date on topics related to the interaction between surrogates and tokens. These include mental spaces, surrogate and token space, body partitioning and simultaneity, classifiers, and indicators of a role shift/change in ASL.

2.2 Mental Spaces

2.2.1 Introduction

In this section I will discuss mental spaces. They are relevant to this paper because they explain how a person is able to understand a dialogue that has many components. It provide us with an explanation as to why a speaker can convey a message that includes a token/surrogate interaction as well as why a listener can understand it. In this section, I will review the components that make up mental spaces, as well as how they work together to allow us to conceptualize an event.

2.2.2 Mental Spaces

In order to better understand mental spaces, let us first look at an example, used by Fauconnier and Turner, which they in turn borrow from Arthur Koestler:

One morning, exactly at sunrise, a Buddhist monk began to climb a tall mountain. The narrow path, no more than a foot or two wide, spiraled around the mountain to a glittering temple at the summit.

The monk ascended the path at varying rates of speed, stopping many times along the way to rest and to eat the dried fruit he carried with him. He reached the temple shortly before sunset. After several days of fasting and meditation he began his journey back along the same path, starting at sunrise and again walking at variable speeds with many pauses along the way. His average speed descending was, of course, greater than his average climbing speed.

Prove that there is a spot along the path that the monk will occupy on both trips at precisely the same time of day. (Arthur Koestler 1964: 183-184)

Mental spaces are mental packets that are constructed as we think and talk (Liddell 1995 and Fauconnier and Turner 1998), and can be modified as thought and conversation flow (Fauconnier and Turner 1996). They are temporary structures, not to be confused with domains of knowledge, which are relatively stable (Evans and Green 2006: 403). Mental spaces contain elements that help us with local understanding and action and are constructed by frames and cognitive models (Fauconnier and Turner 1998). A mental space can be anything from a person's conception of their immediate surroundings to a conception of a story, event or image (Liddell 1995). Mental spaces are comprised of input structures, generic structures and blend structures. In the above example, there are two input spaces. Each contains a partial structure, one for each of the journey days (Fauconnier and Turner 1998). Each of the input spaces has a generic space mapped onto it. These generic spaces contain what each of the input spaces have in common (Fauconnier and Turner 2006). It is any structure that belongs, at any moment during the conceptual work, to both of the input spaces (Fauconnier and Turner 1998). In the monk example, the generic spaces contain a moving individual (the monk), his position, a path that connects the foot of the mountain with the summit, and a day of travel. Since the direction the monk travels, as well as the day of travel differ between the two input spaces, they are not mapped onto the generic space (Fauconnier and Turner 1998). The final structure is the blend. In the blend, the two separate days, the two separate paths and the corresponding times on each day have been fused together. The direction of travel as well as each individual monk are not fused in the blended space and are kept as they were in their respective input spaces. When these

two spaces are blended together, we get one conceptualization that allows us to "see" the monk traveling up and down the mountain at the same time.

Between mental spaces, there can be cross-mapping. This occurs when counterparts in the input spaces are connected.

Frames are systems of concepts that are related. If/when you understand one of the concepts, you will understand their whole structure (Fillmore 2008). If one of the concepts is introduced into conversation (or text), all of the others in the structure also become readily available (Fillmore 2008). Frames are also known as schemas, scripts, scenarios, cognitive model or folk theories (Fillmore 2008). Frames help to structure both our conceptual and social lives (Fauconnier and Turner 2006).

Each blend has at least two input spaces (Fauconnier and Turner 2006). An input space contains a partial structure of the final blend. Elements are taken from the input spaces and projected into the final blend.

Fig. 1 Input spaces for the Buddhist Monk (Fauconnier and Turner 2002) (Used with permission)

Input Space 1   Input Space 2

Using the Buddhist Monk example, Input Space 1 represents the monk's journey up the hill and Input Space 2 represents the monk's journey down the hill. Working with the monk example, a1 is the monk on his journey up the hill, on day 1 (d1). Similarly, d2 represents day two and the monk on his journey down the hill (a2)

2.2.3 Conclusion

Mental spaces are temporary packets of information that we construct as our conversation flows. They can be modified as the discourse progresses and are made up of multiple components, including input spaces and blended space. The next section discusses blended space.

2.3 Blended Space

2.3.1 Introduction

The following section looks at blended space, including what components make up blended space, the goals of blends and how blended space can be modified according to discourse. Understanding blended space is important for this research project, as the examples discussed are blends made up of multiple input spaces.

2.3.2 Blended space

Blended space occurs when (at least) two input spaces combine to form one conceptual space, known as the blend. The blend is comprised of portions of the structure of each input space and becomes its own structure (Fauconnier and Turner 1996).

Fig. 2 Blended space for the Buddhist Monk (Fauconnier and Turner 2002) (Used with permission)

Input Space 1   Input Space 2
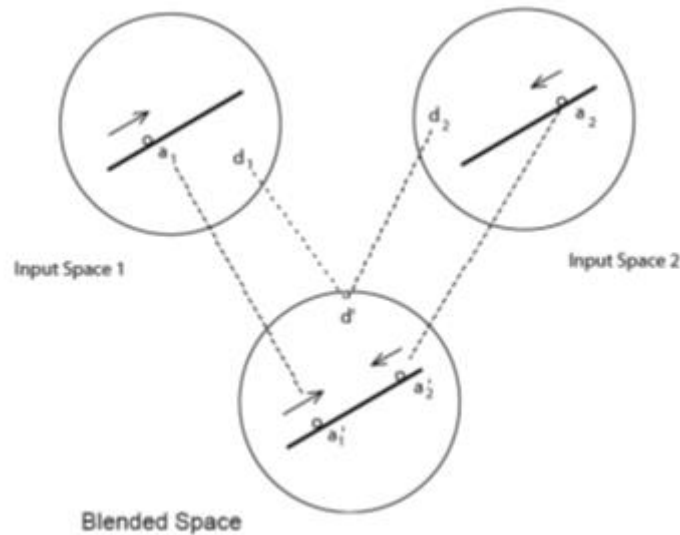
Blended Space

Once again returning to the Buddhist monk example, d1 and d2, from the input spaces, have been fused to form d' in the blended space. The traveling monk's direction and position needs to be preserved in the blended space. Therefor they are not fused. They become a1 and a2 in the blended space (Fauconnier and Turner 2006). Not everything in the input spaces is projected onto the blended space. For example, the calendrical time of the journey of the monk is not projected onto the blend (Fauconnier and Turner 2006). Similarly, the blend contains structure that is not in either of the input spaces. These are known as emergent structures (Fauconnier and Turner 1998). An example of emergent structure from the Buddhist monk is the two simultaneously moving monks. Each of the input spaces has one moving monk, but the blended space has two monks, each moving in opposite directions (Fauconnier and Turner 2006). We are able to compare their positions and see if and where they coincide (Fauconnier and Turner 1998).   Blends are further developed in three different ways:

1) Composition: Elements in the blend can be composed of elements not in the input spaces. In the blended space for the Buddhist monk example, there are two moving entities. However, in each of the input spaces, there is only one. Fusion is a type of composition.

2) Completion: Pre-existing frames allow us to understand without having to compute encounters as if they were brand new each time we encounter them. We already know through "common sense" that two individuals who start a journey at the same time from opposite ends of a path will meet up at some point. While there is no "meet up" in either of the input spaces, there is one in the blended space, and it is added through completion.

3) Elaboration: The blend can be elaborated using principles and logic in the blend, along with our stimulating out imaginations (Fauconnier and Turner 2006). Some principles will have come about during completion, while others are brought about through elaboration. This can be done through a process known as "run the blend" (Fauconnier and Turner 2006: 315). This running of the blend can be done indefinitely. For example, Fauconnier and Turner suggest that the monks could meet and end up in a philosophical discussion. Due to the indifinitiveness of elaborations, blends have the potential to become "extremely elaborated" (Fauconnier and Turner 2006: 315).

Composition, completion and elaboration help to form the emergent structure in a blend.

A blend cannot be predicted solely from the structure of its input spaces (Fauconnier & Turner 2008). While they rely heavily on the input's structure, background and context also contribute (Fauconnier and Turner 2006). If we are to look at the example below, we will see that two input spaces contribute to the blended space. The example is taken from a philosopher leading a seminar (Fauconnier and Turner 1996: 1):

I claim that reason is a self-developing capacity. Kant disagrees with me on this point. He says it's innate, but I answer that that's begging the question, to which he counters, in Critique of Pure Reason, that only innate ideas have power. But I say to that, what about neuronal group selection? And he gives no answer.

One input space consists of the philosopher leading the seminar. The second input space contains Kant. These two input spaces combine and create the blended space, in which the "frame of debate" (Fauconnier and Turner 1996: 1) between the two is located. The two input spaces share a frame structure. They both contain a thinker (the philosopher and Kant), they both contain musings and thoughts of their respective thinkers, these musings and thoughts are expressed, and they share a common language (Fauconnier and Turner 1996). These shared characteristics form a fourth space in this blend; the generic space. A generic space is mapped onto each of the input spaces   While we work over all four spaces at the same time, it is the blended space that allows us structure, integration and efficiency that we do not get from the other three spaces (Fauconnier and Turner 1996).

Fig.3 A network (Fauconnier and Turner 2002) (Used with permission)

Generic Space

Input I$_1$

Input I$_2$
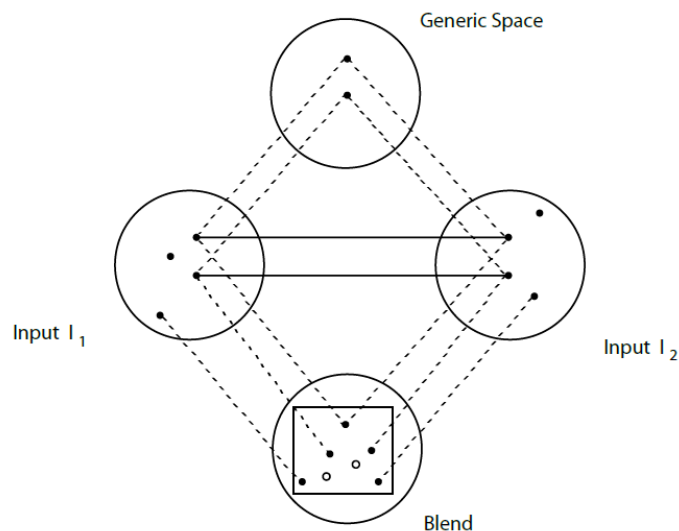
Blend

In the above example, the circles represent mental spaces. We can see that this network has four: two input spaces, a generic space and a blended space. The solid lines represent counterpart connections. There are many types of counterpart connections, including connections between frames, roles in frames, connections of identity, transformation or representation, or metaphoric connections. If we look back to the monk example, the monks, their journeys, the days and their paths are examples of counterpart connections. Fauconnier and Turner state that this is a "minimal network". Networks can have more than two input spaces, as well as multiple blend spaces. The square inside the "Blend" circle is emergent structure.

An example of blended space in a signed language, ASL, comes from Paul Dudis. In this example from Wulf and Dudis 2005 a gift giver, a gift receiver and the gift being exchanged (a birthday card) are all present in the discourse, with only one signer. This example shows a blended space formed from three input spaces. The first input space would contain the gift giver, the second input space would contain the gift receiver and the third input space would contain the gift itself. When these three spaces blend together, we are left with a conceptualization of someone giving a gift, another person receiving the gift, as well as the gift itself. Even though the birthday card and the gift's receiver are not physically present, they are conceptually present (Wulf and Dudis 2005). If any one of these input spaces were to be removed, the blend would change and we would not conceptualize it in the way the signer intended. In addition to the non-physical entities of gift and gift receiver being mapped onto this blend, the elements of time and setting are mapped onto the real space. This gives the blend a "here and now feel" (Wulf and Dudis 2005: 319).

Blends can also be used in nonnarrative situations. Below is an ASL phrase showing a nonnarrative example:

(1) (PRO)　　　Future　OH-I-SEE

　　you　　　　will　　"Oh, I see" ("You will understand") (adapted from Wulf and Dudis: 2005: 319)

In this example, the ASL sign for UNDERSTAND is not used. Instead, the signer conveys his message by breaking eye contact with his addressee and moving his body to indicate a role shift and a shift in time. The signer shifts into the addressee's "future state and location" (Wulf and Dudis 2005: 320). Wulf and Dudis explain that this type of blend is more schematic than the birthday gift example described above.

Depending on the discourse, blends can vary in depth and detail (Dudis 2004), and some blends are better than others (Fauconnier and Turner 1998). A blend can vary in the number of entities, the complexity of the actions of the entities, how fully the signer takes on the role of another entity, as well as in the length of time of the blend (Wulf and Dudis 2005). Instructing someone on how to open the hood of their car would contain less detail than a narrative about the event. When instructing, you would not be concerned about how the human body was positioned when pulling the lever or the expression on their face. However, in a narrative describing the same event, body position and facial expression would be important to the context of the story (Dudis 2004). In these two cases, the blending process is the same, but the outcome is different (Dudis 2004).

2.3.3 Vital Relations

Vital relations occur when an element is projected from an input space to the blended space and a second element is also projected from the input space to the blended space because of the (vital) relation between the two elements (Fauconnier and Turner 2006). Vital Relations can exist either between the mental spaces or within the mental spaces of a network (Geeraerts 2007). In some cases, Vital Relations can exist in both areas. Those that exist in between the mental spaces are known as "outer-space vital relations", while those that exist in the mental spaces are known as "inner-space vital relations" (Turner 2007: 381). Below is a list of Vital Relations from Turner in Geeraerts, 2007:

- Change
- Identity
- Time
- Space
- Cause-Effect
- Part-Whole
- Representation
- Role

- Analogy
- Disanalogy
- Property
- Similarity
- Category
- Intentionality
- Uniqueness

2.3.4 Goals and Optimality Principles of Blends

The main goal of conceptual integration is to achieve human scale (Fauconnier and Turner 2006). When conceptual integration occurs, there are partial counterpart connections between input spaces. These can include connections between frames, between roles in frames, connections of identity, transformation or representation, or metaphoric connections (Fauconnier

and Turner 2006). When looking at the monk example, counterpart connections include the

monks, their paths, the journey and the days of journey (Fauconnier and Turner 2006). This

often requires transformations of elements and structures in integration networks, which are then

projected onto a blend (Fauconnier and Turner 2006). The governing principles (listed below)

help achieve human scale in blends (Fauconnier and Turner 2006). Human scale helps humans

deal with reality. It does this through "direct action and perception inside familiar frames,

typically involving few participants and direct intentionality" (Fauconnier and Turner 2002: 322)

Once a blend reaches human scale, it can then be used to help form other human scale blends

(Fauconnier and Turner 2006). In addition to the goal of achieving human scale, there are five

sub-goals of conceptual integration. These are:

1) Compress what is diffuse

2) Obtain global insight

3) Strengthen vital relations

4) Come up with a story

5) Go from many to one (Fauconnier and Turner 2006: 340)

Even though blends can vary in detail and some are better than others, there are

optimality principles that blends can meet "more or less well" (Fauconnier and Turner 1998:

162). These seven governing principles compete with one another, while trying to achieve

human scale (Fauconnier and Turner 2006).

1) <u>Intensifying Vital Relations:</u> To intensify vital relations, a single vital conceptual

relation is scaled or transformed into others. This compresses a formerly spread out

concept.

2) <u>Maximizing Vital Relations</u>: Human scale structures are created in the blend by maximizing vital relations.

3) <u>Integration</u>: The blend needs to create a scene that can be manipulated as a whole unit. Ideally, each space in the blend should be able to create a scene that can be manipulated as a whole. (As mentioned earlier, mental spaces change and flow along with the conversation.)

4) <u>Topology:</u> Each input space, and each element in that input space, that is projected onto the blend, the relations of the element in the blend need to match the relations of its counterpart.

5) <u>Web:</u> The blend must be able to be manipulated as a unit, while maintaining the web of appropriate connections to the input spaces. This must be done easily and without additional surveillance or computation.

6) <u>Unpacking</u>: Based on the blend alone, the addressee must be able to unpack the blend and reconstruct the input spaces, the cross-space mapping, the generic space and the network of connections between the spaces.

7) <u>Relevance</u>: If an element appears in blended space, there needs to be significance for this element (all things being equal). This significance can include relevant links to other spaces and relevant functions in running the blend. (Fauconnier and Turner 2006)

2.3.5 Blend Networks

1) Mirror Network: A mirror network exists when the input spaces, generic space and blend all share topology given by an organizing frame. An organizing frame, in terms of mental spaces, is a frame that specifies the nature of the relevant activity, events

and participants and provides a topology for the space it organizes (Fauconnier and Turner 2006). In keeping with the Buddhist monk example, the shared organizing frame is a man walking along a mountain path (Fauconnier and Turner 2006). Organizing frames cannot be abstract. A frame of competition is too abstract as it does not specify an event structure or type of activity (Fauconnier and Turner 1998). A mirror network is an example of a shared topology network (Fauconnier and Turner 2006).

2) Shared Topology Network: In a blend, the topology of the generic space is shared among the two input spaces, the generic space and the generic space (Fauconnier and Turner 2006). When all four spaces share the topology of the generic space, a shared topology network is formed.

3) Single-Scope Networks: The input spaces in single-scope networks each have their own organizing frames and only one of them is projected onto the blend. The organizing frame of the blend becomes an extension of the organizing frame of only one of the input spaces.

4) Double-Scope Networks: A double-scope network is formed when each of the two input spaces has their own organizing frame. Some topology from each of the organizing frames is projected onto the frame of the blend (Fauconnier and Turner 2006). An example of a double-scope network is the phrase *same-sex marriage*. One input space contributes marriage, but not same-sex partners. The second input space contributes same-sex partners, but not marriage (Fauconnier and Turner 2006). The blend takes "marriage" from input space 1 and "same-sex" from input space 2 and projects these onto the blend to form "same-sex marriage".

5) Simplex Networks: In a simplex network, one input space has an abstract frame and the other input space has a specific situation that has no organizing frame for the purposes of integration (Fauconnier and Turner 2006). By having no organizing frame in the second input space, there is nothing to compete with the organizing frame in the first input space.

2.3.6 Conclusion

Blended space is composed of elements projected from at least two input spaces. Blends can be formed to various degrees of complexity. They have goals to reach and need context and background information to be completed. In the following section I will look at real space in terms of conceptualization.

2.4 Real Space

2.4.1 Introduction

In this section, I look at real space. Real space is important because it deals with a person's conceptualization.

2.4.2 Real Space

Liddell defines real space as "a person's current conceptualization of the immediate environment based on sensory input" (Liddell 2003:82). These conceptualizations can be derived from visual inputs as well as input from the sense of touch or sound (Liddell 2003). Even though we cannot see the back of our desk chair, we can feel it and therefore conceptualize that it is there. Likewise, we cannot see our computer fan working, but we can hear it. Real

space is grounded. Liddell explains that real space is grounded because the elements of real space are "conceptualized as existing in the immediate environment" (Liddell 2003: 82).

2.4.3 Conclusion

A person's conceptualization of the world around them is their real space experience. Conceptualization can be comprised from input from all of the senses.

2.5 Token Space and Surrogate Space

2.5.1 Introduction

Before we can establish if there is an interaction between tokens in token space and surrogates in surrogate space, we need to discuss what each is comprised of. In the following sections, I will outline the characteristics of tokens and token space, as well as surrogates and surrogate space.

2.5.2 Tokens and Token Space

Token space is a grounded mental space (Liddell 1995). Tokens are three-dimensional (Liddell 2003) conceptions of entities that are given manifestations in physical space. They bear no physical resemblance to the entities they are representing (Liddell 2003). Tokens only exist in the physical space in front of the signer where the signer's hands are located (Liddell 1995). While the space in which tokens can be produced is restricted, there in an unlimited number of places *within* that space to put them (Liddell 1995). For this reason, the locations are neither listable nor morphemic (Liddell 1995). Tokens are sized to fit in this limited space, and therefore have no bodily features, such as heads or arms. One feature that they do have is height. The signer can direct pronouns and indicating verbs towards tokens (Liddell 1995).

Pronouns and indicating verbs can be directed at tokens according to height, as if the represented entity were present. For example, handing something to a child would be directed lower than handing something to an adult. It is the physical location of the sign in the signing space that is the basis how pronouns and indicating verbs are directed at tokens (Liddell 1995:35). Through blending with real space, tokens give absent entities a "here and now" presence (Liddell 2003: 192).

It is possible to have multiple tokens within the token space. For example, a signer describing five different genres of movies could establish a token for each one in the token space in front of them (Liddell 2003). This can be seen below in fig. 6. The signer, in fact, has six tokens in use. One is for each genre of movies (old movies, foreign movies, art movies, commercials and animation) and a sixth token that represents all of the movies in one token. The signer can indicate each individual category, such as describing his favourite Super Bowl commercial, or he can indicate all of the categories by directing his verbs at the sixth token.

Fig. 4 Multiple tokens within token space (Liddell 2003: 196) (Used with permission)
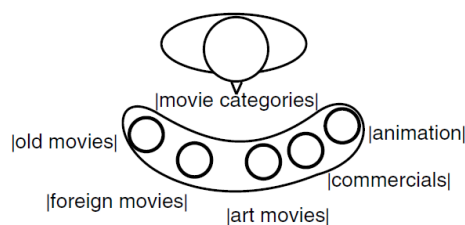
Token space is non-topographical (Liddell 2003).   This means that a token "merely" exists, and is an isolated entity (Liddell 2003: 190).   Unlike surrogates, concepts such as near, far, above and below do not exist in relation to tokens and are not relevant (Liddell 2003). Token space is

located in front of the signer's torso "in which the hands may be located while signing" (Liddell 1995: 33).

Liddell states that unlike surrogate space, the signer is not incorporated into token space in any manner (Liddell 2003). I will show later that this is not always the case.

Below is an example of a token taken from the data used in this thesis[1]. In this example, the signer is explaining the rules of rugby and how it is different from American football. He explains after you achieve a try in rugby, that is the end of the scoring opportunities. However, he explains, in American football, the scoring team has a chance to kick a field goal for an additional point. The token is on his left hand. His hand takes on a handshape resembling goal posts. The signer's hand is significantly smaller than life sized goal posts. A second token can be seen on the signer's right hand, when it takes on a classifier handshape used in ASL to show long, thin entities. This token is representing the football that is being kicked through the goal posts for the extra point. While the signer breaks eye contact with his addressee briefly, he resumes eye contact with her and retains it through the rest of his explanation. In addition, his body remains neutral; there is no shift to the right or left, nor does he lean backwards or forwards. By not moving his body, he is not indicating a role shift[2]. With no role shift, no surrogate is present, nor is there any interaction with the token on the part of the signer.

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[1] A full description of data can be found in Chapter 3: Data and Methodology
[2] Ways to identify role shift are discussed in 2.8 Role Shift

(2) Example of a token (disc 2--16:22-16:23)

(a)   (b)   (c)

For the sake of convenience, all tokens in this paper will be regarded and treated like classifiers. Classifiers are morphemes used in signed languages to represent the size and shape of an entity. They are further discussed in section 2.7.

2.5.3 Surrogates and Surrogate Space

Scott Liddell uses the term *surrogate* to describe a person or entity that is not physically present (Liddell 1995). They differ from tokens in many ways. To begin with, surrogates are full sized, whereas tokens are miniature. Secondly, unlike tokens, surrogates can occur anywhere in the signing space[3] (Liddell 2003) or even outside of the signing space (Liddell 1995). This means that surrogates can occur anywhere in the physical space that surrounds the signer (Liddell 1995), including behind them. They can occur close to or far from the signer (Liddell 2003: 154). Pronouns and indicating verbs can be directed towards surrogates. This makes surrogate space a grounded mental space (Liddell 1995: 31).

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[3] Liddell defines signing space as a three-dimensional space ahead of the signer that extends from their head to their waist (1995).

Signers become surrogates by taking over the role of one of the entities in the dialogue. Much like an actor takes on a role in a movie or a play, a signer takes on a role in their dialogue (Liddell 2003).   This is often done during role shifting (Liddell 1995).   One example of this appears in a description of a Garfield comic strip. The signer produces a blend and "takes over" the role of Garfield. The signer was asked to look at a Garfield comic and then describe it (Liddell 2003: 151). In the comic, a dialogue occurs between Garfield (a cartoon cat) and Jon (his owner). Jon explains to Garfield that the t.v. remote doesn't work and that Garfield would have to get up out of his chair to change the channel. Garfield subsequently grabs Jon, points him towards the television and uses him as a remote control. While Jon remains an invisible entity throughout most of the dialogue, the signer maps the entity of Garfield onto his own head and torso. Garfield is now visible. This is evident when the signer signs CAT[4] followed by LOOK-TOWARD. When the signer signs CAT, his head and eye gaze are directed forward (Liddell 2003). The surrogate is created when the signer rotates his head and his eye gaze to the right, where he has previously established Jon to be standing.   The signer also directs his fingertips to where Jon would be present (to his right).

It is important to note that in this example not all of the signer's body is used in the blend; only his head and eye gaze become that of Garfield's. His hands remain his own and he is able to sign LOOK-TOWARD as the narrator of the story. If his hands were included in the blend, it would be interpreted as Garfield signing LOOK-TOWARD, which is not depicted in the comic strip (Liddell 2003: 152). This is an example of body-partitioning. Body-partitioning allows the signer to use different parts of their body to represent and portray different entities. Body partitioning is further discussed in section 2.6.

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[4] English glosses are typed in all capital letters.

It is possible for the signer to not be a surrogate for one of the conversation participants. If we compare the two examples below, we can see how this is possible.

<pre>
          wh-q
      ‾‾‾‾‾‾‾
   PRO-1, HAPPEN
   I went, "What happened?"
(3)
</pre>

<pre>
          wh-q
      ‾‾‾‾‾‾‾
   SUE, HAPPEN
   Sue went, "What happened?"
(4)   (Liddell 1995: 28)
</pre>

Both examples have participants asking questions. However, in the first example, it is the signer asking the question. In the second question, the signer becomes a surrogate and blends into Sue to ask the question (Liddell 1995). This is similar to the previous example when the signer "became" Garfield to look up at Jon.

Surrogates are able to take on roles of first, second or third person entities (Liddell 1995). Because surrogate space is grounded, there is no difference in the way surrogates are referred to as compared to that of physically present entities (Liddell 1995: 31). Surrogates are deictic, not anaphoric (Liddell 1995: 31).

Below is an example of a surrogate with no token that was taken from the data used for this paper.

In this example, the signer takes on the role of his father. The surrogate then tells his wife (the signer's mother) that she should save her money instead of taking it out of the bank. In the second image, we can see that the signer breaks eye gaze with his addressee, and shifts his body slightly to the left. By breaking eye gaze and moving his body, the signer has become a

surrogate and taken on the role of an entity or character in his discourse. Indicators of role shift is discussed in the section 2.8.

(5) Example of a surrogate (disc2--~26:05-26:06)

          (a)   (b)   (c)

2.5.4 Conclusion

Tokens allow the signer to present a whole scene in miniature in front of their body. Surrogates allow the signer to take on a different role (or roles) in their discourse. These two elements are important to understand before we can begin to look for any interaction between the two of them. If a signer produces a surrogate and a token simultaneously, they are partitioning their body into different zones. Body partitioning and simultaneity are discussed in the next section.

2.6 Body Partitioning and Simultaneity

2.6.1 Introduction

In the following section, I will explain the use of body partitioning in ASL and how it leads to simultaneity. Body partitioning is important because it allows a signer to use two different parts of their bodies to convey two different entities, such as two surrogates, two tokens

or a surrogate and a token. Simultaneity comes in to play because if there is an interaction between two entities, both must be present in the dialogue at the same time. In order for there to be an interaction between a surrogate and a token, the signer must portray the surrogate and token at the same time.

2.6.2 Body partitioning and simultaneity

When we speak, we are only able to utter one thing at a time. Our body mechanics only allow us to mouth one utterance at a time. However, signers are able to produce multiple expressions at the same time. These expressions can be articulated not only with the signer's hands, but their "torso, eye gaze, mouth and….other facial actions" (Vermeerbergen, et al. 2007: 1). One example that clearly shows how a signer's body can be partitioned-and used to convey two separate ideas- is that of Paul Dudis' motorcycle rider. In this example, the signer's head, face and torso represent the head, face and torso of a motorcyclist. The vehicle's movement is shown using the signer's dominant hand (Dudis 2004). The signer is able to separate a body part from the blend and use it to create a new element. A signer's body can be partitioned into four separate "zones" (Dudis 2004: 235). These are the signer's two hands, oral articulators and facial expressions.

A signer is able to use both of their hands to produce signs in a number of ways. Each hand can produce a completely distinct sign or one hand can hold a sign *in situ* while the other hand carries on with the narrative (Vermeerbergen et al. 2007). This is known as manual simultaneity (Vermeerbergen et al. 2007). In contrast, manual-oral simultaneity occurs when the signer's hands and mouth are used at the same time. There are three types of manual-oral simultaneity. One occurs when the signer mouths the same lexical item from a spoken language

while they are signing the lexicon (Vermeerbergen et al. 2007). The second occurs when the

signer mouths a separate lexical item while signing the lexicon (Vermeerbergen et al. 2007). For

example, in Quebec Sign Language (LSQ), the French words *quoi* and *après* (WHAT and

AFTER, respectively) are orally articulated without any lexically related sign. LSQ uses them as

oral loan words (Vermeerbergen et al. 2007). Lastly, oral articulators can be used to produce an

onomatopoeic item. This contributes a level of sensory detail to the blend (Dudis 2004).

Phonation is not always required; movement of the oral articulators is often enough. One

example of an onomatopoeic item used in a blend is when the signer is depicting water falling

drop by drop from a leaky faucet. As Dudis explains, "The lips are pressed together during the

initial segment of the sign. They open when the sign moves, and are pressed together at the end

of the sign production." (Dudis 2004: 233). This movement of the oral articulators resembles the

movement when "bip" is produced, as if the signer were actually saying the word. While there is

not necessarily any phonation, it is a part of the verb the signer is producing.

Non-manual articulators other than the mouth can also be used simultaneously

(Vermeerbergen et al. 2007). Eye gaze and body leans are two examples. For example, they can

be used to show the facial expression of someone non-visible (Dudis 2004: 234) or to show

different points of view between non-present entities (Vermeerbergen et al. 2007).

A signer's body can be partitioned to allow one body part to function as two grammatical

items at the same time. Turning to an example from Slobin 2008, using the ASL verb LOOK,

Paul Dudis is able to partition his body so that is he simultaneously both the person who is

looking and the person who is being looked at. His head and face serve as both subject and

object. The signer's LOOK sign points in the direction of the signer. This indicates that he is

the one being looked at, or the object. Simultaneously, the signer's facial expression is that of an

angry person, which allows him to also be the one doing the looking, or the subject (Slobin 2008).

By being able to partition their bodies and use different parts to show different entities and by being able to show multiple entities at the same time, signers are able to utter multiple things simultaneously. Next we will look at classifiers, which made up a good chunk of the entities shown by the signers in my examples.

2.6.3 Conclusion

By separating their body into different zones, a signer is able to articulate more than one utterance at a time. Thus, they are able to shift roles and become a surrogate as well as produce a token to represent an entity at the same time. In the following section I will discuss classifiers, which were often used to represent entities in the examples I found in my data.

2.7 Classifiers

2.7.1 Introduction

In the following section, I will review the different categories of classifiers, as explained by Ted Supalla (1982, 1986). Some linguists do not agree that this is an adequate description of classifiers, while others do not believe that classifiers exist at all[5]. However, for this research project, I am working with Supalla's descriptions as he presented them. Classifiers are significant because the majority (if not all) of the tokens that I have been studying have come in the form of classifiers.

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[5] For more information, please see Schembri 2003.

2.7.2 Classifiers

Classifiers are used in polycomponential verbs (PVs) (Schembri 2003). They change in form in order to accommodate categorical properties of the nouns they represent (Supalla 1986). They also appear in classifier predicates, one of the three types of verbs in American Sign Language (Wulf, Dudis et al. 2002). The other two types of ASL verbs are pointing or indicating verbs and plain verbs (Wulf, Dudis et al. 2002). Classifier predicates map real-world space onto the signing space (Wulf, Dudis et al. 2002). Classifiers have been found in over 30 signed languages around the world, including American Sign Language (ASL), British Sign Language (BSL), Danish Sign Language and German Sign Language (Schembri 2003). The handshapes used in classifiers modify in order to show the referent's most salient characteristic, especially its shape (Schembri 2003). For example, they distinguish between a 2-legged noun (person) and a 4-legged noun (dog). Classifiers map real-world space onto the signing space (Wulf, Dudis et al. 2002). A right to left movement in the real-world can be mapped onto the signing space by a right to left movement of a classifier within the signing space (Wulf, Dudis et al. 2002). In ASL, there can be multiple classifiers to represent the same noun; it is even possible to use different classifiers within the same discourse. This also occurs in spoken languages. Each classifier focuses on a different aspect or characteristic of its noun (Supalla 1986). While three types of verbs exist in signed languages, classifiers are only used in spatial verbs. Plain verbs and agreement verbs do not use classifier constructions (Morgan and Woll 2007). Spatial verbs use topographic space to show trajectory, path, speed and location. These movements are isomorphic with the real world (Morgan and Woll 2007); they have a similar form to the actions they represent. In contrast, agreement verbs show number and person. In spatial verbs, classifiers show information about the class of nouns (Morgan and Woll 2007). Obligatory

information for spatial verbs includes location of a referent, where it moves from and to, how

fast it moves and what noun class it belongs to (Morgan and Woll 2007: 1161).

ASL nouns can be classified in one of five ways. These are:

1) Shape and Size Specifier (SASSes)

2) Semantic Classifier

3) Body Classifier

4) Body Part Classifier

5) Instrument Classifier

An ASL noun can have many different classifiers to represent it, depending on which

physical attribute the signer wishes to focus on (Supalla 1986). The interaction between the

agent, instrument used and the subject is also taken into consideration when choosing a classifier.

A signer can also switch classifiers for the same noun through the discourse, if the need arises

(Supalla 1986).

2.7.3 Affixes

Supalla argues that classifiers can have affixes attached to them. For example, Supalla

claims that the semantic classifier that represents TREE in ASL can have a broken affix attached

to it to indicate the tree is broken. In this example, the affix is shown by bending the wrist

forwards (Supalla 1982). A second affix, representing wrecked, can also be added to classifiers.

In keeping with the TREE example, the fingers would be bent in order to show a tree that is dried

up or dead (Supalla 1982).

Morphemes can be added to SASSes to indicate textural features of an object (Supalla 1986: 198). Visual texture and consistency morphemes co-occur with SASSes to form complex classifier forms (Supalla 1986). For example, in ASL a liquid substance is indicated by floating movement of the fingers that moves across space. If a gaseous substance is to be shown, a wiggly movement of the fingers is added to the SASS. Smooth textures are differentiated from a rough texture simply by a difference in which morpheme is added. For smooth textures, the signer's fingers are held close to one another, indicating a smooth surface[6].

When using multiple classifiers, scale must be taken into consideration. For example, using an animal classifier to show a bird sitting on a human's head is acceptable. However, using an animal classifier to show a bird sitting on another bird's head is not, unless the second bird is quite a bit larger than the first (Supalla 1982). Similarly, using a vehicle classier to show a full sized car hitting a person is not acceptable. A vehicle classifier could be used to show a full sized car hitting King Kong, or a toy car hitting a person (Supalla 1982).

2.7.4 Types of Classifiers

In the following section, I will describe the multiple types of classifiers used in signed languages, as described by Ted Supalla. These are size and shape specifier (SASS), semantic classifiers, body classifiers, body part classifiers limb classifiers, and instrument classifiers.

2.7.4.1 SASSes

In the first classification, the handshape represents the size and shape of the object (Supalla 1986). These are known as size-and-shape specifier or SASSes. Parts of the signer's

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[6] Supalla's diagrams also show a hand bound together but moving in a wavy pattern. He titles this "rough texture" but offers no description for it.

hand represent parts of the referent object, whether it is one or two dimensions of the object. The hand may be used in relation to the other hand or other body parts to further show dimension. The hand may be moved, in order to trace an outline of the referent object in two or three dimensions (Supalla 1986: 184). SASSes agree with the noun's shape and size (Supalla 1986). Each finger, including the thumb, along with the signer's forearm, can be a possible morpheme. Supalla calls these hand-part morphemes (Supalla 1986). These morphemes can be combined in various ways to construct the classifier. Each morpheme classifies a "different aspect of dimension of the visual-geometric structure of the noun referent" (Supalla 1986: 186). One hand-part indicates whether the object is a dot or a one-or-more dimensional object (Supalla 1986: 186). Another hand-part indicates where the object is straight or round. When combined, these hand-parts form static SASSes. It must be noted that these hand-parts must be combined in a fixed order (Supalla 1986). Hand-part morphemes can be either bound or free (independent) morphemes, just as in spoken language. For example, if only one morpheme is marked, it is an independent morpheme. However, some hand-part morphemes, such as a signer's middle finger, can only be added to an already marked hand (Supalla 1986). Some handshapes have a movement morpheme that further add dimension to the object. This is done by tracing or outlining the dimension it represents. These are known as tracing SASSes (Supalla 1986).

First-Level Static SASSes

When forming SASSes, morphemes must be added in a specific order. The first phonological feature to be added is a straight index finger, extending straight from the hand. Although Supalla does not mention it, I believe that palm orientation is an important feature in this SASS. In ASL, a straight index finger with the palm facing up has a different meaning than a straight index finger with the palm facing outwards. This indicates one of two possible noun

markers, depending on which part of the finger is "semantically significant" (Supalla 1986: 186). If the semantic focus is solely on the fingertip, the noun represented is 0-dimensional. This indicates either a dot or a speck of something (Supalla 1986). If the semantic focus is on the whole finger, a linear, 1-dimensonal object is represented, such as an arrow or a stick (Supalla 1986).

Only after a hand has been marked with an index finger, can a thumb can be added. By adding a thumb, 3 different groups of handshapes can be identified. These are round SASS, angular SASS and size specifier. Each of these three can then be further marked for differences in degrees of sizes (Supalla 1986).

Round SASSes occur when the index finger and thumb bend towards each other as if to make a circle. This handshape is used to indicate 2-dimensional curved objects, such as a tube or pipe. One of four-degrees of bending is required to further mark this handshape to indicate the size of the curved object (Supalla 1986).

Angular SASSes are formed when the index finger and thumb are bent towards each other only at the joint that connects them to the hand. This handshape allows the signer to depict objects with intersecting lines. This group has two possible degrees of angle. This shows the "semantic distinction of the angular arrangement of two linear parts of a figure" (Supalla 1986: 187).

Size specifier SASSes occur only to show the difference in size, and not shape, of an object (Supalla 1986). To show this, the thumb and index finger are held parallel to each other. The amount of space between them varies and indicates the distance across an object (Supalla 1986).

Second-level Static SASSes

Second-level static SASSes incorporate the middle, ring and pinkie fingers into their handshapes. Phonologically, these handshapes can be either (+index and middle fingers) or (+index, middle, ring and pinkie fingers) (Supalla 1986). In addition, the hand is also marked with one of four features that show how the fingers interact with one another. They can be 1)bound together 2) set apart, but parallel to one another 3) spread out with fingers on a flat plane or 4)spread out with fingers on a curved plane[7].

Third-level Static SASSes

Third-level static SASSes are used to describe objects that are very long or very wide. The phonological features of (+forearm) or (+second hand) would be added to second-level static SASSes. The forearm is an independent morpheme. When it is combined with straight SASSes, objects of great length can be represented. A forearm that is added to a SASS with a two split finger handshape can be used to show a very long ladder. Two hands can be used to show three dimensional objects/shapes with straight sides, such as a room or a box. A room or a box is shown when two open flat hands are placed side by side in two different orientations, in sequence (Supalla 1986: 189).

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[7] In Supalla's diagrams, a hand bound together on a curved plane can be seen as a Second-level static SASS, but he makes no mention of it.

Fig. 5 Derivations of SASSes (Supalla 1986: 206) (Used with permission)
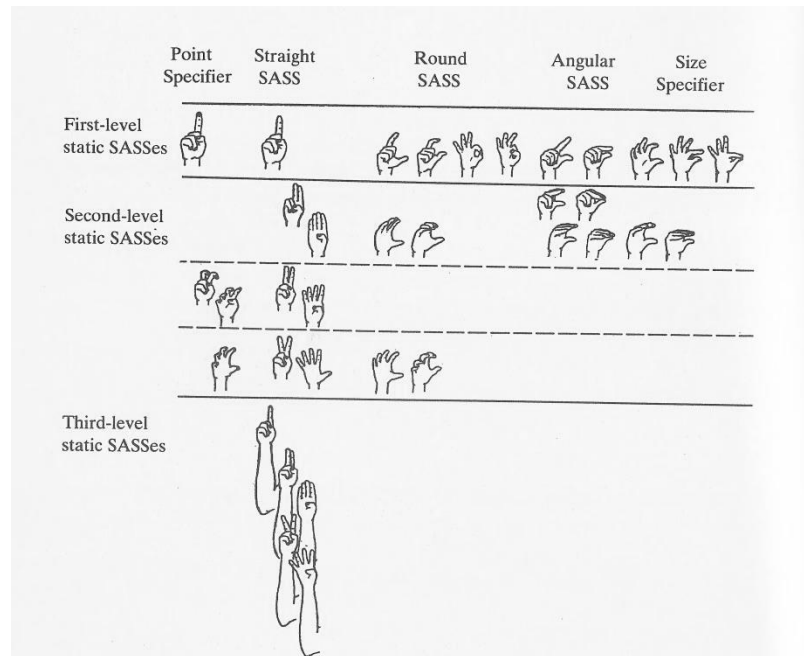
<u>Tracing SASSes</u>

Tracing SASSes are formed by moving a SASS classifier in space. This shows the shape of the intended object. One example is the ASL for HOUSE, seen below. Two open flat hands are used to trace or "sketch" the outline of a house (Supalla 1986). Each tracing SASS represents a class of objects (Supalla 1986).

There are limitations on what and how objects can be represented using tracing SASSes. When forming tracing SASSes, both hands begin at the same spot. From there, one of two things can happen. Either one hand can move away or both hands move away from each other, in opposite directions. In the example below, the hands begin at the same location, forming the peak of a house. They then move away in opposite directions, forming the walls of the house.

Fig. 6 ASL sign for HOUSE (Lifeprint http://www.lifeprint.com/asl101/pages-signs/h/house.htm) (Used with permission)

2.7.4.2 Semantic Classifiers

In the second group, semantic classifiers, the hand represents the semantic category of the noun, and is therefore more abstract in their representations than SASSes (Supalla 1986). One example of a semantic classifier is the ASL sign for TREE. This shape is easily recognizable as a tree. However, this sign is used to represent all trees, whether they are palm trees or fir trees. The shape of the actual tree referred to has no bearing on the shape of the sign. The sign refers to the semantic category of TREE (Supalla 1986). Some semantic classifiers do no visually resemble what they represent. For example, the classifier commonly used in ASL to represent vehicles looks nothing like a vehicle.

Classifiers that represent the legs of humans, animals and furniture fall into the category of semantic classifiers (Supalla 1986). Animal and human classifiers both share the same general handshape. Fingers are extended downward from the hand. To represent a "normal sized" person, the index and middle finger are used. To represent an obese person (or other wide, two-legged objects), the pinky and thumb are used (Supalla 1986). Four-legged animals are represented using both of the signer's hands, but still using the fingers-extended-down handshape. The size and shape of different animals can be shown by further deriving only underlying forms with the index and middle fingers. This allows the signer to portray anything from a spider to a dog to a bird (Supalla 1986).

Maneuverable horizontal objects can be indicated with a hand where the palm is facing downward. This provides a horizontal platform to add morphemes to (Supalla 1986). One derivation differs in the number of fingers extended. With only the index finger extended, a one dimensional object that is moving through space is represented. An example of a referent noun that is represented by this type of classifier is a flying bird (Supalla 1986). When all fingers are extended, a two dimensional object, such as a moving car, is indicated.

At the second derivational level, single finger extensions indicate different horizontal objects. Combinations can be formed that allow three fingers to be extended at the same time. This provides ASL signers with an airplane classifier. Depending on dialect, there are five possible forms of the airplane classifier (Supalla 1986). Each form has finger extensions to indicate the wings. Two of the variants have a third finger extension to indicate the fuselage of the plane.

Maneuverable vertical objects have two underlying forms. Each form comes with its own hierarchy to derivate higher levels (Supalla 1986). In the first form, the palm is oriented outwards, with the fingers extended upright. The only object classifier that uses this as an underlying form is that which indicates a one-dimensional upright human or animal. This classifier is formed when the fingers are extended. If only the index finger is extended, this indicates one vertical human or animal. If one (or more) of the other fingers, including the thumb, are extended, this indicates additional upright humans or animals. The second underlying form is constructed by turning the hand on its side. Again, the fingers can be extended in different numbers and combinations to form different classifiers. One classifier is this category has all four fingers extended. This classifier represents two-dimensional vertical objects, such as fish (Supalla 1986). For three-dimensional vertical objects, fingers are added as needed, with

each finger representing a projection from the body of the object. One example of this is the vehicle classifier. While it doesn't resemble a car, it was originally used to represent a ship, with masts and spars (Supalla 1986: 190).

The classifier used to represent columnar objects is formed with the signer's arm vertical and their hand closed. The forearm represents a solid column-like entity and this classifier is used to signify foundations and other support structures (Supalla 1986).

2.7.4.3 Body Classifiers

The third type of classifier uses the signer's body to refer to animate objects that have bodies and limbs. This is known as a body classifier and is more of a mimetic representation of a noun (Supalla 1986). It uses the whole body to mark noun agreement "referring to an individual person" (Supalla 1986: 193). Four restrictions exist when it comes to using body classifiers. Firstly, the nouns they represent must be animate. The second restriction states that only one referent object can be referred to at a time when the classifier is incorporated into a verb. However, different body parts can indicate different attributes of the object (Supalla 1986). Third, if body and hand classifiers are combined, their scales must remain consistent. Lastly, if the whole body is used as a classifier representing an agent, the classifier cannot be combined with a movement path. Only manners of movement can be shown with body classifiers, not paths of movement (Supalla 1986). If the signer uses their hands to articulate, either manner of movement, path of movement or both can be shown (Supalla 1986).

2.7.4.4 Body Part Classifier

The fourth type of classifier uses a signer's body or body part to represent a body part of the referent object. This is called a body part classifier. The body part classifier has two

components. Each has their own semantic representation. The first, the hand articulator, indicates the shape of the body part. Secondly, the body location component indicates the spatial location of the body part (Supalla 1986). The signer can simply point to their eye, nose, mouth, etc. to indicate the corresponding body part on the referent. They can also trace an outline on their body, such as tracing an outline of their face to indicate the referent's face. Body part classifiers can also be used in verbs. In the example HIT-IN-THE-EYE, one eye of the signer is used to indicate the eye of the referent (Supalla 1986).

When body part classifiers are used to show a specific characteristic or activity of a body part, the signer must also use a hand articulator to represent the noun. An example of this is when a stative SASS that represents multiple long, thin shapes is placed on the signer's mouth to represent the teeth of a tiger.

2.7.4.5 Limb Classifiers

Limb classifiers can be used to indicate the limbs of animate, two-legged objects, such as humans or some animals. Limb classifiers are separated into two groups. The first group represents the hands and forelimbs, while the second represents the legs and feet (Supalla 1986). Limb classifiers can be mimetic, showing human hands. Other limb classifiers take on handshapes of SASSes, and these show the size and shape of different animal's hands. The limb classifiers that take on SASS handshapes can also be used to show the legs and feet of humans (Supalla 1986). There are a limited number of limb classifiers that are used to show the postures and activities of the animals they represent. The same classifier construction is used to show both a rabbit and a kangaroo. Both of these animals have paws for forelimbs. A tiger, on the other hand, has claws, so it is represented with a different classifier (Supalla 1986).

Since the lower half of a signer's body is phonologically insignificant in ASL, using the legs and feet for classifiers that represent legs and feet of animals is not possible. However, there is a separate group of limb classifiers that allows this to happen. SASS classifiers are placed in mid-air in front of the signer to represent legs and feet.

2.7.4.6 Instrument Classifiers

The last type of classifier is an instrument classifier and it occurs when an instrument (either a hand or mechanical instrument) interacts with an object. It is mimetic if the hand is manipulating the object, such as a tool. It is a visual-geometric representation if the instrument is mechanical and acting on yet another object. With instrument classifiers, the object being manipulated is not directly referred to (Supalla 1986). An instrumental hand classifier is used when a human agent is manipulating an object with their hands (Supalla 1986). A tool classifier is used if the agent is manipulating an object with a tool. This tool classifier would show the visual-geometric features of the tool. If another body part is being used to manipulate an object, such as a foot kicking something, the proper body part SASS classifier is used. It is used as an instrument classifier (Supalla 1986).

If an instrumental hand classifier is being used (when a human agent is manipulating an object with their hands), the way human hands interact with objects of different shapes and sizes is shown (Supalla 1986). Each of the handpart morphemes in a classifier construction shows a "different aspect in the visual-tactile mode" (Supalla 1986: 196). These morphemes are organized in a hierarchy (below) and each level of the hierarchy can have many different features shown. Due to the many different possible combinations, there are approximately 30 instrumental hand classifiers (Supalla 1986). Supalla's hierarchy is as follows:

1) Function of the hand

2) Region of the hand contacting the object

3) Manner of contact

4) Size and shape of the object the hand is interacting with (Supalla 1986)

Manually operated tools have their own group of classifiers to represent them. It is implied that they are hybrid versions of instrument classifiers, as they have their own set of morphophonological features (Supalla 1986: 197). They are mimetic in the sense that they mimic the movement needed to use a specific tool, but their handshapes are different than those of instrument classifiers (hence the hybrid). The modified handshapes refer to the shape of the tool, rather than the hands of the agent using them. Only hand instrument classifiers can be used to represent tools like hammers or pliers. Tools such as screwdrivers, wrenches, knives and scissors can be referred to by either type of classifier (hybridized tool classifiers or hand instrument classifiers). Which one is used is dependent on where the focus of the discourse lays. The interaction between the agent's hands, the tools and the object determine which classifier is used (Supalla 1986).

2.7.4 Conclusion

Classifiers allow signers to articulate using a specific handshape. Choice in handshape is based on which aspect or characteristic of the entity the signer wants to be most prominent. This handshape choice can change over discourse and there are many classifiers that can represent the same entity.

2.8 Role Shift

2.8.1 Introduction

In this section, I describe how a role change can be identified in ASL. It is important to be able to identify a role shift in order to recognize when a signer becomes a surrogate in their discourse.

2.8.2 Role Shift

During discourse, a signer is able to take on the role of different entities in their dialogue, as we have seen with surrogates. This is done by role-shifting[8]. Carol Padden explains that during role-shifting, "third person pronouns are shifted into first person" (Padden 1986: 48). Signers are able to convey information from the perspective of another entity (Lillo-Martin 2012). Role shifts are characterized by a shift in body position and a change in the direction of the signer's eye gaze (Padden 1986).   Padden identifies changes in body position as "contrastive role shift" and further explains that there are two types of contrastive role shift, each with their own constraints (Padden 1986).

The first type of contrastive role shift involves the signer slightly moving their body either forwards or backwards to indicate a change in character (Padden 1986). With this type of contrast, there is only two possibilities, forwards or backwards, and therefore a three-way distinction is not available to the signer (Padden 1986). The second type of contrastive role shift again offers the signer only a two-way distinction. In this type, the signer can move left or right in order to distinguish between entities. These two types of role-shifts cannot be combined

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[8] Some linguists use the term "shift in perspective" in place of role shift. Please see Janzen 2004 for more information.

(Padden 1986). If the signer moves forward to indicate one entity, they cannot move to the left to indicate another. They must move backwards to show the second entity.

2.8.3 Role Shift: Conclusion

Role shift, or change in perspective, allows a signer to take on and portray a different character or entity in their discourse. There are two distinct indicators of a change in role on the part of the signer. The first is a shift in eye gaze away from their addressee. The second is a physical shift in their body position.

2.9 Conclusion

Over the past section, I have discussed mental spaces, tokens and token space, surrogates and surrogate space, classifiers, body partitioning and simultaneity and how to identify role shift.

In the next section, I provide you with an overview of the data I used, as well as the methodology I used while collecting my examples.

3 <u>Data and Methodology</u>

3.1 Introduction

The following chapter discusses the data that was used for this study, as well as the methodology used to analyze it. In addition, it discusses why the data was viable, the computer programs used to analyze the data, as well as ethics approval.

3.2 Data

Data for this project were taken from a corpus provided by Dr. Terry Janzen at the University of Manitoba, Winnipeg, Manitoba, Canada, stemming from a study Dr. Janzen was the principle investigator for in 2000. The corpus consists of approximately 10 hours of conversational ASL recorded on video. These 10 hours are divided into one-hour conversations between two members of the Winnipeg Deaf community. Dr, Janzen randomly numbered the video discs 1-10. For this research project, I used discs 1-8 and simply carried their original numbers over to identify the subjects.   All 10 videos were conversations between the same research assistant and a member of the Deaf community. The research assistant never appeared on camera and was instructed to try and draw out casual conversations from the participants. For the purposes of this study, eight out of the ten hours were watched. All of the signers appearing in the videos use ASL as their first and primary language. The conversations recorded were spontaneous. The conversations contained in the video ranged on topics from what they would do if they won the lottery, the floor plan of their house, a traumatic event in their lives and whether they prefer cats or dogs as pets. There were both male and female participants and ages ranged from approximately 20-55. The videos were recorded in 2000. Ethics approval was granted by the University of Manitoba in 2000 which extended from the original study at the

time to future projects of the principle investigator from the 2000 study and his collaborators and students. The data remains archived in the Department of Linguistics at the University of Manitoba.

3.3 Methodology

In order to analyze the videos, each one was individually loaded into ELAN. ELAN is a computer program that was developed to annotate video and audio recordings (ELAN: The Language Archive, 2015). In this case, it was video recordings that were annotated. During the course of the current research project, ELAN went through several updates, but version 4.9.1 was most recently used. ELAN gives its users a great deal of information on the annotations made. It gives users a start time, an end time and a duration for each annotation made.

ELAN allows users to add an unlimited number of annotation tiers to their file. For the purposes of my analysis, an "interaction" tier was added. As the project progressed, a "notes" tier and a "number of entities" tier were added. Below in Figure x is a screen shot of ELAN, with all three tiers present. As well, the annotations of the "interaction" tier are visible.

Fig. 7 Screen-shot of ELAN

Nr	Annotation	Begin Time	End Time	Duration
1	surrogate: face token: sitting fingers	00:02:37.991	00:02:38.558	00:00:00.567
2	surrogate: surprised face token: finger eyes	00:02:43.863	00:02:44.397	00:00:00.534
3	surrogate: face token: finger eyes	00:02:54.074	00:02:54.607	00:00:00.533
4	surrogate: cat's face token:claws? jumping cat body?	00:03:05.085	00:03:05.452	00:00:00.367
5	surrogate: cat's face token: mouse's tail	00:03:05.585	00:03:06.286	00:00:00.701
6	surrogate: cat's face token: mouse's tail	00:03:08.188	00:03:08.922	00:00:00.734
7	? what is she talking about?	00:03:41.588	00:03:43.023	00:00:01.435
8	surrogate: old self token: finger eyes	00:08:17.864	00:08:18.298	00:00:00.434
9	surrogate: mom's face token: police car CL	00:11:46.506	00:11:47.140	00:00:00.634
10	surrogate: old self token: ducking heads	00:12:55.909	00:12:56.443	00:00:00.534
11	surrogate: old self token: ducking head	00:12:58.144	00:12:58.511	00:00:00.367
12	surrogate: old self token:finger eyes	00:13:10.390	00:13:10.924	00:00:00.534
13	surrogate: old self token: finger eyes	00:16:26.519	00:16:27.387	00:00:00.868
14	? surrogate or showing facial feature?	00:16:43.303	00:16:44.070	00:00:00.767
15	?	00:25:11.011	00:25:11.878	00:00:00.867
16	?	00:26:00.393	00:26:01.394	00:00:01.001
17	surrogate: other woman token: finger eyes	00:35:02.902	00:35:03.670	00:00:00.768
18	surrogate: other woman token: finger eyes	00:35:09.976	00:35:10.610	00:00:00.634
19	surrogate: former self token: dress	00:35:17.817	00:35:19.152	00:00:01.335
20	surrogate: old self?? token: people passing by	00:35:33.733	00:35:35.001	00:00:01.268
21	?	00:45:04.671	00:45:05.071	00:00:00.400
22	?	00:45:05.205	00:45:05.538	00:00:00.333
23	?	00:48:12.659	00:48:13.426	00:00:00.767
24	?surrogate: old self	00:50:16.483	00:50:17.217	00:00:00.734
25	surrogate: old self face token: fingers looking at each other	00:50:47.714	00:50:48.481	00:00:00.767

During my analysis, I watched the videos at approximately half speed and made annotations as I saw interactions between surrogates and tokens. In the "interaction" tier, I noted one of several things. Most often, I noted what the surrogate was and what the token was. If I was unclear on either of them, for any reason, I would place a question mark (?) with it, so I could easily find it to clear up with my adviser. At times, I simply noted if the token was a classifier or if the surrogate appeared on a particular part of the signer's body. Some annotations contain only question marks (?). I put these in if I was unsure what the signer was saying or if I was not sure if it was a surrogate, a token or an interaction. These were cleared up during discussions with my adviser. In the "notes" tier, I added notes that were important to the interaction and the "interaction" tier. One example of a note is "broke eye contact". In addition, any additional questions were put into the "notes" tier. In the "# of entities" tier, if I noticed that

more than one entity was being shown in the surrogate/token interaction, it was noted here,

simply with a digit. This tier was not used often.

I used the computer program QuickTime to pull the screen shots for the writing of this

paper. This gave me clearer, more precise images than ELAN did. I took the start time for each

annotation from ELAN to make it easier to find in QuickTime.

Fig.8 Screen-shot of QuickTime

3.4 Conclusion

Data from a previous study was used and the computer programs ELAN and QuickTime

allowed me to analyze it and pull examples of surrogates, tokens and possible interactions

between them easily from the data. The examples I found are discussed in the following section.

4 <u>Findings and Discussion</u>

4.1 Introduction

   In the following section, I provide examples that show an interaction between a surrogate and at least one token. Previously, I discussed that surrogates and tokens can appear on their own. A surrogate appearing without a token can be seen in example (5). A token appearing without a surrogate can be seen in example (2). In the following examples, they appear together, and there is an interaction between them. English descriptions are given that explain the story from which the example is taken in order to provide some context. At least one image is provided for each example, showing the interaction between a surrogate and token(s). In some cases, more than one image is needed to see and understand the interaction. For each example, a chart is given describing the handshape and movement of each of the signer's hands, as well as a description of their facial expressions, eye gaze and body positioning. In addition, for each example, I explain how the blended space for that example would be composed, including how many input spaces and what each input space would contribute to the blended space. English glosses have not been provided due to the fact that the interactions shown are only part of phrases elicited from the participants. In place of glosses, I have provided detailed descriptions of the stories they come from in order to give them context.

   At the end of this section are some examples that I consider to be "problem cases" and need further investigation. For each of those, I have again provided some context and why they are not clear-cut examples.

   There appears to be two different types of interactions occurring between surrogates and tokens.

In the first type of construction, the surrogate and the token represent the same entity. In the second type of construction, the surrogate and the token(s) represent two or more distinct entities.

4.2 One Entity

4.2.1 Introduction

This section contains examples of interactions between surrogates and tokens where only one entity is represented in the construction. Each example shows a potential interaction between a surrogate and a token.

4.2.2 One entity

In the story containing the first example, the signer is describing having to walk on uneven terrain. The surrogate can be seen on the signer's face as he takes over the role of his past-self. As in other examples, the signer breaks eye contact with his addressee, indicating a role change. The tokens can be seen on both of the signer's hands. In this example, they take on the handshape of a classifier that has been identified by Supalla as one that is used in ASL to represent humans walking and represent the signer's legs. This example shows an interaction between a surrogate and a token and represents one entity. The surrogate and tokens are each representing a different part of the signer's past-self. Working together, they produce one complete conceptualization.

The blend for this example would have two input spaces. One would contain the signer's struggling past-self and the other would contain his footsteps over uneven ground. When blended together, these two input spaces would allow us to conceptualize the signer's past-self as he struggles to walk over uneven ground.

(6) Surrogate + Token--One entity: Signer's past-self (disc 1 ~37:32)

(a)	(b)

Right Hand	Face/Body	Left Hand
Palm down	Tongue sticking	Palm down
3 handshape	out	3 Handshape

The story containing the example below tells of a bad snow storm the signer experienced. He explains that he had to walk through the snow to get to work. The surrogate in this interaction can be seen on the signer's face. His facial expression shows his past-self as he struggles to walk through the deep snow. When he looks down, he breaks eye contact with his addressee, signaling a role shift. The tokens can be seen on the signer's hands as they represent his legs as they trudge through the deep snow. The signer's hands show a classifier construction commonly used in ASL to show human legs, as identified by Supalla. There is an interaction between a surrogate and a token in this example. Each represents a different part of the signer's past-self and thus, by interacting, one entity is being represented in this construction.

A blended space for this example would contain elements from two input spaces. One input space would provide us with the conceptualization of the signer's past-self and the second input space would provide us with the conceptualization of him having to walk through deep

snow. Combined, these two input spaces would blend together to produce what we see below: A

man struggling to walk through deep snow.

(7) Surrogate + Token--One entity: Signer's past-self (disc 3 ~43:31)

(a)	(b)	(c)
<u>Right Hand</u>	<u>Face/Body</u>	<u>Left Hand</u>
1 handshape,	Tired/worn out	1 handshape, palm down
palm down,		finger pointing down
finger pointing down		

In the story the example below was taken from, the signer explains why he enjoys dogs

more than cats as pets. He says dogs will play, which he enjoys. Cats, on the other hand, just sit

there. In this example, the surrogate can be seen on the signer's face, when he takes on the role

of a cat. He breaks eye contact with his addressee, further suggesting he has taken on another

role. The token can be seen in the signer's hands, as they show how a cat's legs would look if

the cat were lying down on its side. His hands take on a classifier Supalla identified at one that

is used to show animal legs and are thus the tokens. His right hand is turned as if the cat's legs

were curled.   This example shows an interaction between a surrogate and a token each

representing different aspects of one animal.   They interact with one another to produce one

complete conceptualization of a lazy cat.

The blend for this example is created with two input spaces. One would contain the annoyed expression of the cat and the second would contain the legs of the cat, showing its laziness. When these input spaces are blended together, we are left with the conceptualization of a lazy, bored cat that is no fun to play with.

(8) Surrogate + Token--One entity: Cat (disc 2 ~1:10)

Right Hand[9]   Face/Body   Left Hand

Bent U handshape,   Annoyed/smug   Bent U handshape, palm down

palm right   Turned slightly left

In the story containing the example below, the signer is explaining why he prefers dogs over cats. He says that you can play with dogs, but all you can do with cats is pet them, they don't do anything. In this example, he is showing how cats walk. It shows an interaction between a surrogate and token. His face becomes a cat's face by taking on a smug facial expression and is the surrogate. His hands take on the classifier handshape that Supalla identified as representing

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[9] These charts are an English description of the handshapes, signs, facial expressions, body position/movement used to create the construction in each of the examples. For further handshape descriptions, please see the list at the beginning of the thesis.

animal legs. In this example, they represent the cat's front and back paws, and are thus the

tokens. This example shows an interaction between a surrogate and a token, each representing a

different part of the animal, thus only one entity being represented in the construction. Like

previous examples, the surrogate and token work together to produce one construction.

The blend for this example would contain two input spaces. One would hold the cat's facial

expression and the other would hold the cat's legs. By combining these input spaces, we

conceptualize a snooty cat, complete with a "stuck up" walk.

(9) Surrogate + Token--One entity: Cat (disc 1 ~00:40)

Right Hand	Face/Body	Left Hand
U hand, pointing down, palm down	Snooty/smug Face	U hand, pointing down, palm down

The three images below show an interaction between a surrogate and a token, where both

are representing the same entity. In this set, the signer becomes a surrogate ferret, as well as

shows the actions of the ferret in token space.   The ferret's teeth are shown on the signer's face,

which is the surrogate in the interaction. If we look closely at the signer's mouth, it starts with

his jaw slightly open, and it closes in subsequent figures. This is the signer biting as the ferret

would. At the same time that the surrogate is nipping with its teeth, the signer is also showing token sized teeth nipping. The signer's right hand becomes the ferret's teeth and nips at the signer's left hand, which is a token for whatever the ferret has decided to nibble on. An interaction between a token and a surrogate is shown. This example shows the same part of a ferret on both the surrogate and token constructions, and thus one entity is being represented. The surrogate and token interact with one another to produce a clear, complete conceptualization of the ferret eating.

A blend for this example would be produced from two input spaces. The first would contain the signer's face/mouth, showing us how a ferret would look as they ate. The second input space would contain the signer's hands, showing us how a ferret would nibble on their food. When these two input spaces are blended, we are left with a conceptualization of a ferret eating, and are able to visualize the movement of its teeth/mouth.

(10) Surrogate + Token--One entity: Ferret (disc 6 ~2:51)

(a)	(b)	(c)
Right Hand	Face/Torso	Left Hand
Claw handshape	Nibbling teeth	Lax
to O handshape		

The still below is taken from a story about the signer's pet bird (previously, the signer identified the bird as a cockatoo). He explains that sometimes he leaves the bird's cage open and the bird is free to fly where ever it likes. In the morning, if the signer cannot find the bird, he yells and, most of the time, the bird flies right to him. However, the signer explains, sometimes the bird is stubborn and just stays where it is. This is seen in the above still. This surrogate in this interaction is seen on the signer's face, where he takes on the role of the bird. While this is an odd facial expression for a bird, it is certainly not that of the signer. The token is represented with the signer's right hand. It takes on the handshape of a classifier identified by Supalla as one used to show an entity with bent legs. This time, it is representing the bird, which is lying on its side. This example shows an interaction between a surrogate and a token when they work together to produce the conceptualization. The surrogate and tokens each show a different body part of the same bird, thus this interaction represents one entity.

A blend for this example would be constructed from two input spaces. The first would provide us with the facial expression of the bird. The second would provide us with the legs of the cockatoo. When blended together, we are able to conceptualize a cockatoo laying on its side, with a funny facial expression.

(11) Surrogate + Token--One entity: Bird (disc 6 ~3:27)

Right Hand	Face/Torso	Left Hand
Bent legs CL	Tongue sticking out	Lax
Head tilted to right		

In the example below, the signer is telling about his dogs, one of which is snooty or stuck-up. The signer is describing how his dog sits, tall and proud. The signer's head and face become that of the dog, with a smug look on his face. As we can see, the signer breaks eye contact with his addressee and looks to the left. This indicates a role shift. The signer's head and eye gaze is that of a surrogate. The signer's right hand takes on a classifier handshape that Supalla identified as one used to show the front legs/paws of animals. This is the token. They are miniature in comparison to their real life counterparts and they are within token space. This example shows an interaction between a surrogate and a token, with each showing a different part of the dog, thus one entity is being represented due to the interaction between the surrogate and token.

A blended space for this example would have input from two input spaces. The first would contribute the facial expression and posture of the dog, while the second would provide us

with how the dog's legs were positioned. The blend would allow us to conceptualize what we see below: a snooty dog sitting straight upright.

(12) Surrogate + Token--One entity: Dog (disc 7 ~5:49)

Right Hand	Face/Body	Left Hand
Animal legs CL	Eye gaze to left	Fist, palm down
resting on left hand	Snooty expression	

In the next example, the signer is telling a story of when he tried to drive when he was 9 years old. He explains that his mother yelled at him and ran after him when he tried to drive the tractor alone. The surrogate is represented on the signer's face, as he becomes his mother. He breaks eye contact with his addressee and looks from the left to the right. This further suggests a role shift and the appearance of a surrogate. The tokens are represented on the signer's hand, using the handshape that Supalla identified as a classifier representing human legs. They are of his mother's legs as she runs towards him. This shows an example of an interaction between a surrogate and a token as they are working together to complete the conceptualization. Once

again, each one represents a different part of one entity and thus one entity is being represented in this construction.

The blend for this example would contain two input spaces. One would allow us to conceptualize the signer's mother yelling after him. The second input space would allow us to conceptualize the signer's mother running after him. When these two input spaces are blended together, we are able to conceptualize what the signer is showing us in this example: an angry mother running after him and yelling.

(13) Surrogate + Token--One entity: Signer's mother (disc 1 ~14:59-15:00)

(a)   (b)   (c)

Right Hand	Face/Body	Left Hand
1 handshape, palm down, finger pointing down	Screaming	1 handshape, palm down, finger pointing down

4.2.3 Conclusion

The previous section contained examples in which only one entity was represented by both the surrogate and the token. All of the entities represented by the surrogates and tokens in the one-entity examples were animate. Five out of the eight (62.5%) were animals, while three

out of the eight (37.5%) were humans. In each of the examples, removing either of the input spaces would change the conceptualization of the discourse. The meaning of one is lost without the meaning of the other. In this regard, they are interacting with one another. The surrogates and tokens work together to produce a clear, complete conceptualization that represents what the signer is trying to convey. In the next section, we will see examples in which the surrogate and tokens represent different entities. These examples will still contain an interaction between a surrogate and at least one token.

4.3 Multiple Entities

4.3.1 Introduction

In this section, examples containing multiple entities are described. In these examples, there is still an interaction between a surrogate and a token or a surrogate and multiple tokens. Additionally, there are occurrences of interactions between tokens.

4.3.2 Multiple Entities

The story containing the example below deals with how frogs start as eggs, become tad poles and eventually grow into frogs. The signer explains that frogs do not like the sun, that they will hide in the shade, and they like the water. The signer explains that the frogs come out at night, when it is cooler. He said he noticed that when it got cool, the frogs would start jumping around him. The surrogate in this example is seen on the signer's face, as if he had become his past-self. The signer breaks eye contact with his addressee, signaling a role-shift. The tokens can be seen on the signer's hands and they represent the frogs jumping around him. Depending on the type of frog being discussed, the handshape meets the miniature size requirement and is in token space. The handshapes used are ones that Supalla has identified as being used to represent legs.

The movement of the signer's arms add the "jumping" movement of frogs. This is an example of an interaction between a surrogate and a token, with two entities being represented in this construction. The first entity is represented by the signer-as-surrogate and the second entity is represented by the token handshape.

One input space used to create the blended space for this example would contain the classifier handshapes used to represent the frogs. A second input space would contain the signer-as-surrogate. These two input spaces would blend together to form a blended space conceptualizing the signer's past-self with frogs jumping all around him. If either one of these input spaces were to be removed or omitted, the addressee would not be able to conceptualize what the signer is trying to convey. His signer-as-surrogate expression shows is confusion, while his hands shows us the tokens representing what he is confused about. When these two representations interact with one another, we are left with the conceptualization below.

The surrogate in this example could converse with the tokens. He is already looking down towards them. He would need to lose one token in order to articulate what he is wanting to, but conversation would be possible.

(14) Surrogate + Token--Two entities: Signer's past-self and frogs (disc 1 ~27:24-27:25)

<div align="center">(a)   (b)</div>

Right Hand	Face/Body	Left Hand
3 handshape, palm down	Looking down and around him	3 handshape, palm down

In the story containing the next example, the signer is describing how he got lost in the woods and that he knew what would happen if he were to meet a bear in the woods. He explains that if a bear were to pop up and surprise him, he'd be "finished" (dead). The same construction appears twice in the story. In both constructions, there is a surrogate/token interaction. The surrogates are the signer's past-self, and the tokens are classifiers that represent the bear. The surrogates can be seen on the face of the signer, when he shows us the shocked/surprised/scared look on his face. He breaks eye contact with his addressee and focuses on "the bear". The token can be seen on the signer's right hand in the first still and his left hand in the second still. Both tokens are formed with a classifier handshape that Supalla identifies as being used to represent upright objects, such as humans or upright animals. As mentioned before, multiple classifiers can be used to represent the same entity, even within the same discourse. Both of these examples show an interaction between a surrogate and a token, each containing two entities. The signer-as-surrogate is the first entity in each construction. The second entity is the bear, even though it is represented by two different classifiers. Thus, two entities (and the same two

entities) are represented in each construction. These two entities interact with one another, thus the surrogate and token interact with one another, to produce the conceptualization below.

The blended space for each of these examples is formed from two input spaces. The first input space would contain the signer-as-surrogate representing his past-self. The second input space would contain the classifier the signer uses to represent the bear. When these two spaces are blended together, we are able to conceptualize the past-self signer coming face-to-face with a bear. Removing either of these input spaces would result in a different conceptualization that the one presented by the signer. If the surrogate was removed, the addressee would not know who or what met the bear in the woods. If the token representing the bear was removed, the addressee would not know who or what the signer's past-self met in the woods.

In this example, the surrogate would be able to converse with the bear, if only to scream in panic! The signer's left hand could articulate what the surrogate wanted to convey.

(15) Surrogate + Token--Two entities: Signer's past-self and bear (disc 3 ~15:33)

Right Hand	Face/Body	Left Hand
1 handshape, palm inwards	Surprised/shocked	Curved hand, palm out

(disc 3 ~16:01)

Right Hand	Face/Body	Left Hand
Neutral	Surprised/shocked	1 handshape, palm in

The two examples below come from the same story and occur approximately one second apart. Both show an interaction between the same surrogate and the same token. In this story, the signer is describing how his bird flew towards him. The bird was supposed to land on the surrogate's shoulder, but instead, hit him in the back of the head. The first two stills show the

bird landing on the signer's shoulder, which was what was supposed to have happened. The signer, however, has become a surrogate for his past-self. He is telling a story of something that occurred in the past. He was a participant in that story, so he has "become" his past-self. The signer's right hand takes on the role of the bird and becomes the token. The signer uses a classifier identified by Supalla as one that would represent bent legs. Earlier in the dialogue, the signer indicated that he had cockatoo birds. The classifier that the signer is using would be smaller than most cockatoo's and therefore fit the size criteria of tokens. The second set of stills shows what actually happened; the signer's bird flew into the back of this head. Again, the signer is representing his past-self as a surrogate and the token is the flying bird that is represented on the signer's right hand. Thus, two entities are represented in this construction.

These two example each contain two input spaces that blend together. The first input space contains the classifier used to represent the bird. The second input space contains the signer-as-surrogate. These two input spaces blend together and allow us to conceptualize the bird flying to land on the surrogate's shoulder in the first set of still and to hit him in the back of the neck in the second set of stills. All of the input spaces in these examples are needed and removing anyone of them from their respective blends would cause their conceptualization to change. In (b), without the token representing the bird, the addressee would be unaware of anything sitting on the surrogate's shoulder. In (d), without the token, the addressee would not know that the surrogate had been struck, nevermind where or by what.

Both of these examples show an interaction between an surrogate and a token. When they interact, they blend togetgher to form the concepualization seen below.

In both of these instances, the surrogate could converse with the token. The signer's left hand remains neutral through out and could be used to articulate the surrogate's thoughts.

(16) Surrogate + Token--Two entities: Signer's past-self and bird (disc 6 ~7:44 and disc 6 ~7:43 respectively)

(a)	(b)

Right Hand	Face/Torso	Left Hand
Bird legs CL	Neutral	Neutral

(c)	(d)

Right Hand	Face/Torso	Left Hand
Claw hand	Head down	Neutral
	Looking down	

The example below shows an interaction between a surrogate and two tokens, as well as an interaction between the two tokens. It is taken from a story in which the signer is telling her experience of being in a tornado while visiting a friends' farm. She explains that the wind blew the chimney off of the roof of the house. Her and her friend opened the front door to find the chimney on the ground. The signer's face is a surrogate, taking on the role of her former self and her friend as they looked at the mess outside. She breaks eye contact with her addressee and looks where her past-self would have looked-in the direction of her friend. The signer's hands are the tokens, taking on the form of the friend's heads as they look at each other in disbelief. They are miniature and in token space. The surrogate and one of the tokens represent the same entity, which is the signer's past-self. The second token represents the signer's childhood friend. Thus two entities are represented in this construction. In both (a) and (b), the signer breaks eye contact with her addressee and looks around as if she her past-self, looking around to assess the storm's damage. By interacting, the surrogate and token give us a complete conceptualization.

A blend for this example would contain three input spaces. The first input space would contain the signer-as-surrogate's facial expression. The second and third input space would each contain one classifier, representing the signer and her childhood friend. Blended together, these three spaces provide us with a conceptualization of two girls seeing the result of a tornado and their immediate actions (to look at one another). Without any one of these input spaces being contributed to the blend, the conceptualization of the blend would change. By removing the surrogate, we would not understand the disbelief they experienced. If the token representing the friend was to be removed, we would think the signer-as-surrogate was by herself. Lastly, if the token representing the signer's past-self was removed, we would not conceptualize the actions of the two children-that they looked at each other in disbelief.

The signer-as-surrogate would be able to converse with the token representing her childhood friend (she could also converse with herself, if she so desired). She would have to lose the token representing herself in order to communicate with her childhood friend, but by directing eye gaze towards the friend token would indicate the signer's past-self is communicating with the childhood friend.

(17) Surrogate + Two Tokens--Two entities: Signer's past-self and childhood friend (disc 8 ~50:48)

| (a) | (b) |

Right Hand	Face/Body	Left Hand
Bent V hand, pointing left	Looking right to left	Bent V hand, pointing right

In the story containing this example, the signer is describing a snow storm that occurred when she was a small child. She explains that after the storm, her brother ran outside and she followed after him. The surrogate in this example is her past-self and can be seen on the signer's face. She is portraying the face she had as a small child, chasing after her brother. The tokens are classifiers that are used in ASL, as Supalla indicates, to represent people. In this case, they

are representing the signer and her brother as children. One is chasing after the other. The surrogate and one of the tokens both represent the same entity, the signer's past-self. The second token represents the signer's brother. Thus, two entities are represented in this construction. These two entities, and therefore the surrogate and tokens, interact to produce a complete conceptualization.

This example contains three input spaces contributing to its blended space. One input space would contribute the facial expression of the signer's younger self. A second input space would contribute the classifier representing the signer's brother. The final input space would contribute the classifier that represents the signer's younger self following her brother. Blended together, those three spaces give us the concept seen below: a young signer chasing her brother in the snow.

As in previous example (17), the surrogate in this example would be able to converse with the token representing her brother. Since she is following her brother, the token representing her brother is articulated on the signer's left hand. By using her right hand to communicate, she would lose the token representing herself. However, using eye gaze and her right hand, the signer-as-surrogate would be able to converse with the remaining token.

(18) Surrogate + Two Tokens--Two entities: Signer's past-self and her brother (disc 5 ~23:22)

Right Hand	Face/Body	Left Hand
Person CL	Amused child	Person CL

In this example, the signer is describing having a bird as a pet. At night, he would put the

bird in its cage, cover the cage with a sheet and the bird would then sleep through the night. One

morning, he was curious as to what the bird looked like while it was sleeping. When he lifted

the sheet, the bird was awake, looking at him and ready to go. The surrogate in this example is

represented on the signer's face. He takes on the role of his past-self. The token is represented

on the signer's right hand. It takes on the construction of a classifier used in ASL that has been

identified by Supalla to represent a bird. In this example, the signer's left hand shows the final

position for the ASL sign for READY. The surrogate and token interact to produce the blend

shown below, giving us a conceptualization representing what the signer was trying to convey.

This example's blend would contain information from three input spaces. The first

would provide information about the signer's bird. The second input space would provide

information about the signer. Lastly, the third input space would provide the information that the

bird is ready to go. Blended together, these three spaces would produce the blended space

conceptualizing the image below: a bird, in its owner's face, ready to go. Removing any of the

three input spaces would change the conceptualization of this example. Removing the input

space containing the bird would leave the addressee thinking the signer-as-surrogate would be

talking to nothing. The signer-as-surrogate shows us the expression of the signer's past self as

he takes the sheet off the bird's cage. If the final handshape for READY was removed, the

addressee would not conceptualize just how ready to go the bird was.

If he desired, the signer-as-surrogate could converse with the token representing the bird.

He would need to use his left hand and direct his eye gaze towards the bird (as he appears to be

doing).

(19) Surrogate + Token--Two entities: Signer's past-self and bird (disc 6 ~5:50)

Right Hand	Face/Body	Left Hand
Beak/bird CL	Neutral	READY

The example below is taken from a story the signer is telling about witnessing a tornado.

He and a friend went to check on the cows to see if they were O.K. after the storm. The signer's

face takes on the role of his past-self as he is telling the story and becomes the surrogate in this

interaction. It shows the shocked expression on his (and possibly his friend's) face as they saw

the damage from the storm. The signer's hands show how their head/faces turned to look at each

other as they saw the damage. They are articulating token handshapes. In addition, the signer breaks eye contact with his addressee, further suggesting a change in role. This example shows an interaction between a surrogate (the signer's past-self) and two tokens. The tokens represent the heads and eye gaze of the signer's past-self and his friend. The direction that the signer's head is turned and his eye gaze is the same as one of the tokens. This suggests that the token on the signer's left hand is to represent his past-self. The surrogate is represented on the signer's face and body. Thus, two entities are represented in this example. The surrogate interacting with the tokens gives us a more complete conceptualization that if any of the elements were missing.

A blended space for this example would contain elements from three input spaces. Each of the tokens represented on the signer's hands would be in their own input space. The third input space would contain the signer-as-surrogate. When these three input spaces are blended together, we are left with a conceptualization depicting two people looking at one another, with a least one of them having a shocked expression on their face. This example is very similar in construction to (17) and removing any of the input spaces in this example would jeopardize the conceptualization in the same way.

(20) Surrogate + Two tokens--Two entities: Signer's past-self x 2 and childhood friend (disc 1 ~12:55)

Right Hand	Face/Body	Left Hand
Bent U hand, palm left	Surprised/shocked facial expression, facing right	Bent U hand, palm right

Example (21) below comes from a story the signer is telling about a scary experience in her life. Her and her family was forced to pull off to the side of the road so that the police could catch a thief who was driving in their direction. The surrogate in this example is shown on the signer's face as she takes on the role of her past-self (and possibly that of her sister). The tokens in this example are represented on the signer's hands and are the heads of the signer and her sister as they duck when the police start shooting. Supalla identified this classifier as one that represented solid round objects, such as human heads. This example shows an interaction between a surrogate and a token and contains three entities. The surrogate and one of the tokens represent the same entity, the signer's past-self. The surrogate shows her facial expression while the token shows her movement. The second entity is shown on the signer's other hand and represents her sister. Thus, two entities are represented in this construction. In (a), the tokens representing the sisters appear to be at the right height to let them look out the window. In (b), the signer lowers her body, as if to show the girls crouching down in the back seat, no longer

able to look out the window. In (c), the signer has lowered the tokens, to show that the girls are low in the back seat. By combining the actions and the facial expression of the surrogate with the actions of the tokens, we get a clear conceptualization of what the girls did.

A blend construction for this example would contain three input spaces. One for the facial expression of the signer's previous self, and one each for the tokens representing the signer's past-self and her sister. These three spaces would combine to form the blend seen below. If any of the input spaces were removed from this blend, the signer's addressee would not be able to conceptualize it in the same way. The surrogate provides the facial expression of the signer's past-self (and possibly her sister), while the tokens provide the action of their heads.

The surrogate in this example, the signer's past-self, could have conversed with the token representing her sister. The signer would have had to lose the token representing her past-self in order to articulate what her past-self wanted to communicate to her sister.

(21) Surrogate + Two tokens--Two Entities: Signer's past-self and signer's sister (disc 8 ~12:55)

| (a) | (b) | (c) |

| Right Hand | Face/Torso | Left Hand |
| S handshape, palm out | Scared/shocked face | S handshape, palm out |

The example below tells the story of an embarrassing moment for the signer when she was shopping with her children. She tried a dress on that had buttons all the way down the front. What she didn't notice was that the buttons were undone and the dress was open all down the front in the middle of the store. The above example shows the signer's embarrassed face as people pass her in the store. As she is retelling the story, the signer's face takes on the role of her past-self and is the surrogate. Her hands are a classifier used to show a number of people. Their movement path shows that they were moving past her as she stood still. While they are not in ideal token space, they are in miniature form and are the tokens in this example. This example contains multiple entities. It is hard to indicate an exact number, as the token's construction could indicate 10 people or 50 people. The surrogate represents one entity, and the classifier represents a group entity, which, for simplicity, is counted as one entity.

Two input spaces would contribute to this example's blended space. The first input space would provide us with the embarrassed facial expression see on the signer's face as she becomes a surrogate of her past-self. The second input space would provide the concept of the crowd passing by the signer-as-surrogate. Blending these two input spaces allows us to conceptualize an embarrassed woman with many people passing her by. Removing one of the input spaces from this blend would change how it is conceptualized. If the input space with the embarrassed signer-as-surrogate were removed, we would have no other way of knowing how she felt after discovering her dress was open. If the classifier representing the token was to be removed, we would not understand that the woman was standing in a crowd of people.

In this example, the token leaves token space. Liddell said tokens are limited to the space in front of a signer. However, we can see that the token is up beside the signer's head, which, by Liddell's definitions, would be surrogate space. In (a), it could be argued that the token has

already been moved out of token space. It is higher than "in front of the signer's body". In (b) and (c), the token has been moved to the right, moving it further out of token space.

The surrogate in this example would be able to converse with the token. By turning her eye gaze towards the token, we would understand that she was addressing them, instead of her addressee.

(22) Surrogate + Token--Two entities: Signer's past-self and crowd of people (disc 8 ~35:34)

(a)	(b)	(c)

Right Hand	Face/Body	Left Hand
Flat hand, palm left	Embarrassed	Flat hand, palm right

In the example below, the signer is explaining how he was not used to the heat he experienced on a recent trip to South America. He is explaining that the heat was right above his head, which we are not used to here in Canada. Here, the sun is at an angle, which gives us shadows. However, in South America, the sun is right above you, so no shadow. In this example, the signer becomes a surrogate as he becomes any human, including his past-self. His left hand takes on the handshape of a classifier Supalla identified as one commonly used to represent human legs standing, and is the token in this interaction. His right hand represents the

sun, and it can be argued that this is also a token. In (a) the signer's right hand (the sun) is held directly over his left hand (human legs). It is in the second still (b) that we see the interaction between the surrogate and token. The signer moves the sun to directly above his own head. Even if the sun classifier is not considered a token, there is still an interaction between the signer and the classifier representing human legs. This interaction between a surrogate and a token has two entities. The interaction occurs when the surrogate and token work together to give a clear representation of what the signer is wishing to convey.

In (a), the token has left token space and moved to surrogate space.

Two input spaces would contribute to the blended space for this example. One input space would provide the classifier used to represent the sun, while the other would provide information about the human. When blended together we would be able to conceptualize the sun, the human and the relationship between the two entities.

(23) Surrogate + Two Tokens--Two entities: Signer's past-self and The Sun (disc 6 ~18:01)

(a)	(b)

Right Hand	Face/Body	Left Hand
Claw hand	Neutral	Human legs CL
Palm down		Palm down

In example (24) below, like (18), the signer is describing the aftermaths of a snow storm she experienced when she was a 6 years old. Her brother managed to shovel a narrow path so she could go out to play. The example shows what she experienced when she got outside. The surrogate is her past-self and is represented on her face and in the movements of her eyes and head. She breaks eye gaze with her addressee and looks around. The break in eye gaze suggests a role shift and the signer looks around as she did that day as a small child. The tokens are represented on her hands and show how high the snow was after her brother shoveled in compared to her own height. They are represented by classifiers that Supalla identified as ones used to represent tall, flat objects. In this example, they are walls of snow. Since her brother was only able to shovel a narrow path, it would be like walking between two walls of snow. This example shows an interaction between a surrogate and a token, with two entities being represented. The first entity is shown in the surrogate, while the second entity is shown in the classifiers. These two entities work together to form a complete conceptualization.

A blend for this example would be comprised from two input spaces. One input space would contain the signer-as-surrogate facial expression. The second input space would contain the classifiers representing the walls of snow. Together, these two input spaces form the conceptualization of a young girl walking between two walls of snow. If the signer was to remove either of the input spaces, her addressee would not be able to conceptualize what she was trying to convey. The height of the snow would be absent if either the surrogate looking upwards or the tokens up by the signer's face were omitted.

Like (22), the tokens in this example leave token space and enter surrogate space. Liddell stated that surrogate space was anywhere in the physical space around the signer, while tokens are required to remain in front of the signer's torso.

(24) Surrogate + Token--Two entities: Signer's past-self and walls of snow (disc 5 ~24:00)

(a)   (b)

Right Hand	Face/Body	Left Hand
Flat hand, palm in	Looking up and to Right	Flat hand, palm in

The four images below show an example between a surrogate and a token. In this story, the signer is retelling about an experience of hitting a deer while driving a semi-truck. His body is partitioned into two distinct entities. The signer becomes a surrogate when his head, face and torso take over the role of his previous self as the semi-truck driver. As the construction progresses, the signer breaks eye contact with his addressee and turns his body, further suggesting a role shift. The token is seen in the signers hands, as he produces a classifier identified by Supalla as commonly used for long, flat objects. In this example, they are representing semi-trucks or flatbed trucks. In this example, after truck hits a deer, it spins on the road. This is seen in the token. In (a) the truck is driving normally on the road. In (b), it starts to swerve. This can be seen as the signer turns his body to show how the driver's body would have moved when the truck swerved. As well, the tokens on the signer's hands move as if to show the movement of the semi-truck. In (c), the truck continues to swerve, again seen on the signer's body and hands. This is a surrogate and token interaction with two entities. One entity

is the signer-as-surrogate truck driver, and the second entity is the classifier representing the semi-truck. Finally, in (d), we see the truck sitting sideways on the road. The signer-as-surrogate's body is completely turned to the left, the same direction that the tokens are showing the direction of the truck. The surrogates and tokens interact to show us both the actions of the semi-truck (the tokens) as well as the resulting movements of the driver (the surrogate). By interacting and working together, we are given a clearer, more complete conceptualization.

The blend for this example would contain elements from two input spaces. The first input space would contribute the signer-as-surrogate and the second input space would contribute the classifier that is being used to represent the semi-truck. The blend would conceptualize a truck driver who turns his truck abruptly to avoid hitting a deer. By removing either of the two input spaces in this example, the addressee's conceptualization would be different. If the signer-as-surrogate was removed, the addressee would not see how frightened he was when the semi-truck swerved. If the input space containing the truck were to be removed, the addressee would not be able to conceptualize the movement of the truck.

(25) Surrogate + Token--Two entities: Signer's past-self and semi-truck (disc 7 ~46:38)

(a)   (b)

(c)   (d)

Right Hand	Face/Body	Left Hand
Flat, palm down, behind left hand	Facing addressee right hand	Flat, palm down, in front of
Rotates to right	Rotates to right	Rotates to right

Example (26) below is taken from a story the signer tells about a scary flight she took in 1986. She was returning to Winnipeg from a curling tournament. The signer explains that the plane was flying normally and that she was relaxed in her seat. The surrogate appears on the signer's face/head. Her expression is that of her past-self during the beginning of the flight—relaxed. The token in this example appears on the signer's right hand and is a classifier Supalla identifies as one used in ASL to represent airplanes. This example depicts an interaction

between a surrogate and a token. The signer becomes a surrogate of her past-self as one entity and the signer's hand takes on a classifier handshape to represent the second entity. Thus, two entities are represented in this example.   When the surrogate and token interact together, we are left with a complete conceptualization.

The blended space for this example would take information from two input spaces. One input space would contribute the concept the signer-as-surrogate represents—a passenger on an airplane. The second input space would contribute the concept of the airplane flying smoothly, as opposed to being on the ground, or flying through disturbance, as we will see in (37). If we look ahead to example (41) a third input was added to indicate that the plane was on the ground, as opposed to this example. As with the previous examples, if any of the input spaces were removed from this blend, the conceptualization would change. Removing the signer-as-surrogate would leave her addressee unable to conceptualize just how smooth the flight had been. If the input space representing the plane was removed, the addressee would have no concept of where the incident took place.

(26) Surrogate + Token--Two entities: Signer's past-self and airplane (disc 5 ~28:48)

Right Hand	Face/Body	Left Hand
AIRPLANE	Head tilted back and	Neutral
classifier	to right. Relaxed face	

Below is another example from the airplane emergency landing story that we have seen in the previous example. In this example, the signer explains how she almost hit the back of the seat in front of her with her face when the airplane came to a sudden stop. Once again, the surrogate is the signer's past-self. She breaks eye contact with her addressee and instead focuses on the classifier used to represent the seat back. This change in visual focus suggests a role shift on the part of the signer. The token is shown on the signer's left hand. It is a classifier is one that Supalla identified as one used in ASL to represent flat objects. In this example, it is the back of the seat in front of her. Interestingly, the signer brings her hand to her face, instead of her face/torso to her hand. This example shows two entities interacting, one being a surrogate and the other being a token. The signer-as-surrogate is one entity, and the classifier representing the seat back is the second entity. Thus, two entities are being represented in this construction. The interaction of the surrogate and token allows us to have a clear conceptualization. They work together to produce a clear perception. Removing either element would leave us without all of the information needed.

The blended space for this example would be made up from two input spaces. The first input space would contain information regarding the signer-as-surrogate, including her body position and facial expression. The second input space would contain information about the back of the airplane seat in front of her. When blended together, we are left with a blended space that allows us to conceptualize the airplane passenger hitting the seat in front of her when the plane stops abruptly. The conceptualization of this blend would be altered if either of the input spaces were to be removed. Removing either one would take away the addressee's ability to conceptualize the surrogate's face smashing into the seat in front of her.

This example also shows the token leaving token space and entering surrogate space. In still (c) below, the signer's left hand is in front of her face, which is not token space according to Liddell's definition. Also, according to Liddell, tokens have no concept of near or far. However, without the concept of closeness in regards to the surrogate and token, the conceptualization of the whole blend would be altered.

(27) Surrogate + Token--Two entities: Signer's past-self and airplane seat (disc 5 ~29:19)

| (a) | (b) | (c) |

Right Hand	Face/Body	Left Hand
Neutral	Focusing on LH	Flat hand, palm in, moving towards face

Example (28) below comes from a story a different signer is telling about a different scary incident in her life. As she was traveling in her car with her sister, her mother, who was driving, and a family friend, they were ordered to pull over to the side of the road by the police. In this example, the signer takes on the role of her mother, and is the surrogate. The mother, sitting in the driver's seat, can see a police car coming towards her. The token represents the police car, and is seen on the signer's left hand. This example shows an interaction between a surrogate and a token (the signer's mother seeing the police car coming towards her) and thus

contains two separate entities. By interacting and working together, the surrogate and token provide us with a clearer conceptualization.

Two input spaces are used to form the blended space for this example. The first input space would contain the signer-as-surrogate, while the second input space would contain the vehicle coming towards them. Blending these two input spaces would allow us to conceptualize the example described above and seen below.

If needed or desired, the surrogate in this token could have conversed with the token. How many of us have tried to communicate with another car on the road? The signer is not using her right hand to represent anything in this construction, so it would be free to articulate anything the surrogate wished to say to the oncoming vehicle.

(28) Surrogate + Token--Two entities: Signer's past-self and vehicle (disc 8 ~11:47)

| (a) | (b) |

Right Hand	Face/Torso	Left Hand
Neutral	Confused/worried face	Vehicle CL

In the story containing the next example, the signer is explaining the plot of the children's movie "Stuart Little". In the movie, human parents decide to adopt a child and go to an

orphanage. They can't decide whether to get a boy or a girl and sit down to decide and talk with the orphanage staff.   They are classifiers used to show humans sitting. There is a surrogate/token interaction in this example. The surrogate is seen on the signer's face. She takes on the role of either of the parents as they discuss what to do. The tokens appear on the signer's hands, using a classifier Supalla identified as one for bent (in this case, human) legs. They represent the parent's legs as they are sitting side-by-side. No matter whose face is represented in the surrogate, the mother's or the father's, this example contains an example of an interaction between a surrogate and a token. The surrogate parent face belongs to one of the token legs. The second pair of token legs belongs to the other parent. Each set of token legs represents one parent and the signer-as-surrogate represents one parent, thus two entities. The interaction between the surrogate and token allows us to see a clearer and more complete conceptualization of what the signer is trying to convey.

Three input spaces would blend together to form the blend for this example. One would contain the facial expression for the parent seen on the signer's face. The other two would each contain one set of token legs. When blended together, we would be able to conceptualize what the signer is showing us in the image below: two humans sitting side by side, with one of them having a worried look on their face. By removing one of the input spaces in this example, the addressee's conceptualization would change. For example, if one of the tokens were to be removed, we would not understand that both parents were present at the meeting.

As in the example above, if the surrogate wanted to communicate with a token, this would have been possible. Since it is not clear in the story, let's argue that the signer-as-surrogate and the signer's left hand are both representing the mother. The father is represented

on the signer's right hand. The signer could use their left hand and her eye gaze to communicate with the token father.

(29) Surrogate + Two tokens--Two entities: Mother and Father (disc 8 ~2:38)

Right Hand	Face/Body	Left Hand
Sitting CL	Worried/undecided	Sitting CL

The example below shows a surrogate and token interaction, as well as an interaction between two tokens. The signer's body is partitioned into two entities. The surrogate is portrayed when the signer takes on the role of his dog. This can be seen on the signer's face, which takes on a snooty/smug expression. He breaks eye contact with his addressee and his body is turned slightly to the left. Both of these indicate a role shift. Previously, the signer explained that his dog was stuck up or snooty when it came to meeting and interacting with people. The token that interacts with the surrogate is indicated by an index classifier. Supalla identified this type of classifier as one that is used to represent an upright, slim figure, in this case a human being. The second token is in place of the dog and is, again, a classifier. Supalla identified this classifier as one that is used to represent small entities. Thus, three entities are

represented in this example. These three entities, and therefore the surrogate and tokens, interact with each other and leave us with a more complete conceptualization. Removing any of them would leave us with an incomplete scene.

Three input spaces would blend together for form the blended space for this example. One input space would hold the signer-as-surrogate's facial expression. A second input space would provide the classifier used to represent the human the dog is meeting. The final input space would contain the classifier used to show how the dog is in relation to the human. When these three spaces are blended together, we are able to conceptualize the dog's facial expression upon meeting someone, as well as the relation of dog to human. Removing any one of the input spaces would change the conceptualization of this blend. If the signer-as-surrogate was removed, we would not know how the dog acted when meeting humans. What he friendly? What he angry? Did he kiss them? If the classifier representing the human was to be removed, we would not know when the dog acted snooty. Perhaps this dog was always snooty. Lastly, if we removed the classifier indicating the dog's proximity to humans when being snooty, we would not conceptualize that the dog is snooty when he meets humans.

(30) Surrogate + Two Tokens--Two entities: Dog and Human (disc 7 ~5:50)

Right Hand	Face/Body	Left Hand
3-finger claw	Turned towards left	Fist with index finger extended
Palm facing LH	Snooty/smug facial expression	Palm facing RH

In the images below, we see the signer as a surrogate goalie. His right hand is no longer holding a stick, but his left hand is still shaped and positioned as a goalie's catching glove would be. It is in this image that we see an interaction between a surrogate and a token. The signer's right hand becomes a classifier indicating many people out in front of him. This indicates the players who are in front of a goalie during a hockey game. Although it is difficult to see in a still image, the signer's fingers are moving as if to show people moving in front of him. His eyes are staring straight ahead, but he is not maintaining eye contact with his addressee. He, as a surrogate, is looking where a hockey goalie would be looking: where the play is. This is an interaction between a surrogate and a token as the signer is a surrogate hockey goalie with token people in his line of vision. They work together to portray a clear conceptualization of the signer's message.

A blended space for this example would be made from two input spaces. One input space provides the conceptualization of the hockey goalie, while the second provides the conceptualization of the hockey players in front of him. When these two input spaces are blended together, they form a blended space with the conceptualization of a hockey goalie who has players skating in front of him, blocking his line of vision.

The surrogate goalie in this example would be able to converse with the players in front of him, much like real-life goalies might want to converse with players standing in front of them. Using his left hand and directing his eye gaze at the token on his right hand, the signer-as-surrogate would be able to convey his message.

(31) Surrogate + Token--Two entities: Hockey goalie and Opposing players (disc 6 ~12:45)

Right Hand	Face/body	Left Hand
Palm out	Staring straight ahead	Palm up/open claw
Fingers wiggling		
Moving back and		
forth in front of face		

The two examples below are from the same story and occur approximately 2 seconds apart from one another. The signer is explaining the rules of football, both American and Canadian, as well as the different rules between the two. In (32), the signer is showing the path of a football

that is in the air coming towards him. He becomes the football player and is the surrogate in this interaction. His body and eye gaze follow the path of the football as it comes towards him, thus suggesting a role shift. The token appears on the signer's right hand. The signer traces the path of the football with a classifier Supalla identifies as one used in ASL to indicate long objects (as opposed to a fist, which would indicate a round object, such as a basketball). Example (37) shows an interaction between a surrogate and a token, with two entities being represented. The first is a signer-as-surrogate football player, and the second is a classifier showing the path of the football as it flies over the football player's head.

Two input spaces would contribute to the blended space for this example. The first input space would contain the signer-as-surrogate representing the football player. The second input space would contain the classifier representing the football and its path. When these two input spaces blend, we are able to conceptualize the football player watching the football fly over his head.

In this example, the signer would be able to converse with the token representing the football as it flies over his head. His left hand is neutral, so it could be used to articulate what the signer wanted to say to the ball, perhaps "I need to catch you!"

The next example, (33) shows another interaction between a surrogate and a token. The signer continues to take on the role of a football player. He has just caught the ball that was coming towards him in the previous example, as shown by his left hand. His facial expression shows a football player who is frightened or surprised by the number of opposing football players headed towards him. The token appears again appears on the signer's right hand. However, in this example, the handshape is one that is commonly used to represent a group of

people. In this case, the group of people is other football players, presumably from the opposing team, who are moving towards the signer/football player.   The signer-as-surrogate is one entity and the classifier representing the opposing football players is a second entity. Thus, two entities are being represented in this interaction's construction.

For this example, two input spaces are needed to form the blended space. In the first input space, there would be, again, the signer-as-surrogate football player. The second input space for this example would contain the classifier used to represent the token for this example-the opposing football players. This example has a similar construction to example (31), with the only differences being the look on the surrogates face and the palm orientation of the classifier. Removing any of the input spaces would alter the conceptualization in the same manner as it would for example (31).

As well, the signer-as-surrogate would be able to converse with the football players in front of him much the same as the surrogate in (31) would be able to converse with the hockey players in front of him. In both of these examples, the respective surrogates and tokens interact with one another to produce a complete representation of what the signer is trying to convey.

(32) Surrogate + Token--Two entities: Football player and football (disc 1 ~21:40-21:41)

(a)   (b)   (c)
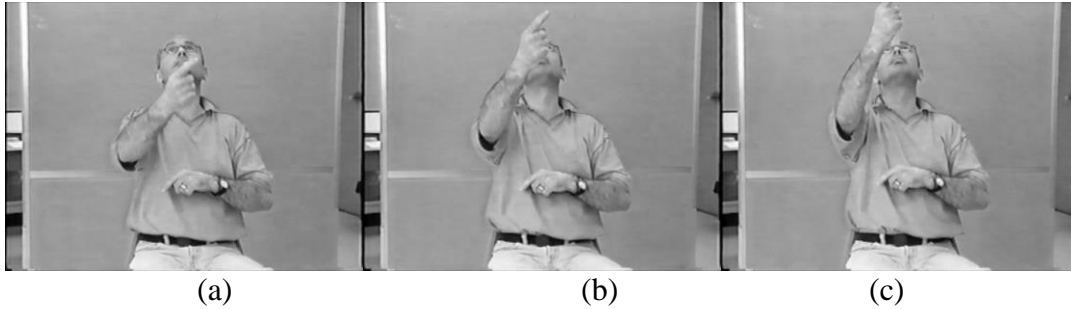
Right Hand	Face/Body	Left Hand
1 handshape, palm left Travels up & over head	Looking up	Neutral

(33) Surrogate + Token--Two entities: Single football player and group of football players (disc 1 ~21:42)

(a)   (b)   (c)

Right Hand	Face/Body	Left Hand
5 handshape, palm in Moves towards body	Staring at RH	Flat hand, palm in, against chest

In the story containing the example shown below, the signer is describing how they tag bears to keep track of them. In this example, the signer's right hand is the surrogate as it

becomes the hand of a game warden. The signer breaks eye contact with his addressee and leans to the right. Both of these are indicators of a role shift. The signer's left hand becomes the bear that is being tagged, using a non-specific classifier. It is the token. The signer's hand is considerably smaller than a bear, even a bear cub, and it is positioned in token space. It is unclear whether the signer's hand is a token for the whole bear or just its head. If it is to be the bear's head, the placement of the tag on the bear's ear is clear. The signer's/warden's hand is at the side of the bear, close to the top, which is close to the location of bear's ears. If it is to be the whole bear, it is difficult to see where the tag is placed on the bear's body. However, approximately one second previously, the signer was seen "tagging" himself, as if his head was the bear's. As we can see, the signer attaches a tag to his lower ear.

Two input spaces would blend together to form the blended space for this example. One input space would contain the game warden, while the second input space would contain the bear. When blended together, we are able to conceptualize the game warden ID tagging the bear. If either of these input spaces were removed, the blend would change. By removing the signer-as-surrogate's right hand, the addressee would not be able to conceptualize what is being done to the bear. If the classifier representing the bear was removed, the addressee would not know what is being tagged or where on the body the tag was being placed.

The signer-as-surrogate could communicate with the token in this example. He would have to direct his signer-as-surrogate eye gaze towards the token (in order to keep the surrogate represented), as well as alternate between using his right hand to articulate and represent the surrogate.

(34) Surrogate + Token--Two entities: Game warden and bear (disc 7 ~26:14)

(a)   (b)

Right Hand	Face/Body	Left Hand
Flat hand to A hand	Neutral	Body CL

(a)   (b)

(disc 7 ~26:13)

Right Hand	Face/Body	Left Hand
Open hand to A handshape	Leaning to right	Neutral

Given this previous context, we can presume that the classifier in the surrogate/token example was meant to represent the bear's head. However, even if the classifier was meant to

represent the entire body of the bear, there would still be a surrogate/token interaction. The surrogate is the game warden, represented with the signer's right arm and hand. While he does not break eye contact with his addressee, he does lean to the left, signaling a role shift. The token is the bear, either its head or its entire body, represented by the classifier on the signer's left hand. Given that the above two still occurred before the previous example, I am inclined to think that the signer's left hand was to represent the bear's head, while the signer's left arm was to represent the bear's body, as if the bear was laying on the ground.

The surrogate and token, no matter what it is representing, interact with one another. Together, they produce a more complete visual representation of the signer's message. As with the other examples, removing one element would leave the conceptualization either incomplete, unclear or both.

In the story containing the following example, the signer explains why you must leave fallen moose antlers on the ground. He explains that if you find them and take them, you can be arrested. He further explains that this is because bugs and mice feed off of them. The surrogate in this example can be seen on the signer's face, in particular his mouth. He becomes the bugs and mice that are eating on the moose antlers and his teeth nibble as the teeth of bugs and mice would. The token can be seen on the signer's right hand. The fingers of his right hand represent the teeth of the nibbling creature. While it may not be considered miniature, it is in token space and it is a similar construction to what is seen in (11), where it is a miniature representation of a ferret eating. The two handshapes are similar, as well as their movements. The interaction between the surrogate and the token in this example is seen when looking at the signer's teeth nibbling and the signer's left hand, which is a token representing the moose antlers. It can also be argued that the signer's right hand is miniature and is a second token. The signer-as-surrogate

represents one entity in this construction. The signer's right hand represents the same entity

nibbling bugs). The second entity is represented on the signer's left hand. Thus, two entities are

represented in this example. These two entities interact with one another. This then means that

the surrogate and tokens interact with one another. This interaction provides a clearer

conceptualization.

This example's blended space is comprised of information from three input spaces. The

first input space would contain information about the signer-as-surrogate. The second input

space would contain information about the token representing the nibbling bugs. The final input

space would provide information about the antlers that the bugs are nibbling on. When blended

together, we are able to conceptualize what the signer is describing-bugs nibbling on antlers,

including the movements of their little teeth. Removing any of the three input spaces in this

example would change how the addressee would be able to conceptualize it. Removing the

surrogate would remove the actions of the bug's mouths and the addressee would not be able to

conceptualize as clearly that the bugs were eating the antlers. Removing the token representing

the antlers would leave the bugs with nothing to chew on. Removing the token representing the

bug's teeth would again leave the addressee unable to conceptualize as clearly that the bugs were

eating the antlers.

(35) Surrogate + Token--Two entities: Bugs and moose antlers (disc 7 ~25:27)

Right Hand	Face/Body	Left Hand
E handshape	Body neutral, teeth chattering together, lips pulled back, showing teeth	Flat, palm in, thumb hidden

In the example below, the signer is describing having to park a vehicle. His face shows the surrogate, with a confused facial expression of his past-self as he is driving. Once again he breaks eye contact with his addressee, signaling a role shift. His right hand shows a classifier Supalla has identified as one used in ASL to show a vehicle and is one of the tokens. The other token appears on the signer's left hand. It shows a classifier used in ASL to show a flat surface, as indicated by Supalla. In this case it is representing a road or street. This example shows an interaction between a surrogate and two tokens. The first entity is represented in the signer-as-surrogate construction, when the signer represents his past-self. One entity is represented with a vehicle classifier and the final entity is represented by the classifier indicating the road and thus has three entities. The three entities, and therefore the surrogate and tokens, interact with one another to provide a complete conceptualization.

The blended space for this example would contain input from three input spaces. One input space would contain the signer-as-surrogate as he describes trying to parallel park. A second input space would contain the vehicle. The final input space would contain the road he is driving on. When these three spaces are blended together, we are able to conceptualize a frustrated signer's past-self trying to parallel park a vehicle. If the surrogate was to be removed from this blend, the addressee would not see how frustrated the signer's past-self was with having to parallel park. The token representing the vehicle is needed in order to conceptualize what the signer is trying to manipulate. The token representing the road is needed, as it tells the addressee that he is on land, as opposed to flying an airplane.

The surrogate could converse with the vehicle token if he desired. He would have to give up the token representing the road, but he would then be able to articulate what he wanted to the vehicle as he tried to park it.

(36) Surrogate + 2 Tokens--Three entities: Signer's past-self, road and vehicle

(disc 1 ~36:59-37:00)

(a)   (b)

(c)   (d)

Right Hand	Face/Torso	Left Hand
Vehicle CL	Confused	Flat surface CL
Moves R-L	Looks down and to right	

Example (37) below is from the story describing when the signer took a scary flight. However, now, things are not quite as relaxed. In this example, the signer is describing the emergency landing the plane was forced to make after a bomb threat was made. Once again, the surrogate is the signer's past-self. This time it is represented in the position of her torso. She leans forward as the plane crashes down, as one would do when the vehicle they are traveling in comes to a sudden stop. She breaks eye contact with her addressee, suggesting a change in role. A token is seen on both of the signer's hands. Her right hand shows the classifier used for

AIRPLANE, as identified by Supalla. Her left hand shows a classifier that Supalla explains is used in ASL to show a flat surface; in this case the tarmac where the plane is landing. This example shows an interaction between a surrogate and two tokens. The surrogate is seen on the signer's face. The signer's right hand represents the airplane in token form, while the signer's left hand represents the tarmac it is trying to land on, for a total of three entities. By interacting, these three entities provide us with a complete representation of the airplanes difficult landing.

Three input spaces are used to form the blended space for this example. One input space contains the signer-as-surrogate airplane passenger, one input space contains the concept of the airplane with its nose pointing down and the final input space contains the ground that the airplane landed abruptly on. These three input spaces blended together produce the blended space that allows us to conceptualize what the signer is describing: an airplane that landed and stopped abruptly, throwing the passengers forwards in their seats. This example is very similar to 41 and removing any of its input spaces would change the conceptualization in the same way.

(37) Surrogate + Two tokens--Three entities: Signer's past-self, airplane and tarmac (disc 5 ~29:18 Repeated at 30:51)

(a)	(b)	(c)
<u>Right Hand</u>	<u>Face/Body</u>	<u>Left Hand</u>
AIRPLANE	Leans forward,	Flat hand, palm up
classifier	head down	

In the next example, the signer is explaining a near-accident he had while driving a semi-truck. The surrogate is represented on the signer's face, as his past-self. He takes on the facial expression of his past-self; that of a terrified driver who is about to crash into another truck. The signer gazes to the left, and later downwards, breaking eye contact with his addressee, further suggesting a role-shift. The tokens appear on the signer's hands, which are representing two semi-trucks that are getting closer and closer to one another. In the first still, the signer uses a classifier that Supalla identifies as one used in ASL to represent long, thin entities. In this case, they are representing semi-trucks. He continues to uses this handshape throughout the rest of the example. However, in the rest of the example, his palm orientation has been changed. In the first still, his palms are down, where as in the rest of the example, his palms are facing one another. In the latter stills, we can see that his hands move closer and further from each other. The second handshape, palm orientation and movement closely resemble the ASL sign for MEET. This is an interaction between a surrogate and two tokens, for a total of three entities. The first entity appears on the signer's face and one entity appears on each of the signer's hands. Thus, three entities are shown in this construction. The surrogate and tokens in this example interact with one another and produce a more complete conceptualization. If any of them were to be removed, the addressee would not get the complete message that the signer is trying to convey in this construction.

There are three input spaces for this example, that would blend together to allow us to conceptualize what the signer is describing. Each classifier representing the vehicles would have their own input space. The third input space would hold the concept of the signer-as-surrogate. Removal of any of these input spaces would result in a change of conceptualization for this blend. Removing either of the tokens representing the semi-trucks would leave the addressee

unable to conceptualize how close they were to each other. Removing the surrogate would leave

the addressee unable to conceptualize the fear the signer felt at the time of the incident.

(38) Surrogate + Two tokens--Three entities: Signer's past-self and two semi-trucks (disc 2

~40:07-40:08)

(a)   (b)

(c)   (d)

Right Hand	Face/Body	Left Hand
1 handshape, palm down	Looks left and down	1 handshape, palm up palm up
Moves closer and further from LH		Moves closer and further from RH

The following example occurs at the end of the scary flight story from the above

examples. It describes how the passengers had to slide down the slide to evacuate the plane.

The surrogate in this example can be seen on the signer's face and torso. Her torso is slightly

turned away from her addressee and she breaks eye contact with her. The tokens are seen on the signer's hands. Her right hand forms a classifier used to show legs and her left hand is a flat hand, showing the top of the inflatable slide. Supalla has identified these classifiers as those used in ASL to represent human legs and smooth, flat objects respectively. The movement of her right hand shows a "body" sliding down the slide. At the end of the description, her body returns to more of a neutral position and she reestablishes eye contact with her addressee. There are three entities being represented in this construction. The first can be seen in the signer-as-surrogate construction. The second can be seen in the classifier that is representing human legs. The third entity can be seen in the classifier that represents the airplanes emergency exit slide. These entities, represented by the surrogate and tokens, all interact to provide us with a clear conceptualization of the emergency exit procedure. Removing any of them would remove an important element of the description.

Three input spaces would contribute to the blended space for this example. One input space would conceptualize the signer-as-surrogate. A second input space would conceptualize the signer's past-self's body movements as represented by the "legs" classifier. The final input space would conceptualize the emergency exit slide they used when they evacuated the airplane. When these three input spaces are blended together, we are left with a blended space conceptualizing this example. Removing any one of the input spaces would alter the conceptualization of this blend. If the surrogate were to be removed, the addressee would not be able to conceptualize the body position of the signer's past-self as she slid down the emergency slide. This is also true of the token representing the surrogate's legs.

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(39) Surrogate + Two Tokens--Three entities: Signer's past-self, signer's legs and emergency exit slide (disc 5 ~29:33-29:34)

(a)   (b)

(c)   (d)

Right Hand	Face/Body	Left Hand
Legs CL, palm down	Torso turned	Flat hand, palm down
	to right	

Example (40) occurs shortly after (38) and is again discussing the near-crash between two semi-trucks. The surrogate is once again represented on the signer's face. He has "become" his past-self driving the semi-truck. He once again breaks eye contact with his addressee, this time looking upwards. The tokens are once again representing two semi-trucks. However, this time, the signer uses a different classifier. This one is commonly used to signify long, flat objects, but they are still representing the semi-trucks. Once, again, the signer's hands move closer and away from each other. One entity is the signer-as-surrogate truck driver. Each of the signer's hands represents a token semi-truck. Thus, this interaction between a surrogate and two

tokens contains three entities. The interaction occurs when the surrogate and tokens work together to provide the addressee with a complete conceptualization of the almost-accident.

Three input spaces would blend together for the blended space representing this example. Each of the semi-truck would have their own input space, just as each of the traveling monks had their own input space. The third input space would contain the signer-as-surrogate. When blended together, we would be able to conceptualize two semi-trucks that are about to crash and the terrified look on the face of one of the drivers. Once again, removing any of these input spaces would alter the addressee's conceptualization of the incident. By removing the surrogate, the frightened look of the driver would be lost. Removing either one of the tokens representing the semi-trucks would cost us the conceptualization of how close they were to each other as well as how they slowly got closer to one another.

(40) Surrogate + Two Tokens--Three entities: Signer's past-self and two semi-trucks (disc 2 ~40:10-40:11)

(a)	(b)	(c)
Right Hand	Face/Body	Left Hand
Flat hand, palm down	Looking up	Flat hand, palm down
Behind left hand, close to body		In front of right hand

The two stills below show an interaction between a surrogate and a token. The story containing this example describes the signer on an airplane that has an emergency landing after a bomb threat. The signer becomes a surrogate when he takes over the role of his old self. His body is partitioned into two entities. His right hand becomes a token when it articulates the ASL classifier identified by Supalla as one commonly used to represent an airplane. The signer's left hand is an ASL classifier used to represent flat surfaces, in this case where the plane landed. The signer explains that they did not land smoothly, as seen in the first image, but rather they landed abruptly, shown in the second image. In both instances, the signer's body shows how it reacted to each of the landings. In the first, gentle landing, (a) there was no movement in his body. However, in the second, harder landing, (b) he was thrown forward in his seat, much like you do when you hit the brakes in a car. These examples each show an interaction between a surrogate and a token. The surrogate and token each represent a different entity, thus two entities are shown in this example. By interacting, the surrogate and tokens represent a clear conceptualization of the story the signer is telling. Removing any element would change the conceptualization.

A blended space for this example would contain information from three input spaces. One would provide the signer's body position as the plane experienced an abrupt stop. The second would allow us to conceptualize the position of the airplane and the third would allow us to conceptualize the plane being on the ground (as opposed to flying in the air). When these input spaces are blended together, we are able to conceptualize what the signer shows us in the second still. A plane that has landed and stopped abruptly, causing it's passengers to be thrown forward in their seats. By removing one of the input spaces in this blend, the conceptualization

would be altered. If we were to remove the handshape classifier representing the tarmac, we would not know if the plane was on the ground or experiencing turbulence in the air.

(41) Surrogate + 2 Tokens--Three entities: Signer's past-self, airplane and tarmac (disc 7 ~43:15) and (disc 7 ~43:18) respectively

(a)

Right Hand	Face/Body	Left Hand
Airplane CL	Upright	Flat, palm up

(b)

Right Hand	Face/Body	Left Hand
Airplane CL	Leaning forward, head down	Flat, palm up

4.3.3 Conclusion

The previous section described examples that I found containing multiple entities within a surrogate-token interaction. In the previous examples, 27 surrogates were used to represent entities. There were a total of 41 tokens used. All of the surrogates represented animate beings. 25 of the 27 (92.5%) surrogates represented humans. The two remaining surrogates (7.4%) represented animals (bugs and a dog). Of the 41 tokens used 16 (39%) represented human entities, either in whole, in part or multiples of. There were 7 (17%) token entities representing animals, either the whole animal or part of the animal. Inanimate objects were represented by 17 (41%) of the tokens. One (2%) of the tokens represented an animate object, the sun. They showed that all input spaces were necessary for conceptualization and where conversation could have taken place between surrogates and tokens, should their real-life entities have been able to communicate with one another. When the surrogates and tokens interacted with one another, they provided the addressee with a clearer, more complete conceptualization of what the signer was trying to portray. In all instances, if any of the elements-either the surrogate or any of the tokens-were to be removed, or the interaction between them was removed, the conceptualization would not be as complete or as clear. The following section describes examples that I found that were not as clear cut. The reasons that they are problematic, as well as some possible arguments in each direction are given for each example.

4.4 Problem Cases

4.4.1 Introduction

The following section contains examples that are a bit of a grey area. They contain handshape constructions that challenge the definition of "token". Some examples, while

miniature, represent an entity that is represented elsewhere in the construction. Other examples challenge the definition of "miniature" needed in order to be classified as a token. One example's surrogate is produced on the signer's mouth. While that is a characteristic of a classifier, is it a surrogate as well? For each, I have given reasons as to why they could be called tokens, and therefore show an interaction between a surrogate and a token, as well as why they might NOT be called tokens.

4.4.2 Problem Cases

Examples (42-46) deal with the same type of construction. They each show a signer using their hands to represent an entity (eyes that are looking around) that is also being represented on the surrogate.

(42) Surrogate + Token--One entity: (disc 3 ~1:06)

(43) Surrogate + Token--One entity (disc 2 ~31:37-31:40)

(44) Surrogate + Token--One entity: (disc 6 ~7:47)

(45) Surrogate + token--One entity (disc 8 ~13:10)

(46) Surrogate + token--One entity (disc 8~2:43)

These sets of images all show the same classifier construction, used in different contexts.

However, they all show the same entity: human eyes looking around or following an object as it

moves across the signer's field of vision. This classifier construction presents the question of should it be called a token or not. In three of the examples, (43), (44), (45), the signer has shifted into the role of their past selves as they retell a story. In one example (42), the signer takes on the role of a cat. In the final example (46), the signer takes on the role of a movie character as she describes the plot of the movie. The following list indicates what the possible tokens are representing in each example:

(42)   The signer is describing how a cat's eyes dart around.

(43)   The signer is describing seeing an inmate walk past him at a hospital in handcuffs and shackles.

(44)   The signer saw something flying towards him out of the corner of his eye and did a double take.

(45)   The signer is retelling a story of when she and her family were pulled off the road by police so the police could catch a thief who was headed their way. She is describing what she sees out the car window as the police catch the thief at gunpoint.

(46)   The signer is describing the plot to the movie "Stuart Little". When it is suggested they adopt a mouse as a son, the parents look down at the little mouse sitting beside them.

Table 1: Token vs Non-token for (42-46)

Reasons to call it a token	Reasons to NOT call it a token
It occurs in token space.	It can be argued that in front of the signer's chest can also be surrogate space.
By using their hands to exaggerate the movement of their eyes, the eyes, and where they are looking, becomes the focus of the phrase.	
Why use two surrogates for one entity?	
It is easier to see a signer's hands moving than it would be to see their eyes moving.	It is not the proper size. If anything, the classifier is larger than human eyes.

An additional question would be why did the signer use two separate constructions (a surrogate and a token) to represent the same aspect of an entity? In section 4.3 above, signers used a surrogate and a token to represent different aspects of one entity. One possibility is that the signer wanted to make certain that the addressee focused on the direction on their eye gaze.

In the example below, the signer is explaining the rules of ice hockey. He becomes a player who is shooting the puck. The surrogate can be seen on the signer's face and torso. The token appears in his handshapes and movements. The question regarding this example is whether the signer's handshapes and is movements are miniature enough to be classified as tokens. While it might not appear to be miniature, hockey players are usually much more relaxed and less compact then the signer below, with their hands further away from their body

when they shoot a puck. The signer's face shows a hockey player as he struggles to shoot the puck. This example shows an interaction between a surrogate and a token, displaying one entity.

(47) Surrogate + possible token--One entity: Hockey player (disc 1 ~4:16)

Table 2: Token vs non-token for (47)

Reasons to call it a token	Reasons to NOT call it a token
Compared to the size of real-life hockey players, the signer is smaller and more compressed	It is not miniature in the same respect as more clear-cut examples
Occupies token space	

The following two examples, (48) and (49) are similar in construction and deal with the same issue. In each of these, the handshape the signer uses to articulate the token is very close to the real-life entity it is being used to represent. In the image below, (48) the signer is describing stroking his pet ferret. It shows the surrogate-token interaction between two separate entities. In this construction the surrogate is the signer as his past-self. He is not talking about having a ferret with him in the present; he is retelling a story of owning ferrets in the past. The token is represented by the shape and position of his hands. He is holding and petting a ferret, showing

its size and shape and its position in his hands. While it might be argued that a ferret is the same size as what his hands are showing, he could easily be showing how he holds a token-sized baby, a token-sized dog or a token-sized sheep in his hands.

(48) Surrogate + possible token--Two entities: Signer's past-self and ferret (disc 6 ~ 2:02)

In (49), the signer-as-surrogate is petting a cat. However, like the ferret in (48), the handshape is very close to the actual size of cat, at least one that would be kept as a pet. Once again, there is the question of calling this classifier a token. The surrogate is anyone who owns a cat. The main reason as to whether this can be called a token or not is due to the size of the entity represented by the classifier handshape. A small cat, or kitten, could easily be the same size as the signer's left hand. This would exclude this construction from being a token. However, in another context, the signer could just as easily be describing holding and petting a grizzly bear cub. A grizzly bear cub is easily bigger than the signer's hand, and in that context, it would be identified as a token. It seems logical to me that a construction should be called the same thing, no matter what the context.

(49) Surrogate + possible token--Two entities: Cat owner and cat (disc 4 ~2:01)

Table 3: Token vs non-token for (48 & 49)

Reasons to call it a token	Reasons to NOT call it a token
It occurs in token space.	The area in front of the signer's chest is also surrogate space.
Depending on context, the same construction can be used to describe a mouse, a cat or an elephant.	Tokens are approximately the same size as the real-life counterparts they are representing

In the stills below, the signer is retelling a story of camping in a cabin with her family. Her father was standing at the counter chopping mushrooms, while at the same time keeping up with the conversation around him. The surrogate in this example is seen when the signer takes on the role of her father at the time the story occurred. There are two tokens in this example. One is represented on the signer's left hand and is a classifier that represents a flat surface. In this example, it is the counter top. The second token is a knife represented by the signer's right hand.

(50) Surrogate + possible token--Two entities: Signer's father and knife (disc 4 ~31:54)

Table 4: Token vs non-token for (50)

Reasons it is a token	Reasons it is NOT a token
The type of knife is not specified. While the signer's hand is not smaller than a paring knife, it is smaller than a cleaver.	
It is in token space.	As with (49), the area in front of the chest is thought of as surrogate space.

The signer below is retelling a story about how her family saw a mouse in the cabin while they were camping. The signer's uncle had explained to her that if she screamed the mouse would hear her and jump into her open mouth. The signer is the surrogate, in the fact that she represents her former self while she is telling this part of the story. The construction of the mouse in her mouse poses a problem, about whether it can be called a token or not. Firstly, it is not in token space. Secondly, the handshape the signer uses is not smaller than a mouse.

(51)Surrogate + possible token--Two entities: Signer's past-self and mouse (disc 4 ~32:41)

Table 5: Token vs non-token for (51)

Reasons it is a token	Reasons it is NOT a token
Depending on context, the signer could be describing a larger entity.	
It is very close to life-size of a mouse. It is not larger than a mouse.	The token used to represent the mouse is approximately the same size as a real-life mouse and not miniature as is characteristic of tokens
Previous examples have shown that tokens leave token space and enter surrogate space	Not in token space

In the story containing the example below, the signer compares taking care of a plant to taking care of a pet. Above, she explains that you need to brush a pet. The surrogate is the signer's face, body and right hand as she takes on the role of any pet owner. Once again, the eligibility of the token is called into question because of the handshape. If the signer is describing brushing a rabbit or a hamster, the handshape articulated is the same size (or larger) as

the real-life entity it is being used to represent. However, if the signer is describing having to brush a German Shepard, the handshape articulated is miniature in comparison and would fit the criteria for being labeled a token.

(52) Surrogate + possible token--Two entities: Pet owner and pet (disc 4 ~34:39)

Table 6: Token vs non-token for (52)

Reason it is a token	Reason it is NOT a token
Depending on the type of pet, it is miniature. If the signer is talking about brushing a German Shepard, the handshape would be considered a token, as it is smaller than a German Shepard.	Depending on the type of pet, it is not miniature. If the signer is talking about brushing a rabbit, the handshape is the same size or possibly larger than a rabbit.
It is in token space.	It could be argued that this construction is in surrogate space.

In the example below, the signer is telling a story of when he got to see and pick up the Stanley Cup. The signer's face shows what his facial expression was when he got to pick up the Stanley Cup. This is the surrogate in this example. He breaks eye contact with his addressee and

looks at what he is holding, signaling a role shift. The token can be seen on the signer's hands.

Both hands have a curved handshape to them, indicating that they are holding something curved.

The distance of his hands from one another show the height of what he is holding.

(53) Surrogate + possible token --Two entities: Signer's past-self and Stanley Cup (disc 3 ~6:43)

Table 7: Token vs non-token for (53)

Reasons it is a token	Reasons it is NOT a token
Even though it looks large, it is miniature in compared to the size of the real Stanley Cup	Not in token space

(54) Surrogate + possible token--Two entities: Signer's past self and her heart (disc 5 ~38:46)

(a)   (b)

In this example, the signer is describing how it felt to have a heart attack, which she had experienced previously. The surrogate is seen on her face, which takes on the appearance of her face when the heart attack was occurring. Her hands are the tokens and are representing the tightening feeling she felt in her chest.

Table 8: Token vs non-token for (54)

Reasons it is a token	Reasons it is NOT a token
Her hands are representations of her heart, where she feels the tightening. They allow her to show her addressee what the sensation of having a heart attack felt like	Not miniature.
In token space	

The following example is a "problem case" for a different reason. This time, the eligibility of the surrogate is in question. In this example, the signer is explaining how he lives close to a freeway. The surrogate can be seen when the signer purses his lips in order to "make" noise resembling the traffic noise. As noted above in section 2.6.2 Paul Dudis said, oral articulators can be used in blends. Even if there was no sound coming from the signer, he is adding to the blend. The token for this example can be seen in the signer's hands. They resemble traffic on the freeway. By having his fingers point in opposite directions, we can understand that the traffic moves in two directions. I believe that this example shows an interaction between a surrogate and a token.

(55) Possible surrogate + token--Two entities: Wind and traffic (disc 6~20:23)

(a)   (b)

Table 9: Surrogate vs non-surrogate for (55)

Reasons it is a surrogate	Reasons it is NOT a surrogate
Oral articulators can be used in blends.	Not a physical entity.

4.3.3 Conclusion

Some of the examples I found in the data were not as clear cut as others.   I have

presented those examples in the previous section. The problems had to do with one of three

issues:

1) Why use a surrogate and a token to represent the same part of an entity?

What is the signer's purpose for representing an entity on both the surrogate and

tokens? Are they trying to draw focus to the entity or is it just for effect?

2) Hand size and handshape size when articulating tokens to represent small entities

There does not seem to be a clear definition on what "miniature" means when it comes to tokens representing entities. A handshape that is a miniature representation of one entity is not necessarily miniature for another entity.

3) Oral articulators to represent surrogates.

Oral articulators can be used as classifiers. However, I have not found any literature discussing whether they can be used as surrogate.

I have been unable to find any literature that deals with any of these issues. I have presented arguments for and against both side of these issues, but have not attempted to resolve them here. Perhaps future research will be able to solve some of these questions.

4.5 Findings and Discussion: Conclusion

The data I used in this research project showed many examples of interactions between surrogates and tokens. These interactions were found in constructions with only one entity being represented on both the surrogate and token, as well as multiple entities being represented on the surrogate and tokens. The data also contained some examples that raised some questions in terms of what constitutes miniature in regards to tokens.

5 <u>Conclusion</u>

5.1 Summary

At the beginning of this research project, I set out to find out if there were interactions between surrogates and tokens in American Sign Language discourse. After viewing eight hours of a 10 hour corpus that had been collected for a previous study, I found numerous examples of interactions between surrogates and tokens.   In addition, there appear to be two types of interactions. In one type, one entity is being represented in both the surrogate and the token. In the second variation, multiple entities are being represented in the surrogate and tokens. At most, three entities were represented in one construction. There are several examples with three entities, including (21), (37), and (38).

While it could be argued that the examples showing multiple entities are simply examples of body partitioning, what about the examples containing only one entity? Why are two separate constructions needed to represent the same item? Why are two separate constructions needed to show the same aspect of the same entity? In many instances, the surrogate and token both showed different aspects of the entity. For example, in (12), the entity being represented is a dog. The signer-as-surrogate's face is representing the dog's face, while the tokens shown on the signer's hands are representing the dog's legs and position.

5.2 Conclusions

From the examples I have found and outlined, the data supports the conclusion that surrogates and tokens can interact with one another. If we were to remove either the surrogate, any of the tokens or the interaction between them, we would not have the same conceptualization we do with all of the elements present. Either the conceptualization would be missing a crucial

element or, as in example (22), the scene would be changed. By removing the surrogate, any of the tokens or the interaction between them, an input space would be removed. By removing this input space, the resulting blend would not be complete. In some cases, such as (9), there are only two input spaces. If one were to be removed, that would leave us with only one remaining input space. This is not enough to create a blend, as at least two input spaces are needed to contribute elements to the blended space. Since blending occurs across many discourse types, both input spaces are needed. Also, I conclude that they can converse with one another if the real-life entities that they are representing would have been able to communicate with one another. A human communicating with an airplane does not seem plausible, no matter if they were real life entities or surrogates and tokens representing them. I also argue that tokens leave token space and enter surrogate space, which can lead to interactions.

An example containing one entity in which there is an interaction between a surrogate and a token can be seen in (13) and shown once again below. In this example, the signer is describing how his mother yelled and ran after him after she caught him trying to drive the tractor at 9 years old. The signer-as-surrogate showed the mother's facial expression as she yelled. The tokens shown on the signer's hand are articulating handshapes that Supalla identified at those used to represent human legs. While it is difficult to see in a still image, the signer's arms are moving in such a manner as one would conceptualize legs running. The interaction occurs as each construction is dependent on the other in order to conceptualize the situation completely. If either the surrogate or the token were to be taken out of this example, the signer's addressee would not be able to conceptualize what he is trying to articulate. The surrogate and token each rely on the other to make the conceptualization complete. Thus, there is an interaction between them.

(13)

An example containing multiple entities in which conversation could be directed at a token by a surrogate can be seen in (31). In this example, the signer becomes a surrogate as he role switches and becomes a hockey goalie. The token, on the signer's right hand, represents hockey players in front of him. The tokens appear to leave token space and enter surrogate space, as they are higher in the signing space. The signer-as-surrogate could converse with the tokens in front of him, just as a goalie could converse with players standing in front of him.

(31)

An example of a "problem case" that I found while researching this project is (49), although the same problem appeared in multiple examples. The common problem is "what should be considered miniature?" In many examples, hand size in regard to representing tokens has shown to be problematic. In (49), the signer is petting a token cat. However, the handshape that the signer articulates to represent the cat is approximately the same size as a real-life cat.

(49)

5.3 Limitations of Research

This research study was limited in at least three ways.

The first area in which this research study is limited is due to the fact that is only focused on one type of ASL discourse. All of the data used for this research project contained storytelling discourse.

A second way this research project is limited is it only contains participants from one geographical location. All the participants for this study are members of the Deaf community in Winnipeg, Manitoba, Canada. This geographical restriction could result in only a particular dialect being used.

The third way in which this study is restricted is due to the fact that some of the participants are related, either through blood or marriage. This could alter their discourse construction, as people tend to learn from those around them.

5.4 Future Research

Without question, more research needs to be done concerning the possible interaction between surrogates and tokens. A broader geographical sample would allow for any differences

in dialect to be found. Research should also be done looking for interactions in other types of

discourse. In addition, looking for interactions between surrogates and tokens in other signed

languages would be beneficial. I have found instances of tokens leaving token space and

entering surrogate space, but I have no found instances of surrogates leaving surrogate space and

entering token space. This is another possible area of study.

One additional area of study concerns the examples below. During my research I found

two examples that contained constructions that were larger than the entities they were

representing. If tokens are to be miniature, is there a special, separate term for this type of

representation? I have been unable to find any literature that discusses this type of construction.

(56) Surrogate + ?--One entity: Cat (~1:12)

In this example, the signer is explaining why he prefers dogs to cats. He says you can

play with dogs, but when you try to play with cats they hiss at you and show their claws (as seen

above). While the signer is smaller than a tiger, he is certainly larger than a cat you would keep

as a pet. If this would be considered a token for a tiger's paws, would it be considered a token

for a house cat?   The surrogate can be seen when the signer's face takes on the role of a hissing

cat, by narrowing his eyes and showing his teeth.

In this example, the signer is describing the facial characteristics of one of the dogs he owns. One is a terrier and has teeth that the signer describes above. The signer shows his teeth, and becomes a surrogate representing his dog. The signer's hands represent the dog's teeth, but they are larger than the actual dog would be. While some breeds would be larger than this, the signer indicates that it is a terrier, which is smaller.

(57) Surrogate + ?--One entity: Dog (~1:52)

By further researching these areas, it may be found that surrogates and tokens do in fact interact and converse with one another, and in various types of discourse. It may be found that tokens and surrogates move freely between their respective spaces. Whatever is found in the future, both ASL users and linguists alike will benefit.

References

Dudis, Paul G. 2004. Body partitioning and real-space blends. *Cognitive Linguistics* 15(2), 223-238.

ELAN: The Language Archive. Max Planck Institute for Linguistics. Date retrieved: Oct 26, 2015 from https://tla.mpi.nl/tools/tla-tools/elan/

Evans, Vyvyan. and Melanie Green. 2006. *Cognitive linguistics: An introduction*. Hillsdale, New Jersey & Hove, UK:.Lawrence Erlbaum Associates, Publishers.

Fauconnier, Giles and Mark Turner. 1996. Blending as a Central Process of Grammar. *Conceptual Structure, Discourse, and Language*. Adele Goldberg ed. Cambridge: Cambridge University Press. 113-130.

Fauconnier, Gilles and Mark Turner. 1998. Conceptual Integration Networks. *Cognitive Science* 22, 133-187.

Fauconnier, Gilles, and Mark Turner. 2002. *The Way We Think: Conceptual Blending and the Mind's Hidden Complexities*. New York, NY: Basic Books.

Fauconnier, Gilles and Mark Turner. 2006. Mental Spaces. *Cognitive Linguistics: Basic Readings*. Dirk Geeraerts ed. Berlin & New York: Mouton De Gruyter. 303-372.

Fillmore, Charles J. 2008. Frame Semantics. *Cognitive Linguistics: Basic Readings*. Dirk Geeraerts ed. Berlin & New York: Mouton De Gruyter. 373-400.

Koestler, Arthur. 1964. *The Act of Creation*. London: Hutchinson & Co. Ltd.

Liddell, Scott K. 1995. Real, Surrogate and Token Space: Grammatical Consequences in ASL. *Language, Gesture, and Space.* Karen Emmorey and Judy Reilly eds. Hillsdale, New Jersey & Hove, UK.: Lawrence Erlbaum Associates, Publishers. 19-42.

Liddell, Scott K. 2003. *Grammar, Gesture, and Meaning in American Sign Language*. Cambridge: Cambridge University Press.

Lillo-Martin, Diane. 2012. Utterance Reports and constructed action. *Sign Language: An International Handbook.* Roland Pfau, Markus Steinbach and Bencie Woll eds. Berlin/Boston: Walter de Gruyter. 365-387.

Morgan, Gary, and Bencie Woll. 2007. Understanding sign language classifiers through a polycomponential approach. *Science Direct Lingua* 117. 1159-1168.

NIDCD. 2015. National Institute on Deafness and other Communication Disorders. Retrieved July 7, 2015 from http://www.nidcd.nih.gov/health/hearing/pages/asl.aspx.

Padden, Carol. 1986. Verbs and Role-Shifting in American Sign Language. *Proceedings of the Fourth National Symposium on Sign Language Research and Teaching.* Carol Padden ed. Silver Spring, MD: National Association of the Deaf. 44-57.

Schembri, Adam. 2003. Rethinking 'Classifiers' in Signed Languages. *Perspectives on classifier constructions in sign languages*. K. Emmorey, ed. Mahwah, New Jersey: Lawrence Erlbaum Associates. 3-34.

Slobin, Dan. 2008. Breaking the Molds: Signed Languages and the Nature of Human Language. *Sign Language Studies* 8(2), 114-130.

Supalla, Ted. 1982. *Structure and Acquisition of Verbs of Motion and Location in American Sign Language*. Doctoral Dissertation: University of California, San Diego.

Supalla, Ted. 1986. The Classifier System in American Sign Language. *Noun Classification and Categorization* C. Craig ed. Amsterdam/Philadelphia: J. Benjamins. 181-214.

Turner, Mark. 2007. Conceptual Integration. *The Oxford Handbook of Cognitive Linguistics*. Dirk Geeraerts and Huber Cugckens, eds. Oxford: Oxford University Press. 377-393.

Vermeerbergen, Myriam, Lorraine Leeson and Onno Crasborn. 2007. Simultaneity in Signed Languages-A String of sequentially organized issues. *Simultaneity in Signed Languages: Form and function*. Myriam Vermeergergen, Lorraine Leeson and Onno Crasborn eds. Amsterdam/Philadelphia: John Benjamins. 1-25.

Wulf, Alyssa, Paul Dudis, Robert Bayley, and Ceil Lucas. 2002. Variable Subject Presence in ASL Narratives. *Sign Language Studies*. 3(1), 54-76.

Wulf, Alyssa and Paul Dudis. 2005. Body Partitioning in ASL Metaphorical Blends. *Sign Language Studies*. 5(3), 317-332.