CONSTRUING AFFECTIVE EVENTS IN ASL

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ABSTRACT

This dissertation examines the constructions used in American Sign Language (ASL) to describe affective events: those in which an experiencer undergoes an internal change upon perceiving a stimulus, such as a child experiencing fascination upon seeing a bear at the zoo. Previous studies on these kinds of constructions have centered on psych verbs, proposing accounts for how the semantics of verbs like *admire* versus *amuse* map onto syntactic structures with subject-experiencers or object-experiencers, respectively. Here I take a different approach to analyzing affective constructions, following the Cognitive Grammar framework and examining the distinct construals evoked by different grammatical constructions that can be used to describe the same affective event.

The data for this study were collected from Deaf native ASL signers in response to a short film in which characters react with various affects to animate and inanimate stimuli. The analysis investigated constructions that consultants used to describe affective events. These data indicate that ASL affective constructions are formed of two intransitive clauses: the first clause establishes the stimulus in the discourse, and the subsequent clause denotes the experiencer's affective change through an affective lexical predicate, constructed action, or constructed dialogue. The intransitive affective clauses used in ASL evoke construals in which the internal change initiates with the experiencer rather than the stimulus. This is unlike the transitive constructions described in previous studies, which evoke a construal of causation as though the stimulus acts upon the experiencer. The distinct construals evoked by each construction type are examined, as

well as the cognitive processes employed for creating and understanding each construction type.

Langacker (2008) stresses that the natural environment for language is discourse, language in use. This dissertation investigated ASL in naturalistic usage events. Examining language in its natural state enabled the analysis to see the biclausal nature of the complex affective constructional schema to be identified. The analysis also made clear the prevalence of constructed action and constructed dialogue in these data, highlighting the benefits of investigation into affective constructions, defined more broadly than psych verbs, which can be applied to research on spoken languages as well.

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CHAPTER I:

INTRODUCTION

Emotions are central to the human experience, and they are experienced in similar ways by all people. However, the ways we talk about emotions significantly differ depending partially on the language we are using. Interestingly, in many languages the syntactic structures that describe emotional reactions are unique from other structures. The types of sentences we use to describe an event where someone has an emotional reaction to something have been discussed at length under the name psychological verbs or "psych verbs," and linguists have suggested a variety of approaches to analyzing the formal semantics of verbs like *admire* versus *amuse*. That is, these types of verbs are expected to be in the same verb class, sharing theta roles of agent (or stimulus) and theme (or experiencer). However, the mapping of these theta roles onto the subject and object vary from one psych verb to the next in seemingly unpredictable ways. This dissertation considers the same topic with a different approach; rather than suggesting derivations behind varying psych verb syntactic structures, I examine the distinct meanings conveyed by different grammatical constructions denoting affective events.

1.1 Affective Constructions

Because this project considers more than only psych verbs, I use a more encompassing term, affective constructions, to include any linguistic construction that

denotes an affective event. A construction is a symbolic assembly; that is, a combination of two or more symbols (form-meaning pairs) that form a composite with both a phonological pole and a semantic pole (Langacker, 2008:161). Constructions vary in their complexity, from compound constructions to idioms to complex syntactic structures, and they vary in their level of schematicity, from specified to highly schematic (e.g. dog < mammal < animal < thing). Thus, approaching this study as an investigation into constructions, rather than specifically psych verbs, extends the discussion to include lexemes of all grammatical categories as well as more complex linguistic expressions, such as those composed of two clauses.

Affective constructions reference affective events. An affective event includes two participants: an experiencer of the affect and the experienced entity; for ease of discussion, we will refer to the experienced entity as the stimulus. Additionally, affective events include at least two sub-events: the experiencer perceives the stimulus, and then the experiencer undergoes an internal change. For example, when a little girl at a zoo sees a bear, she may be fascinated. In this situation the bear is the stimulus, the perception is through sight, and the affective change is from an unspecified one to fascination. The bear may be inactive, perhaps lying on the ground, or if he stood and approached the girl, his action may contribute a third salient sub-event: the stimulus actively inspiring the girl's fascination.

The structures used to describe affective events vary cross-linguistically, and languages have multiple linguistic forms to reference the same affective event. For

example, the expressions in (1a-c) are a few English options to describe the girl and bear event.

1a) The bear fascinated the girl.

b) The girl was fascinated by the bear.

c) The bear was fascinating.

Here we see one canonical SVO clause (1a) and two more complex clauses (1b-c), each evoking a different construal of the same circumstance, which I elaborate on in Chapter II. The differences in the meaning evoked by one or another construction can be subtle, but they are not trivial. Each construction foregrounds some aspects of an entity or event and backgrounds others, and this necessarily influences interlocutors' perception of topics being discussed. The goal of language, of conversing, is that the addressee develop a conception similar to the one imagined by the initiator. Comprehension has taken place when both interlocutors envisage a similar image, and the linguistic constructions we use support the interlocutor's development of the image by highlighting parts that the speaker deems relevant. The constructions available for communication depend greatly on which language the interlocutors are using at the time. Jakobson put it nicely when he said, "Languages differ essentially in what they *must* convey and not in what they *may* convey" (Jakobson, 1959).

Studies indicate that even when we are not intentionally activating it, our native language influences which aspects of an event we attend to more than others (Fausey, et

al., 2010), and investigations into how each language conventionally construes events offer insights into how our native language plays a role in our habitual way of conceiving events. For example, many spoken languages construe affective events as causal events through transitive clauses and structures that designate the stimulus an agent-like status regardless of that stimulus' action or inaction. This kind of causative construal is evident in (1a) above, and also in the more complex construction below in (2a).

2a) The bear's approaching the girl fascinated her.

b) The bear approached the girl. She was fascinated.

c) The bear approached the girl. Then he sat down and ate some fish.

In (2a) the fascination is attributed to the bear's action, approaching the girl, rather than its mere existence, though in both (1a) and (2a) the bear is presented as the stimulus with an agent-like quality. In transitive constructions the stimulus and experiencer are arguments of the same verb, and thus their relationship is entailed by the syntactic structure. In contrast, the fascination encoded in (2b) is attributed to the bear through implicature, though it is not overtly encoded in the syntax. When the stimulus and the experiencer are encoded in two clauses, as in (2b), they are recognized as related pragmatically, but they are separate syntactically. In fact, the former is not identified as a stimulus clause unless it is followed by an affective clause designating that role to its predecessor. That is, *The bear approached the girl*, which serves as a stimulus clause in (2b) could alternatively be followed by action clauses as in (2c), in which case no

affective event is encoded. Thus, in (2c) the clause *The bear approached the girl* does not serve as a stimulus clause at all since it is not followed by an affective clause.

The data for this dissertation show that ASL psych verbs almost exclusively encode the experiencer as the subject, which has been seen in previous studies on signed languages (cf. for NGT, Oomen, 2015; ASL, Kegl, 1990; LSC, Quer, 2009; GSL, Sapountzaki, 2012), and the data show that ASL conventionally encodes affective events in two clauses: first a clause encoding the stimulus, and subsequent clause encoding the affective change, similar to that in (2b). These biclausal constructions are significantly different from the causative constructions attested to in spoken languages (cf. for Italian, Belletti and Rizzi, 1988; French, Bouchard, 1995; English, Fabienne, 2013; Japanese, Katada, 2013; Basque, Oyharcabal, 2013). Future research with a psycholinguistic approach may elucidate the impact that these distinct construction types have on both mono- and bilingual users of ASL with regard to their perceptions of the roles, responsibilities, and salience of the experiencer and experienced entities of affective events. This project sheds light on which constructions native ASL signers use spontaneously, and the analysis examines how the various constructions present affective events differently.

A pilot study for this dissertation asked native ASL users who were bilingual to translate English sentences like the three presented in (1a-c). The results indicated that ASL predominately construes focus on the experiencer of affective events, rather than the stimulus. This dissertation builds on that inquiry in three ways: by targeting construals which focus on the stimulus; by eliciting naturalistic language, rather than translations;

and by broadening the analysis beyond the clause-level. For this dissertation, native ASL users viewed a short film with multiple affective events and retold the story to a Deaf addressee. Then they viewed film clips of the individual affective events and described each one in isolation. Finally, consultants judged the acceptability of ASL utterances describing affective events signed by an ASL model.

The current data confirm the pilot study findings that ASL affective clauses are almost exclusively experiencer-subject. Consultants encoded affective events in two consecutive intransitive clauses, relating the state or action of the stimulus in one clause, and then encoding the experiencer's perception and affective change in a subsequent clause. The constructions varied by either naming the affect lexically, or indexing it through constructed action or constructed dialogue. The exception to this multi-clause construction was seen with the sign FEAR/SCARE, which appeared in several different constructions, described in-depth in Chapter V. Finally, constructions often included a lexeme that is associated with visual perception, glossed here as the prospective attending sign (PAS), but which also seemed to serve a grammatical function, primarily introducing constructed dialogue. This has been proposed as a light verb (Winston, 2013), and is discussed in Chapter VI.

1.2 Structure of Dissertation

The structure of this dissertation is as follows. Chapter I has introduced the topic of this dissertation, affective constructions in ASL, touched on the analysis approach

taken in previous research on affective constructions, namely psych verbs, and given a brief overview of the methodology and findings presented in this dissertation.

Chapter II reviews in more detail the approaches and findings of previous studies, and then because this dissertation follows the Cognitive Grammar framework, key concepts used in the analysis are explained. These concepts are applied in a discussion of affective events, and affective constructions in two unrelated spoken languages, English and Atsugewi, are discussed. Chapter II also summarizes the pilot study for this dissertation and describes features of ASL that are pertinent to this project, including issues of depiction, specifically constructed action and dialogue.

Chapter III reports on the methodology used for the dissertation. The elicitation stimuli and process that were used in collecting the data are described. The demographics of the consultants are reported, and the processes used for analysis are related. Chapter IV reports the bulk of the data, cataloging the three instantiation types of affective clause constructions: affective lexical predicates, affective constructed action, and affective constructed dialogue. Along with these results, the use of the prospective attending sign (PAS), which encodes the experiencer's perception of the stimulus, is also reported. One exception to these results was with the sign FEAR/SCARE.

Chapter V describes and discusses the use of FEAR/SCARE in these data. This sign appeared most frequently in constructions similar to those in which other affective lexemes appeared. However, FEAR/SCARE also appeared in three constructions unique from other affective constructions. These unique constructions are explored in Chapter V.

Chapter VI discusses the findings. First the composition and comprehension of the biclausal affective constructional schema are discussed. Then each of the affective clause instantiation types is analyzed for its distinct form and the unique construal it evokes. The prospective attending sign is analyzed for its denotative meaning and grammatical function. Chapter VII concludes the dissertation, summarizing the findings, noting limitations of this study, and calling for future research.

CHAPTER II:

BACKGROUND FOR CURRENT STUDY

The introduction chapter mentioned that affective constructions have previously been studied with the consideration of psych verbs, and that this dissertation takes a new approach to the same topic. This chapter first reviews previous studies on psych verbs in both spoken and signed languages, and then introduces concepts from the Cognitive Grammar framework that were used for this analysis. Then the concept of affective events is described with examples from English and Atsugewi. This sets the stage for the remainder of Chapter II, which includes a summary of the pilot study on affective constructions in ASL and a review of ASL features relevant to this dissertation.

2.1 The Syntax and Semantics of Psych Verbs

Psychological (psych) verbs have been defined as a class of verbs which describe an experiencer's mental state, such as verbs like *scare, fascinate,* and *excite* (Levin, 1993). Psych verbs are categorized according to where the experiencer is expressed in the syntax: either experiencer-subject or experiencer-object as in (3a-b).

3a) Stephanie fears clowns. *experiencer-subject*

b) Clowns scare Stephanie. *experiencer-object*

Discussions of psych verbs have centered around the fact that in many languages these two kinds of psych verbs, though categorized in the same verb class, behave differently with regard to syntax and semantics, and the next section reviews these studies.

2.1.1 Generative Linguistic Theories of Psych Verbs

Generative Linguistics conceives the lexicon as a kind of index of words with their accompanying thematic representations and semantic structure. Entries from the lexicon are selected, placed into the syntax, and then progress through transformations that move the arguments to receive case and satisfy rules of the specific language. Generative analyses propose rules to account for movements of arguments from their semantic locations to where they appear in the syntax structures seen in data. In relation to psych verbs, an elegant theory should be able to account both for experiencer-subjects, such as those which appear with verbs like *admire*, and experiencer-objects, such as those which appear with verbs like *amuse*. This section provides a high-level review of the evolution of Generative discussions regarding psych verbs. Because the analysis for this dissertation follows the Cognitive Grammar approach, the descriptions of Generative theories have been kept very brief. Readers are directed to the referenced works for thorough descriptions of theories mentioned here.

In the early 1970s linguists began discussing the seemingly unpredictable behavior of different psych verbs. Lakoff (1970) suggested that in deep-structure syntax, the subject of all psych verbs is the experiencer, which would be expected based the theta role, and he claimed was supported by nominalization as in (4)

4) *My amusement at what he did.* (19770:126).

Lakoff suggested that in the case of experiencer objects, there has been a *subject-object interchange* which flips the subject-object relation. In a similar argument, Postal (1971) suggested a transformational rule specific to psych verbs, calling it *psych*-movement. Many other linguists joined the discussion (Perlmutter, 1983; Hermon, 1985; Stowell, 1986; Pesetsky, 1987; Zubizarreta, 1987; Katada, 2013; Ramchand, 2008), and analyses centered primarily on explaining why experiencer objects seem to break expectations of the Thematic Hierarchy (Jackendoff, 1976; Chung, 1998). Belletti and Rizzi (1988) set forth a popular theory with a tripartite classification of psych verbs based on inherent case on the experiencer: nominative, accusative, or dative. Grimshaw (1990) suggests an Aspectual Tier alongside the Thematic Tier in a verb's lexical entry, and Pesetsky (1995) proposes an amendment to the contents in the Hierarchy, specifically that in an experiencer-object sentence, the subject is a *causer* rather than a *theme*. Each of these theories focus primarily on theta roles.

Bouchard (1995) rejects Theta Theory and seeks an explanation less reliant on listings in the lexicon. Taking a Minimalist approach to grammar, he explains psych verb behavior through a combination of psych verb semantics and assumptions about the meaning of syntactic structures. Similar to the meaning-based definition of affective constructions used for this dissertation, Bouchard proposes a broader definition of psych verbs, calling them psych constructions, which include any verb with a psychological

argument (e.g., an emotion). He calls psychological arguments, such as emotions *psy-chose* arguments. Bouchard suggests that psych verb "peculiarities do not depend on grammatical factors but on the distinct referential nature of mental entities such as feelings" (265). This view is similar to those expressed in some Cognitive Linguistic studies, explained in Section 2.3.1, viewing psych verb constructions as denoting non-canonical causal relations (Croft, 2012; Talmy, 2003). Bouchard suggests that psych verbs are the same as other verbs, with the exception that rather than the agent having physical contact with a patient, the contact is psychological. The change in an experiencer occurs when the psy-chose makes contact with the experiencer at the level of mental space. This kind of spatial metaphor is echoed in Landau (2010) with an analysis of experiencers as locatives, and it is the locative experiencer concept, as well as spatial metaphors, that Oomen (2015) draws on for a discussion of psych verbs in signed languages.

This section has provided a brief review of theories on psych verb semantics and syntax with the Generative Linguistic lens, and readers are referred to the body of literature cited here for more in-depth discussions of the theories that have been suggested in the study of psych verbs in spoken languages. Analysis of psych verbs in signed languages is still a new area of inquiry, and the next section notes findings mentioned in Greek Sign Language, Catalan Sign Language, Israeli Sign Language, the Sign Language of the Netherlands, and American Sign Language.

2.1.2 Psych Verbs in Signed Languages

Psych verbs in signed languages have been mentioned in a handful of studies examining general signed language verb phenomena. In discussions on agreement and auxiliaries, psych verb constructions have been described briefly in both Greek Sign Language (Sapountzaki, 2005) and Catalan Sign Language (Quer, 2009). It seems in both of these languages that psych verbs typically appear in constructions with an experiencer-subject. In constructions with stimulus-subjects, auxiliaries are included to form causative constructions. The ASL data for this study also noted a sign that may serve as an auxiliary (PAS); however, PAS does not seem to form causative constructions in ASL.

In describing Israeli Sign Language Meir et al. (2006) mention psych verbs in their proposal that a signer's body serves as the grammatical subject for body-anchored verbs, including psych verbs. This claim predicts that all ASL psych verbs would therefore be experiencer-subject, and with little exception this conclusion is supported by the data for this dissertation.

Kegl (1990) and Winston (2013) both look specifically at ASL with a Generative analysis. Kegl (1990) examines ASL psych verbs starting from the three classes proposed by Belletti and Rizzi (1988), and she proposes a modified syntactic/semantic classification for ASL verbs. She categorizes psych verbs into four types, three of which encode the experiencer as the subject of the verb. Again the data from the current project supports the prediction of this categorization, that a high prevalence of psych verbs in ASL are experiencer-subject.

Regarding the fourth category of psych verbs, Kegl suggests that transitive verbs such as FEAR/SCARE[1] and BOTHER, which appear to take an experiencer object are truly not psych verbs. She suggests they are action verbs denoting the agentivity of the stimulus, rather than referencing the experiencer's response. In this project, consultants did include FEAR/SCARE in constructions unlike those used for other affective lexemes, supporting Kegl's recognition of its unique characteristics. My analysis, however, still views these constructions as affective constructions because they denote affective events, and so FEAR/SCARE and its unique constructions are included in the analysis and discussed further in Chapter V. Finally, Kegl noted that ASL psych verbs are accompanied by a Role Prominence Clitic, which was borne out as ubiquitous in the current data, though analyzed as surrogate blends.

Winston (2013) investigates ASL psych verbs through an online survey judgment task, specifically investigating caused psych events. She notes the biclausal structure that this dissertation confirms and notes the inclusion of a sign she glosses LOOK-AT (glossed in this dissertation as PAS) that may be a light verb combined with a main psych verb, or alternatively may be the main verb, combined with psych verbs serving as adverbs, objects, prepositions, or another adjunctive material (82). Winston proposes an expanded structure following Ramchand's Event Structure Analysis (Ramchand, 2008) to account for psych verb behavior in ASL, suggesting a LinkP to connect the two clauses.

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[1] Kegl (1990) glosses this sign as SCARE, bringing to mind the stimulus-subject construction used by the English verb *scare*. I gloss this sign as FEAR/SCARE because in the data for this dissertation there were not distinct forms of the sign that aligned with the different construction types in which it appeared (with a stimulus subject or experiencer object).

Finally, Oomer (2015) investigated psych predicates in the Sign Language of the Netherlands (NGT) and identified that NGT psych verbs only take experiencer subjects. Oomer notes that cross-linguistically signed languages seem to exhibit a high prevalence of experiencer subjects over experiencer objects and suggests it may be a product of the modality, drawing on the *subject-as-body* proposal put forth by Meir et al. (2006) and suggesting that Landau's (2010) analysis of psych verbs as locatives is borne out in the signed modality, through metaphoric iconicity. In NGT and other signed languages, the head and torso are used by many psych verbs to represent metaphorical containers of mental and emotional states, and so Oomer suggests that the use of the body to iconically denote affect may motivate languages in the signed modality to take only experiencer subjects (Oomer, 2015). The data in this dissertation seem to align with Oomer's proposal, as the ASL syntax of affective constructions exhibits parallel behavior to those in NGT. In addition the common use of constructed action and constructed dialogue, in which the signer depicts the experiencer's behaviors, align with this hypothesis, though the analysis here focuses on the distinction in meaning evoked by different grammatical forms, rather than suggesting any derivational processes from a deep-structure syntax.

Psych verb data described in studies so far seem to be similar across signed languages, though more research on auxiliaries is needed, and analyses have primarily analyzed the data with a Generative Linguistic lens, as linguists propose rules to account for complex syntactic behaviors of psych verbs. In contrast this dissertation approaches the data with a Cognitive Linguistic lens, which does not posit an underlying syntactic structure. Instead, the analysis investigates the patterns seen across many utterances, and

the schemas they indicate are used for various instantiations. The discussion also examines how our minds draw on non-linguistic cognitive processes for the understanding and processing of language. The following section reviews Cognitive Linguistic (Langacker 1987; 2006; 2008; inter alia) principles and terminology used for the analysis of these data.

2.2 A Overview of Cognitive Linguistic Theory

Cognitive Linguistic theories (Fillmore, 1975; Lakoff, 1987; Langacker, 1987; Goldberg, 2003; Talmy 2000; Croft 2012; inter alia) assert that language is created and understood through cognitive processes that are also used for non-linguistic purposes. This perspective disallows theoretical principles that would apply only to linguistic elements, such as syntax. Instead theories investigate how linguistic forms are understood through cognitive processes like categorization and schematization. Additionally, the different forms of various linguistic structures are conceived as connected to the distinct mental conceptualizations that they present. The next sections first outline the process of how our minds develop schemas as a basic psychological phenomenon and how this is capitalized on for language processing. Then key terms and concepts from Cognitive Grammar, which guided the analysis for this dissertation, are reviewed and applied in a discussion of affective events and affective constructions in ASL.

2.2.1 Cognitive Functions Recruited for Linguistic Processing

One of the fundamental assumptions of Cognitive Linguistics is that the cognitive processes we use for linguistic functions are the same as those we use for non-linguistic purposes. For example, unrelated to language we regularly make use of the mental capacity to first remember multiple experiences of something, then to compare the different examples, and finally to abstract away from the individual samples, synthesizing the commonalities into one conceptualization. This is the process we use to develop schemas, and we do this as we are exposed to multiple instantiations of any category, be it non-linguistic or linguistic.

Non-linguistic schemas are at work in our lives every day. The most mundane task, like the process of entering a building, is learned through many experiences of first recognizing the door from the surrounding walls and windows, then taking note of any steps, identifying the door as automatic or manual, and then responding accordingly. For each entrance instantiation the specifics differ, but the overall process and concept is understood schematically.

We do the same thing for linguistic concepts as well, to understand linguistic expressions at every level of complexity, from simple morphemes to complex syntactic structures (Langacker 1987). For example, the first time a child encounters the word *dog,* she will likely associate the word with her family pet that she sees every day. Her entire understanding of the word is comprised of only one instantiation. However, as she meets more dogs and other animals, and as fluent speakers demonstrate the connection between /dag/ and the certain type of creature, she develops a schema to account for all

the different instantiations referenced by the one expression. She learns that *dog* not only denotes her own pet, but an abstract concept of a four-legged barking mammal, distinguishable from cats, horses, and others, based on how the term is conventionally used in her speech community, and in this way she learns the meaning and use of each linguistic expression.

Linguistic expressions fall on a continuum of schematicity. For example, the list in (5) from Langacker (2008:19) illustrates a highly schematic to increasingly specific representation related to *dog* on the semantic pole.

5) *thing* → *creature* → *animal* → *dog* → *poodle*

This schematic-to-specific relationship exists not only for lexical items, but for expressions at all levels complexity. It is this relationship between schematicity and symbolic complexity that describes the continuum between lexical items and grammar.

Rather than considering a language's lexicon as distinct from its syntax, all expressions are conceived as falling somewhere along the continua of both complexity and schematicity, as illustrated in Figure 1 reproduced here from Langacker (2008:21). In this figure, the dotted lines indicate that the lexicon and grammar are not distinct, but rather that the more schematic a construction is, the less it is like lexical items and more it is grammar-like. Prototypical lexical items are low in terms of both complexity and schematicity. More complex, specific expressions would be items such as idioms, whereas more schematic, yet simple items would be grammatical markers, such as the

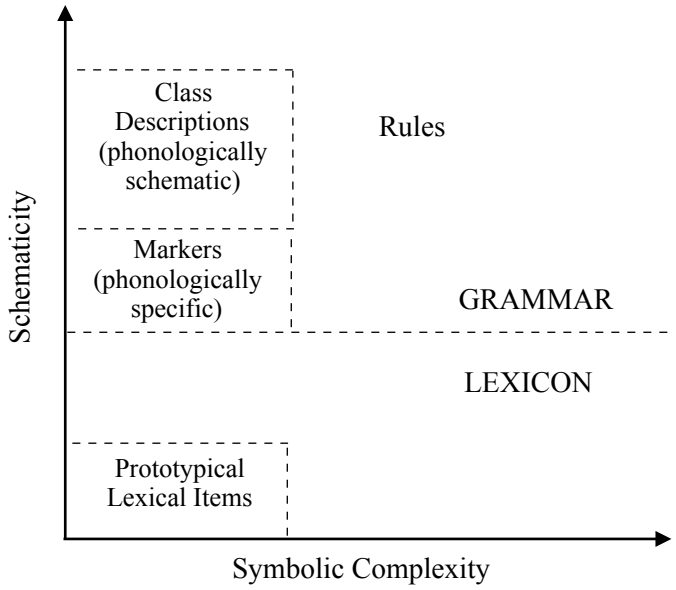

Figure 1. Linguistic expressions fall on continuums of complexity and schematicity.

concept of the English past-tense morpheme, taking the form of allomorphs like [d], [t], and [əd] (ibid:20).

Linguistic expressions are not assigned to distinct categories, such as lexicon and syntax, and in the same way we learn the meanings and use of individual words, we also learn more complex linguistic expressions, such as clauses. It is through language use that we are exposed to a language's conventional structures, and from many instances we abstract the commonalities and develop schemas from which to form future instantiations based on the language's conventional form-meaning pairs, or symbols.

This section has discussed how non-linguistic cognitive processes such as memory and comparison used for schematization are drawn on for linguistic functions, and it has given an overview of the assumption that expressions fall on continua of schematicity and complexity, rather than lexical items being inherently different from

syntactic structures. The following section continues the discussion of complex expressions in a review of concepts from Cognitive Grammar that are relevant for the analysis used in this dissertation.

2.2.2 Cognitive Grammar

Cognitive Grammar asserts that grammar is symbolic (Langacker, 2008). That is, word order is not determined by syntactic rules independent from meaning, but rather the structure of a sentence is significantly linked to the meaning it evokes. Arbitrary formal devices such as principles unique to syntax are excluded, as Cognitive Grammar analyses follow a specific content requirement:

> This requirement states that **the only elements ascribable to a linguistic system are (i) semantic, phonological, and symbolic structures that actually occur as parts of expressions; (ii) schematizations of permitted structures; and (iii) categorizing relationships between permitted structures.**
>
> (Langacker, 2008:25; emphasis in original)

That is, analyses of a language's grammar include only structures that are either used by a language community, or are explained through non-linguistic cognitive processes, like schematization. For example, this dissertation's analysis considered constructions that signers used to denote affective events (the semantic pole) and examined the form (phonological pole) of each construction to identify patterns across expressions (schematization). Then the analysis identified the constructional schema that licenses the expressions seen it the data (categorizing relationships). Three instantiations of the

constructional schema arose from the data, and so the analysis also discusses the different ways each instantiation presents affective events, drawing on our cognitive ability to conceive of the same event in different ways, with different construals. The remainder of this section introduces concepts relevant to construal, and the following section applies these to a discussion of affective events.

Constructional schemas are made up of a phonological and semantic pole. Critically, the semantic pole expresses not only the conceptual content referenced (i.e., the participants and their activities), but also how that content is presented, such as the perspective and relative prominence of the various entities (Langacker 1991:4). For example, the three sentences in (6) are considered to have distinct meanings despite the fact that they all describe the same situation.

6a) Sarah is on Jackie's right.

b) Jackie is on Sarah's left.

c) Sarah and Jackie are next to each other.

The difference in meaning is not in the circumstance they denote, but the way each sentence construes the situation. The construal of any construction depends in part on which entities are profiled, and in the case of a relationship between two participants, which is the primary and which the secondary focus. This section reviews these Cognitive Grammar concepts used in the analysis of affective constructions.

Profiles and Bases

One way that languages evoke relative attention on referenced entities is through a construction's profile and base. Humans are able to scan a room and focus on one primary object, such as the professor at the front of a classroom. This cognitive ability to focus on one aspect of the whole environment is employed for linguistic purposes, as well. Words and phrases focus mental attention on a specific referent within a conceptual context. The context is called the conceptual base while the referent is the expression's profile (Taylor, 2002:193). For example, a hand serves as the conceptual base for the each of the English words *palm*, *finger*, *thumb*, and *hand*. Each expression profiles a different portion of that base.

The diagram in Figure 2 indicates the profile of each term with bold lines and the conceptual base with lines that are not bolded. The first three terms, *palm*, *finger*, and *thumb*, each call to mind the concept of a whole hand, but profile only one portion of that hand, whereas the term *hand* profiles the hand as a whole. The concepts of profile and base come into play with affective events because the base of affective constructions includes two participants, perception, and an affective change. However, the meanings of affective constructions differ in part by which portion of that base is profiled, as with *palm* versus *finger*.

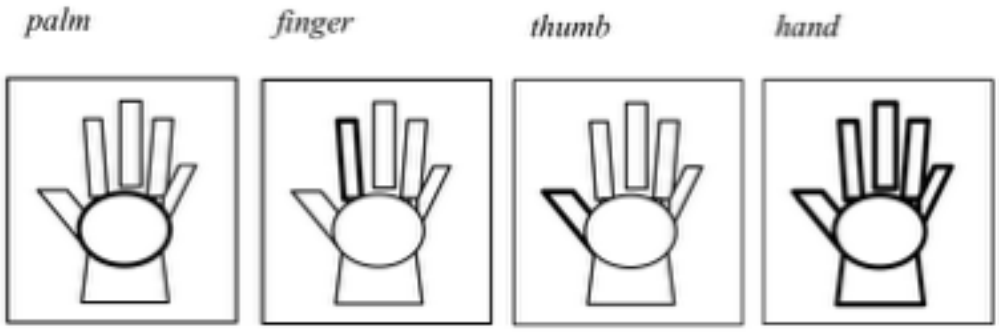

Figure 2. Four constructions with the same conceptual base, but different profiles.

The profile of an expression determines its grammatical class. Nouns, like *hand*, profile a thing, "a unitary entity resulting from conceptual reification" (Langacker 1999:9). Verbs profile a process, a relationship scanned sequentially across time. When a construction profiles a relationship, the entities that are in the relationship are also evoked, so that while a noun is autonomous, having little or no need to combine with other words to complete its conceptualization, words in other grammatical classes can be considered conceptually dependent (Taylor 2002:226). For example, the English verb *pet* evokes the concept of two participants: one who pets, and one that is pet.

Participants in a relationship have archetypal roles (Langacker 2006). For example, the one who does the petting is the agent, the initiator of an interaction or energy source. The participant that is pet is the patient, the recipient of the action, or energy sink. Thus the profile of *pet* consists of a relationship between two participants, an agent and a patient, scanned sequentially across time.

Figure 3 is a schematic diagram illustrating the profile of verbs that evoke the concept of two participants, like *pet*. Following Langacker's (1987, 2000, inter alia) diagramming practices, circles represent things, and arrows or connecting lines represent relationships. Double-lined arrows as in Figure 3 indicate a transfer of energy from one participant to another. The horizontal line labeled (t) represents conceived time, and the three pairs of circles indicate multiple states of the relationship through time. Additional circle pairs could be included to detail information about the change, but as this study's analysis was concerned with the presence of change, not the specific nature of the affective change, the middle pair serves to indicate that the emergence of the affective

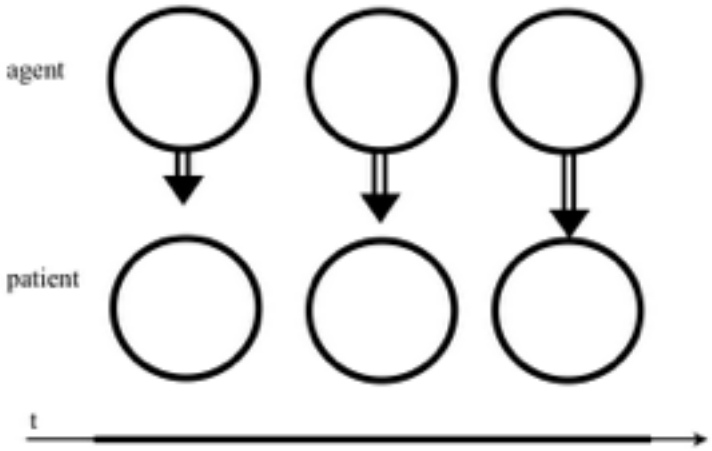

Figure 3. Schematic profile of verbs.

change takes place over time. Figure 3 illustrates a relationship scanned sequentially through conceived time of energy transferred from the participant represented by the circles on top, labeled *agent*, to the participant represented by the lower circles, labeled *patient*.

For circumstances that include two participants, verbs in transitive clauses profile both participants, while verbs in intransitive clauses profile only one or the other participant. The difference in profiling one or both participants comes into play in affective event construal in that the conceptual base includes both the experiencer and the stimulus, but a construction may profile only one or the other.

Trajectors and Landmarks

Another aspect of construal relates to relative focus on each entity profiled by an expression. The primary focal participant is called the trajector, and if a secondary focal participant is profiled, it is the landmark (Langacker, 2008). Two expressions may profile

the same relationship, but differ only in which participant has the trajector role conferred on it. For example, the trajector of the verb *pet* is elaborated by the agent. In contrast, the trajector of the passive construction *BE + pet* is elaborated by the patient. Figure 4 illustrates the difference in the meaning of an active versus passive construction based on which participant has the trajector status. Verbs like *pet* in their root form profile both the agent and the patient, but in their passive construction only the patient is profiled. Additional participants can be included in passive constructions through structures such as prepositional phrases.

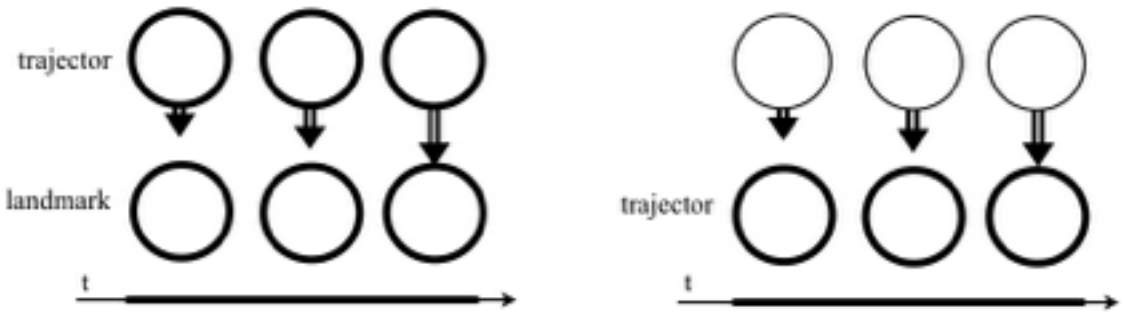

Figure 4. Left: Diagram of the profile of *pet*; Right: Diagram of the profile of *BE+pet*

Syntactic Roles

Trajector and landmark roles assign relative focus on participants of verbal relationships. When nominals encode the entities that elaborate the trajector and landmark roles, those nominals are said to have the status of certain grammatical relations. That is, Cognitive Grammar defines syntactic roles semantically: if an unmarked nominal encodes the trajector in the main clause, that nominal is the subject, and if an unmarked nominal encodes the landmark in the clause, that nominal is the

object of the verb (Langacker, 2008). Subjects and objects in affective constructions can serve to identify the primary and secondary focal participants of an expression. In some languages most affective verbs appear in transitive constructions, with the trajector and landmark encoded as subject and object, respectively (cf. Croft, 2012 for German; Talmy, 2003 for English and Atsugewi). The pilot study for this dissertation suggested that many ASL affective verbs may designate only a trajector role in the verb's profile. The next sections use the Cognitive Grammar lens to describe affective events and their construal in two spoken languages (English and Atsugewi), which illustrate cross-linguistic differences in how languages construe affective events. Then the subsequent section summarizes the pilot study on ASL affective constructions that informed the research questions and design of this dissertation project.

2.3 Affective Events

This section describes affective events and discusses affective constructions in two unrelated spoken languages, English and Atsugewi, illustrating cross-linguistic variation in affective event construal. It follows that ASL has its own inventory of affective event constructions to evoke various construals. The subsequent sections describe the pilot study for this dissertation on affective event construal and then describe how the findings from that study informed the design for the current, expanded study.

2.3.1 Affective Event Bases and Profiles

The conceptual base of affective constructions is a complex process composed of the relationships of perception and affective change between two participants: a perceived entity and someone who experiences an internal change upon perceiving that entity (Talmy, 2000). Talmy (2002) notes that complex processes can be designated by one clause, or each step of the process may be explicitly encoded in separate clauses, or componential processes can be left presupposed or implicit. He explains that it is valuable to identify components of complex processes since individual components can be both negated and contrasted against the composite meaning. Consider the English affective constructions in (7a-b).

7a) The clown scared Stephanie.

b) The clown didn't scare Stephanie.

The affective event denoted in (7a) is a complex process composed of several sub-processes: first the clown engaged in some behavior or was merely present, physically or in Stephanie's consciousness; second Stephanie's cognitive attention was focused on the clown, that is she somehow perceived it; third Stephanie experienced a change in her internal affect; and finally that change resulted in Stephanie having an affective state of fear.

The sentence in (7b) only necessarily negates the forth component: the end result was that Stephanie was not in a state of fear. The first component is not necessarily

negated: the clown may have been present, or perhaps the clown was not present and that is why it did not scare Stephanie. Similarly, the sentence in (7b) does not necessarily negate the second component: it does not specify whether or not Stephanie perceived the clown. The clown may have been present, but she did not perceive it, and that is why she was not afraid. Finally, (7b) does not necessarily negate the third component: that Stephanie experienced a change in her internal affect. She may have found the clown amusing, in which case she did indeed undergo an internal change, but with a final state of amusement rather than fear, thus (7b) would still be accurate. The fourth component is necessarily negated: whatever happened, the end result was not that Stephanie was in a state of fear.

The components that make up the complex process of affective events serve as the conceptual base for affective constructions, and affective construction types differ with respect to which entities of that base are profiled and foregrounded. Figure 5 illustrates the conceptual base of an affective event. The arrow from the experiencer to the stimulus represents the experiencer perceiving the stimulus. It is dotted to indicate that the perception does not cause any change in the perceived entity (Langacker, 2006). The arrow in the experiencer circle illustrates the change of internal property (affect) in the experiencer. The outline of the rectangle representing internal affective change and the arrow illustrating its development are dotted in the second phase to indicate the emergent nature of the affective change over time.

The sensory relationships of perception and affect are unique from physical relationships of an action like that profiled by *pet* in several ways. First, the archetypal

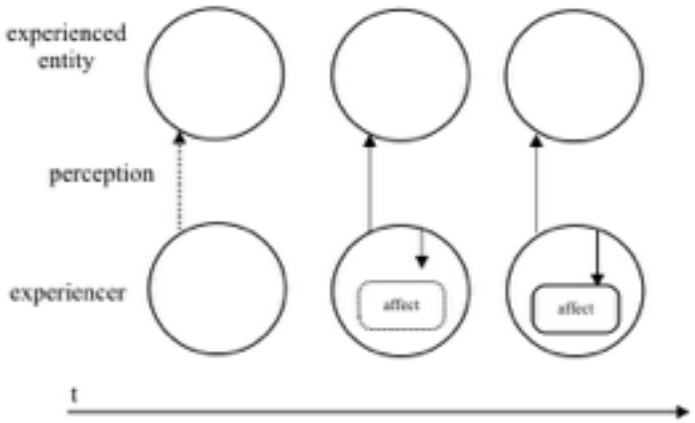

Figure 5. Conceptual base of affective events.

roles are different. These relationships do not "involve the transmission of force, or motion, change, or experience on the part of the second participant" (Langacker, 2006:117). That is, when a child sees a bear or is fascinated with a bear, the child's perception has no impact on the bear. The bear is not a patient, but rather manifests in a zero role. The child does not serve as an agent, an energy source transmitting force on the bear, but as the archetypal role of perceiver.

The second crucial difference is that physical relationships are visible while perception and affective change are invisible. When someone sees, smells, hears, or reacts to something, an observer understands a relationship between the experiencer and the experienced entity through inference drawing on knowledge of common causes and effects. For instance, an observer seeing furrowed brow and tears on a movie watcher's face during a death scene predictably might say, *That scene saddened her*, attributing the tears to the movie acting upon the watcher. Indeed more colloquial phrases employ terms that prototypically reference a physical action chain: *The movie touched her*, *The death scene struck her*, *She was moved by the tragic ending*. All of these constructions imply

that the movie caused an emotion in the audience member, which resulted in tears. The correlation between the woman's tears and the movie seems likely based on our general cultural knowledge. However, it is not inconceivable that the tears could be wholly unrelated to the movie before her. Perhaps the movie-watcher stubbed her toe on the way to her chair, and the swelling inside her shoe caused the pained expression. Unlike the physical relationships between participants, such as a hand reaching out to pet a bear, relationships of perception and affect are invisible. The connection between the visible aspects is built in the mind of the observer through inference.

Given the observer's assumption of the experiencer's change being due to perceiving the experienced entity, Croft (2012) describes affective events as non-canonical causal relations. The prototypical causal relation consists of one entity acting upon another, which causes a change. In contrast, affective events can be regarded as "causal transmission of force [which] is symmetrical and/or branching" (Croft, 2012, p. 233). That is, both participants can be thought of as having a non-physical action: the experiencer perceives, and the experienced affects.

Talmy (2003) also notes that sensory paths such as perception and affect may be conceived in two alternative directions. The experiencer may be considered the source, emitting a probe that moves along a path to the experienced entity. Alternatively, the experienced entity may be conceived as source, emitting a stimulus that moves to the experiencer. In the first case, the experiencer "is interpreted as more active than the entity probed. But under [the latter], the experienced entity…is interpreted as being more active than the entity stimulated by it" (Talmy, 2003, p 118).

If the stimulus is conceived as the more active participant, emitting energy toward the experiencer, the diagram of the affective event is different from the conceptual base. For ease of comparison, Figure 5 representing the conceptual base of affective events is repeated here as Figure 6a. Note that in the conceptual base, there is no arrow of energy transmission from the stimulus to the experiencer. Though there is no transfer of energy (at least physically) in an affective event, some languages express affective events using prototypically causal constructions, construing the relationship as though the stimulus does indeed act upon the experiencer. Figure 3 from above illustrates the profile of a

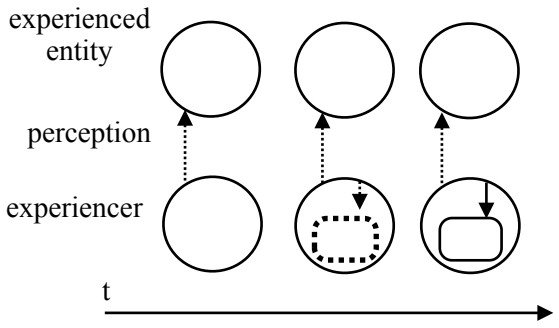

Figure 6a. Conceptual base of affective events.

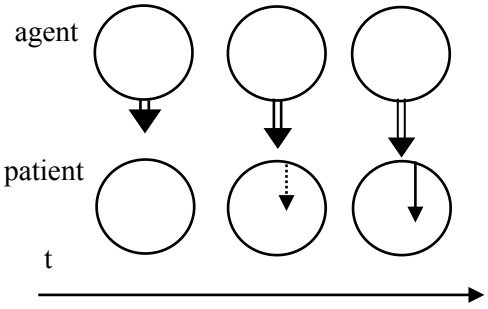

Figure 6b. Conceptual base of causal relationships.

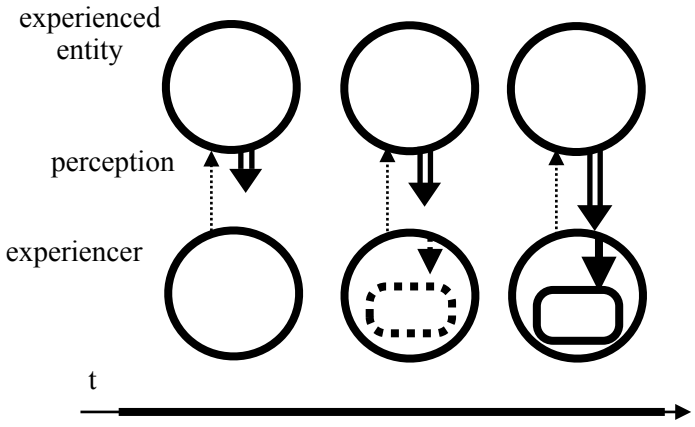

Figure 6c. Construal of affective events evoked by causal constructions.

causal relationship, such as with the verb *pet*, repeated here as Figure 6b. Recall that diagrams of causal relationships indicate energy transfer with the double-lined arrow from the agent to the patient. When languages use constructions that are prototypical for causal relationships (e.g., 6b) to express affective events, the two construals are fused to evoke the conception that the stimulus is agent-like, acting upon the experiencer, causing the internal change. Figure 6c represents this construal with a double-lined arrow moving from the stimulus to the experiencer, indicating a conception of the stimulus as an agent transferring energy to cause a change the experiencer.

Figures 6a and 6c are similar in that they both include the perception that must precede an affective event, as well as the internal affective change; they differ in that 6a does not represent the stimulus as an agent acting upon the experiencer. In contrast, Figure 6c illustrates how the construal of causation (from 6b) maps onto affective events to construe the stimulus with agent-like characteristics, acting upon the experiencer to cause the internal change. Figure 6c illustrates the construal evoked when a causative construction is used to reference an affective event.

Prototypical, that is physical, causal events differ from affective events in two main ways. First, the roles of the participants and kind of change, internal or external, are distinct. Second, causal relationships do not presuppose any preceding event, the way affective events presuppose a perception event, represented by the dotted-lined arrows in Figures 6a and 6c. The integration of causal and affective concepts is not uncommon in many languages, but as we can conceptually distinguish between the stimulus, perception of the stimulus, and experiencer's subsequent affective change, the conflation of

causation and affect is not obligatory in the linguistic coding of affective events, and in the data for this dissertation, we see that ASL does not conventionally evoke a construal of causation syntactically.

2.3.2 English Construal of Affective Events

Just as different constructions, like *palm*, *finger*, and *hand*, share a conceptual base but differ in the parts of the base that are profiled, affective constructions share the affective event base described above, but differ in which parts of that base are profiled. As an example, let us examine how English constructions construe the circumstance with the bear, the girl, and fascination. An English speaker may describe the situation with many different utterances. Let us consider the following four:

8a) The bear fascinates the girl.

b) The bear is fascinating.

c) The girl is fascinated with the bear.

d) The girl is fascinated by the bear.

Each of the sentences in (8) reference the same event. However, the structural positions of the arguments differ in each sentence, and so each sentence evokes a different construal of the same event. Let us consider each in turn.

The archetypal participant roles of an affective relationship are an experiencer and a zero role. However, the SVO construction in (8a) with the root verb *fascinate* is the one used for causal relations in English. Thus the referent of the subject, *bear* is construed as

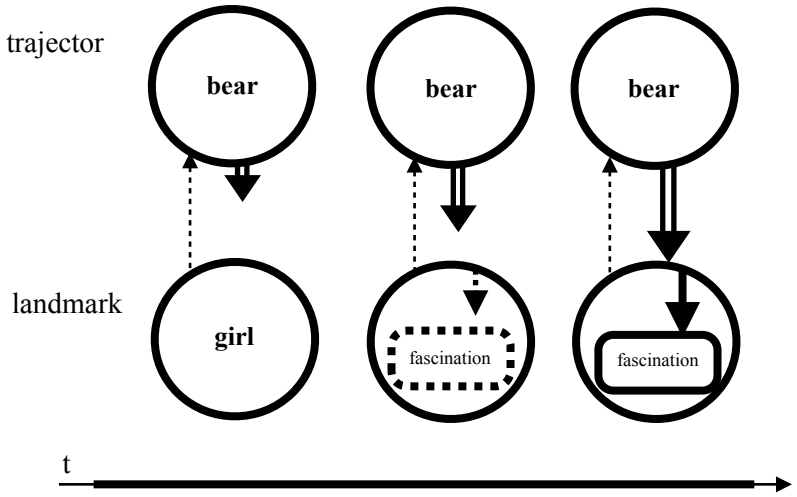

Figure 7. Construal evoked by *The bear fascinates the girl.*

an agent-like participant, acting on the participant encoded in the object position, the girl. This construction evokes a construal with the idea of the bear transmitting force upon the girl to cause the internal change of fascination. This kind of construal was illustrated schematically in Figure 6c. Figure 7 illustrates the construal evoked by (8a) in which the participants and affect are specified. The double-lined arrow from the bear to the children indicates a transmission of energy. Because (8a), and the other constructions in (8), do not profile the event of perception, but rather presuppose it based on one's understanding of affective events, the line representing the girl's perception of the bear is not bolded.

The sentences in (8a) and (b) both construe the bear as the primary focal participant of an interaction, but they differ with respect to focus on the girl. In the second sentence (b), *fascinate* is combined with the suffix *–ing* to form a predicate adjective describing the stimulus (Langacker, 2009). Like the first sentence, *bear* is the subject, specifying the trajector. However, adjectives do not have a secondary focal participant, so there is no landmark role. In *The bear is fascinating* the experiencer is left unspecified. The sentence suggests that the bear has an inherent fascinating quality, that it would cause fascination in any perceiver by emitting energy toward all who perceive it.

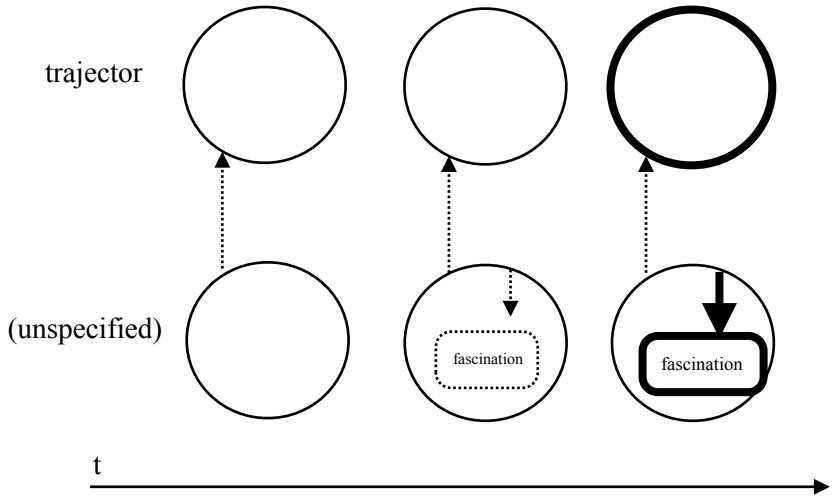

Figure 8. Construal evoked by *The bear is fascinating*.

Figure 8 illustrates the construal evoked by constructions like the one in (8b). The bold lines indicate that only the end state of the event is profiled, rather than the whole sequential process. The stimulus specifies the trajector, and the experiencer is unspecified.

In the third sentence (8c), *fascinate* combines with the suffix *–ed*, in a perfect participle construction that describes the experiencer. The experiencer is the primary focal participant encoded by the subject, *the girl*, and similar to the construal evoked by (b), this construction has a trajector, no landmark, and references only the end state of the event. The internal change of fascination is not attributed to the bear acting upon the girl. Rather, because the bear is encoded as an oblique, the object of the prepositional phrase, *with the bear*, (b) construes the bear in the zero role, neither transmitting nor receiving energy that causes a change. Figure 9 illustrates the construal evoked by constructions like *The girl is fascinated with the bear*.

Finally, the fourth sentence (8d) is similar to that in (c), elaborating the experiencer as the trajector and the stimulus as an oblique. However, (d) differs in that

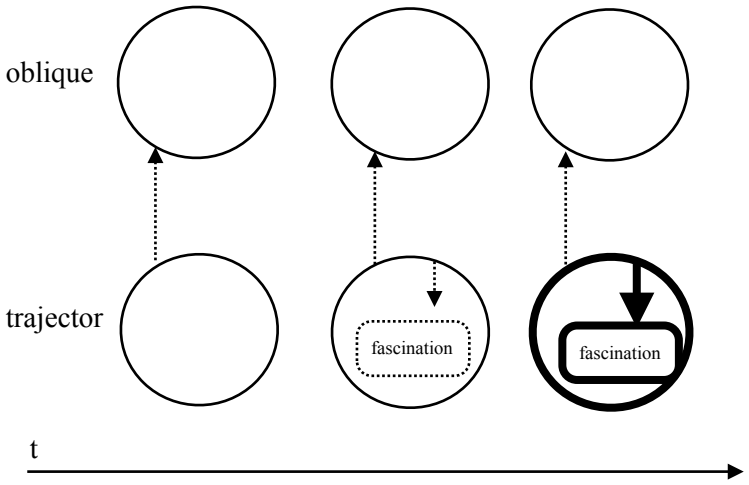

Figure 9. Construal evoked by *The girl is fascinated with the bear*.

the preposition *by* constructs a passive construction. This is critical because passive constructions in English serve to defocus an agent, not a participant manifesting the zero role. The passive construction, *The girl is fascinated by the bear*, selects the girl as the primary focal participant, but includes the bear as an agent, although in an oblique position. Unlike (c), the passive construction in (d) evokes a construal of causality, illustrated in Figure 10 with the double-lined arrows indicating an energy emitted from the stimulus.

The majority of English affect verbs are experiencer-object, like *fascinate* in that when they appear in an SVO construction, the stimulus elaborates the trajector (Talmy, 2003). English also has experiencer-subject affect verbs, such as *enjoy*, elaborating the trajector with the experiencer and thus construing the experiencer as the more active participant. Similar to experiencer-object verbs, English experiencer-subject verbs can also appear in constructions that evoke various types of construals as exemplified in the sentences in (8). Similar to the various sentences discussed above with *fascinate* the sentences in (9) refer to one circumstance, but evoke different construals.

9a) The girl enjoyed the book.

b) The book was enjoyable.

The SVO construction in (9a) profiles a temporal relationship between the girl and the book, as does the SVO construction with *fascinate*. Unlike the SVO construction with

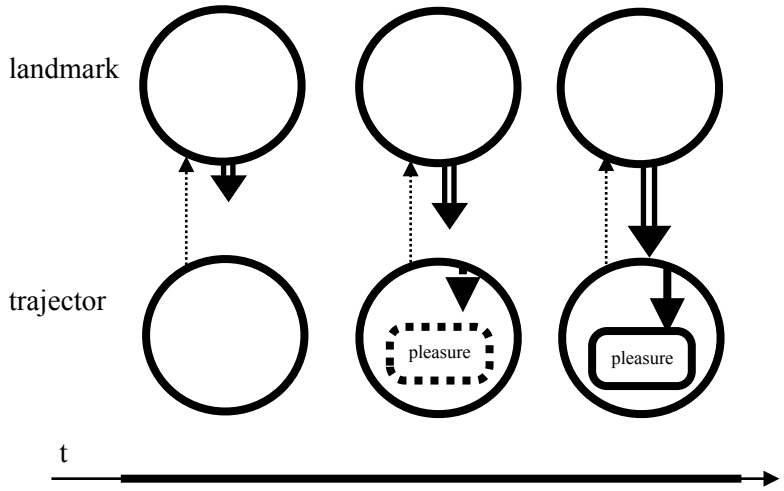

Figure 11. Construal evoked by *The girl enjoyed the book.*

fascinate, the verb *enjoy* in this construction elaborates the trajector with the experiencer, encoded by *girl*, and the landmark with the stimulus, encoded by *book*. Figure 11, illustrating the profile of (9a) is very similar to Figure 7, differing only in which participant is the primary focal participant, the trajector, and which the secondary, the landmark.

Sentences (8b) and (9b) demonstrate that both experiencer-object and experiencer-subject English affective verbs can appear in adjectival constructions that profile the end state of one participant in an affective relationship. Both of these

constructions construe the stimulus (i.e., bear or book) as having an inherent quality of being either fascinating or being enjoyable.

English affective verbs vary in which participant elaborates the trajector role, and English speakers use the various constructions available in the language to evoke distinct construals of affective events. Constructions may foreground the affective process or the end state, highlight either participant as the most salient entity, and imply causality or focus solely on the affective change in the experiencer.

The construal of causality can be more explicit as many English affective lexemes can be included in constructions with the verb *make,* as shown in (10), which further highlights the causal construal.

10) The bear made the girl excited.

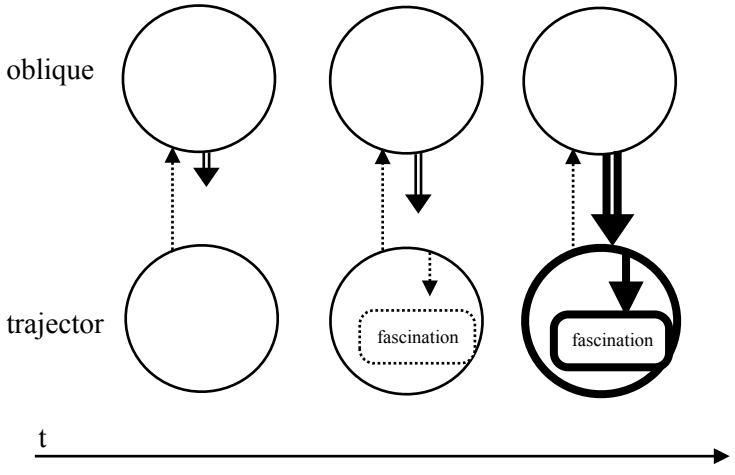

Figure 10. Construal evoked by *The girl is fascinated by the bear.*

This construction is often used with adjectives like *happy, mad,* or *sad*, which do not typically appear in verb form. The *made* construction explicitly designates the stimulus as the cause of the emotion. While many affective adjectives have corresponding verbs, like madden or sadden, some rely exclusively on the *make* construction (i.e., though possible in the language, there happens to be no English verb for the sentence, **The bear happied the girl*).

English is not alone in its construal of affective events as action chains through causal constructions. Indeed causal constructions seem to have special priority in languages; they are often used to express non-causal relationships like space and possession (Croft, 2012), and are processed and recalled more efficiently than other constructions (Sanders and Spooren, 2007). In English, the majority of affective verbs (e.g., *fascinate, amuse*) construe the stimulus as the primary focal participant, in an agent-like role, while affective verbs in other languages predominately construe the experiencer as the more active participant. The next section describes one such language, Atsugewi, in which the majority of affective verbs are experiencer subject.

2.3.3 Atsugewi Construal of Affective Events

Talmy (2003) describes how in contrast to English, the majority of affect verbs in Atsugewi in their unmarked form evoke a construal with the trajector elaborated by the experiencer and the landmark elaborated by the stimulus. For example, having observed a beautiful object, a speaker of Atsugewi may say either of the following:

11a) *s'w sa layím*

1SG by vision consider good

'I find it beautiful.'

b) *'w sa lay**áhw'a***

3SG by vision is considered good

'It is beautiful.'

In both constructions in (11) the verb root -*lay*- denotes the affect of considering something good and the prefix *sa*- indicates apprehension of the stimulus through vision. The inflectional affix-set *s*-*'*-*w*- -^{a} identifies the first person as the subject and the third person as the object of the verb. In the construction in (a), the experiencer elaborates the trajector and the stimulus elaborates the landmark. A direct translation transparently showing the structure of construction may be: *I, through seeing, admire it*. While English does not have an affect verb that specifically denotes the internal change that an experiencer undergoes upon recognizing beauty, the English verb *admire* is similar to Atsugewi's –*lay*- in that they both elaborate the trajector with the experiencer and the landmark with the stimulus.

English also does not have an affix similar to Atsugewi's *sa*- denoting the perception event in the same verb as the affect, thus in Figures 7-11 that diagram the profiles of English affective constructions, the perception event is illustrated with a non-bolded arrow, indicating that perception is not profiled by the construction. The Atsugewi expression in (11a) profiles both participants as well as both relationships: perception and

affect. The experiencer fills the trajector role and the stimulus fills the landmark role in this transitive construction.

In (11b) the suffix *-ahw'* combines with the verb to evoke a shift of focus from stimulus to experiencer and forms a construction which evokes a construal in which the stimulus elaborates the trajector (Talmy, 2003). No experiencer is encoded in the construction; rather the affix *'-w- -a* conjugates the verb with a third person subject. The affix denoting perception through sight remains, profiling both relationships, and the verb seems to profile both participants, though the experiencer is left unspecified.

The distinct affective constructions and construals across spoken languages illustrate cross-linguistic variation, but affective constructions have not yet been studied in-depth in the signed language modality through a Cognitive Grammar lens. As a first step in that direction, I conducted a pilot study on ASL affective verbs using a translation task. Findings from that preliminary study informed the research questions and design for this dissertation project, so the next section summarizes the pilot study and its contribution to this inquiry process.

2.4 Pilot Study on Affective Verbs in ASL

The pilot study for this project compared the construals evoked by English and ASL affective constructions. The data illuminated preliminary findings and prompted additional questions that inspired this dissertation project. This section summarizes the background, methodology, and results of the pilot study, and notes how it called for further investigation into ASL affective constructions.

Because the pilot study was a first step in investigating affective verbs in ASL, a translation task was used to elicit similar data from each participant on a variety of ASL verbs, evoking similar construals. Additionally, metalinguistic knowledge was requested from the participants, to aid in analysis of the data. The consultants' translations were examined at the clause-level, focusing predominately on the word order of the constructions, and so before summarizing the pilot study process and findings, the next section reviews ASL word orders with accompanying prosodic marking.

2.4.1 ASL Syntax

Both the pilot study and dissertation study follow the syntactic analysis of ASL proposed in Liddell (1977; 2003). Liddell's analysis aligns with the Cognitive Grammar framework, understanding the grammatical form of constructions to be meaningful, rather than derived from a syntax that is autonomous from semantics. In this analysis topics are understood as distinct from subjects and objects, since in the Cognitive Grammar approach there is not syntactic movement prior to linguistic production (Langacker, 2008:512). The canonical word order of ASL is SVO and as mentioned, if an unmarked

nominal elaborates the trajector of the verb, that nominal serves as the subject of the clause, and if the landmark is elaborated by an unmarked nominal, it is the object.

Liddell noted that overt subjects and objects are not required in an ASL clause if the referent is already salient in the discourse. Referents may be made salient either in preceding clauses or in a topic construction, marked by raised eyebrows, the head tilted upward, and an optional pause at the end of the topic (Liddell, 1977). For example, in each of the sentences in (12a-d) the agent encoded by GIRL elaborates the trajector of the ASL verb PET, and the patient encoded by BEAR elaborates the landmark role of PET[2].

12a) PRO-X GIRL PET BEAR

The girl pet the bear.

b) <PRO-X GIRL>$_t$ PET BEAR

The girl, [she] pet the bear.

c) <BEAR>$_t$ GIRL PET

As for the bear, the girl pet [it].

d) GIRL GO Z-O-O. LOOK-AT+ ANIMAL. <BEAR>$_t$ PET. COOL.

The girl went to the zoo. [She] looked at the animals.

The bear, [she] pet. It was great.

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[2] ASL signs are glossed using all capital letters. Two words that represent one sign and fingerspelled words are hyphenated. The span of non-manual marking is designated by brackets and a label such as "t" for "topic" identifying the kind of marking. For further glossing conventions see Valli, et al. (2011) and Liddell (2003).

The sentence in (12a) is in the canonical ASL word order, SVO, with the trajector encoded by GIRL as the subject, and the landmark encoded by BEAR as the object in the main clause. Because in (b) the trajector is encoded by GIRL in the topic phrase of the T,VO construction, the girl is salient in the discourse, and there is no need for an overt subject adjacent to the verb. Similarly in (c), BEAR encodes the landmark in the topic phrase of the T,SV construction, and there is no nominal in the object position. Finally in (d) the girl is established in the discourse setting in a preceding clause, and the concept of the bear is encoded in the topic. Both participants are salient in the discourse, and no subject or object appears in the clause with the verb PET. These construction types can also be used in describing affective events, encoding the stimulus and experiencer in previous clauses and topic phrases, and then denoting the affective change in a subjectless clause.

It is important to note that subjects precede and objects follow the verb in ASL, so that if the signs GIRL and PET are reversed in (12a), as shown in (13), the interpretation changes. Similarly, by changing the word order in an affective construction, the roles of the participants, the experiencer and stimulus, will also be changed.

13) BEAR PET PRO-X GIRL

The bear pet the girl.

Liddell's (1977) recognition of the critical role played by non-manual signals (such as those marking topics), and salience of the referents in the discourse setting went

far to explain syntactic constructions in ASL. Furthermore, Villanueva (2010) notes that subjectless clauses evoke construals in which the agent is not focused. To serve certain functions subjectless clauses are acceptable in ASL even if the referent has not previously been mentioned. Subjectless constructions may be used without a salient referent if the person does not know or chooses not to specify who filled the agent role in an interaction because the agent is assumed, unimportant in the dialogue, or because the person intentionally wishes to obscure the identity of the agent. Subjectless clauses may be used in affective constructions to leave either the stimulus or the experiencer, or both participants non-focused, foregrounding other aspects of the event.

While SVO has been identified as the canonical word order for ASL, it is fully recognized that the participants of events can be encoded in a variety of orders, through different constructions (Fischer 1975; Liddell 1980; Padden 1983, Kegl et al. 1996, Petronio and Lillo-Martin 1997, inter alia). ASL users describing affective events can use preceding and succeeding sentences, multi-clause utterances, topics, and subjectless clauses to encode the participants of an affective event in a variety of places relevant to one another and to verbs of perception and affect, evoking various construals of the event. Along with the order in which entities appear, the level of specificity with which entities are encoded influences the construal evoked by a construction, as we shall see in the results both of the pilot study and the dissertation analysis. The following sections first describe the methodology and then the results of the pilot study.

2.4.2 Participants of Pilot Study

Three female and two male native ASL signers with Deaf parents participated in the pilot study. Each consultant had completed some college education and self-identified as comfortable with written English. Additionally, the researcher offered clarification of the sentence meanings if the consultants indicated uncertainty to the desired meaning. This was done through gesture, without affective verbs, and by explicitly indicating which participant of the affective event was meant to be the primary focus.

2.4.3 Elicitation for Pilot Study

Each of the five native signers translated thirty English sentences. The sentences were composed of stimulus-subject affective verbs in three of the constructions described in (8), repeated here as (14).

14a) **Unmarked verb:** The bear fascinated the girl.

b) **Adjective describing stimulus:** The bear was fascinating.

c) **Participle describing experiencer:** The girl was fascinated with the bear.

Each of the ten English verbs was paired with an accompanying picture to assist the consultants in conceiving the same affective event, and to emphasize that the three sentences referenced the same circumstance. The sentences were presented one at a time with their accompanying picture on a Powerpoint presentation. Consultants were asked to read the sentence and consider how it would be signed in ASL. When they were ready to

sign, the Powerpoint was advanced to a blank screen, and the consultants was asked to sign the utterance as naturally as possible.

This project sought native signers' metalinguistic knowledge, so after the consultant produced the sentences for the first three verbs, the researcher explained the research question and asked for metalinguistic knowledge about how ASL construes focus on either the stimulus or experiencer. The first three translations sets were elicited before explaining the research question in order to collect data prior to potentially altering consultants' choices due to the discussion. No difference in construction types were seen between the translations produced before and after discussing the goal of the research. The three initial English verbs (*impress, fascinate, scare*) were chosen because they were expected to elicit three verb types: IMPRESS, which may be signed to map directionally for both the stimulus and experiencer; FASCINATE, which may agree to the stimulus; and SCARE, which was not anticipated to be directional. After the first three sentence sets were translated, and metalinguistic knowledge was requested, the remaining seven verbs were presented successively, and consultants responded to the elicitation materials with translations and commentary on the process.

2.4.4 Analysis for Pilot Study

The video footage from three cameras (one showing the consultant's full signing-space, one showing a close view on the consultant's face, and one showing the researcher) was imported to and synchronized in ELAN files. The signs were glossed using English words, and then each sentence was coded for sentence structure, trajector

and landmark roles, and non-manual features. Sentences were grouped by the ASL verbs used by consultants, and according to whether the stimulus or experiencer filled the trajector role. In cases where the trajector role was debatable due to ambiguous pronouns, the sentences were grouped with the stimulus-trajector category, as this was the least common construal, and consequently of particular interest. Sentence structure and the form of the verbs were then analyzed to evaluate strategies ASL uses to construe focus on the experiencer or stimulus.

2.4.5 Results of Pilot Study

Results indicated that the majority of ASL affective verbs select the experiencer as the trajector. While the English elicitation prompts were evenly distributed across three construal types, a large majority (103/127) of the ASL translations evoked construals in which the experiencer elaborated the trajector. The relatively few (24/127) ASL constructions that did encode the stimulus as the trajector showed evidence of English influence such as preposition signs not typically used in fluent ASL (e.g., TO, WITH). Consultants commented that translating predicate adjectives (e.g., *The bear was fascinating*) was especially challenging.

One consultant explained the difficulty translating stimulus-subject sentences in terms of animacy, saying “In the [those sentences], you’re trying to put action on things that can’t act. For instance, in a sentence like *The computer was infuriating.* A computer cannot be infuriated. There isn’t a real person in that sentence, so there isn’t someone to experience that anger. Or else it’s only talking about that thing, not about me or us

humans." This metalinguistic explanation further substantiates the idea that ASL predominately construes the experiencer as the primary focal participant of affective verbs, to such a degree that placing a stimulus in the trajector role seems effectively to designate it as an experiencer. Consequently if an ASL sentence describing the situation with the infuriating computer elaborated the trajector with the stimulus, it would evoke a personified construal of the computer, as though the machine were infuriated about something.

When asked how they might construe focus on the stimulus, consultants responded with constructions encoding the stimulus in several different discourse structures such as topic phrases, rh-questions/pseudo-cleft constructions (Wilbur, 1994), and in preceding and succeeding clauses, along with more elaborate descriptions of the stimulus itself. Constructions above the clause level were not investigated for the pilot study, which has partially inspired this continuing research.

Also of note from the pilot study, though none of the English elicitation sentences contained a verb of perception (such as *The girl <u>looked at</u> the bear and was fascinated*), almost 25% of the ASL responses (30/127) included a sign often glossed LOOK-AT, referencing the experiencer's perception of the stimulus. The constructions with this sign evoke a construal in which the experiencer takes an active role in the affective event rather than solely receiving the stimulus' influence. As mentioned, Croft (2012) and Talmy (2003) both describe affective constructions as non-canonical causal events, noting that because the relationships between the experiencer and stimulus are sensory, and therefore not visible, the event can be conceived of being initiated by either participant.

An observer may attribute the start of the interaction to the experiencer who must first attend to the perceived entity before reacting to it. Alternatively, the perceived entity can be conceived as the initiator, acting upon the experiencer by stimulating the affective change. The ASL lexemes of perception that appeared in about a quarter of the pilot study data exemplify the construal of the experiencer as the initiator, emitting a probe toward the stimulus.

2.4.6 Summary of Pilot Study

The findings from the pilot study indicate that ASL predominately construes the experiencer as the primary focal participant of affective events. However, the small number of participants and lack of naturalistic data called for further research on what constructions, if any, ASL users have at their disposal when they want to construe the stimulus, rather than the experiencer, as the most prominent or the singularly prominent participant in an affective event. This dissertation project was designed to address these limitations by eliciting a larger and more naturalistic data set in the continued investigation of affective constructions in ASL. Additionally, the analysis for the current project was not constrained to the clause-level, finding that ASL affective constructions are composed of two related clauses. The following section discusses aspects of ASL discourse above the clause level relevant to the affective constructions identified in the current project's data.

2.5 ASL Beyond the Clause

2.5.1 Discourse-level Analysis

Cognitive Linguistic studies have mostly focused on symbolic assemblies at the clause level and below, analyzing lexemes and their trajectors, landmarks, and obliques (Sanders and Spooren, 2007). However the overarching value of studying language in use readily leads to the consideration of more complex linguistic units of discourse in which phrases and clauses relate to one another. In the current study, affective constructions were predominately intransitive experiencer-subject clauses. At the discourse level, these clauses were almost always preceded by a clause that profiled the stimulus. The high frequency of these two clauses appearing together suggests they are one construction formed by two clauses, a preceding stimulus clause and a succeeding affective clause.

Langacker's (2008) explanation of prospective and retrospective elements applies to the relationship between these two components of a bi-clausal affective construction. Langacker points out that linguistic expressions in discourse must be understood in relation to one another, and the characterization of some expressions include not only the entities they profile, but also the expressions' relationship to the surrounding discourse:

> This is so regardless of their size and level of organization. At a global level, for example, the conventional expression *Once upon a time …* induces the expectation that the following discourse will be a certain type of story. Likewise, *…lived happily ever after* carries with it the supposition of being used to end such a story. We can say that the former is **prospective** and the latter **retrospective**.
>
> (Langacker 2008:460; emphasis in original)

The prospective and retrospective nature of linguistic elements varies in their level of schematicity. For example, the story evoked by the introductory and concluding expressions above is very schematic. It is expected to be of the fairy tale genre, but the characters and events are not specified at all. In contrast, words like *fro* which only appear in one expression: *to and fro*, are prospective or retrospective of very specific elements (Langacker, 2008). Most expressions that are prospective or retrospective evoke an expectation at an intermediate schematic level, which is true of affective clauses in ASL found in the current study. Affective clauses are retrospective of a stimulus event in a schematic sense: the identity and actions of the stimulus must be specified in each instance. The retrospective characterization of affective clauses is discussed further in Chapter VI.

Affective events are complex processes in that they consist of multiple sub-events, namely: the existence or action of a stimulus, an experiencer's perception of that stimulus, and the experiencer's affective change. One way that the cohesion of the two clauses of ASL affective constructions is created is through the retrospective nature of affective clauses. Another means of maintaining the cohesion is through surrogate blends, a prevalent feature of signed languages (Liddell, 2003; Dudis 2004, inter alia).

2.5.2 Surrogate Blends

In a surrogate blend, parts of the signer's body are blended conceptually with entities referenced in the discourse, allowing signers to demonstrate characteristics or actions of those entities (Liddell, 2003). For example, in describing an affective event, the

signer can use her body to represent either the experiencer, or the stimulus, or both. In describing the affective event with the girl and the bear, an ASL signer may incorporate surrogate blends in a number of ways. For instance, while using the hands to produce the final sign FASCINATE in (15), the signer may use her face to depict the girl's expression of fascination.

15) <BEAR>$_t$ GIRL FASCINATE$^{\rightarrow|bear|}$

Towards the bear, the girl was fascinated.

The surrogate blend is formed from two input spaces: the real space, which includes the signer and the space surrounding the signer, and the event space, which includes the girl and the bear. Elements of these spaces combine to construct a conceptual blend in which the signer's face depicts the face of the girl. Following Liddell (2003), blended elements, which are products in the blended space of input structures from two input spaces, are represented by words between straight brackets. Thus, in the blend used in (15) and illustrated in Figure 12, the signer's face in the real space that depicts the girl's face from the event space serves as the |girl's face| in the blended space. The location near the signer in the real space that represents the location of the bear, illustrated in Figure 12 with a gray oval, blends with the bear from the event space, and serves as the |bear| in the blended space. In the blend the signer's eye gaze identifies where the |girl| looked to see the |bear|. Figure 12 illustrates the input and blended spaces

created by this surrogate blend, and the correspondences between the mental spaces are shown with dotted lines.

Two points should be noted. First, the sign FASCINATE can be produced without an accompanying surrogate blend: without the fascinated facial expression. If the signer is telling another adult about the girl's reaction, she may produce FASCINATE with a knowing smile and nod, using her face to show her own appreciation of the girl's excitement. In cases in which the expression on the signer's face represents the signer's current emotions rather than the experiencer's fascination, there is no surrogate blend.

Second, the blend referenced in (15) includes only select elements from each input space. That is, the surrogate blend in this case tells the addressee nothing about what the girl's hands did. The signer's hands are not part of the blend, but rather add narration with the sign FASCINATE. Projecting only part of the body or face into a surrogate blend is possible through a process called body partitioning (Dudis, 2004). Without partitioning, the whole signer's body would depict the |girl's body|. The signer's hands could demonstrate the |girl's hands| holding the bars of the exhibit, and the signer's feet could depict the |girl's feet| moving back and forth in excitement. Body partitioning allows the addressee of (15) to recognize that only the signer's face is included in the blended space, while the signer's hands add lexical information about the event.

Body-Partitioned Blends

Body partitioning can also be used to incorporate additional visible elements into a blend. For example, in the first phrase of (16) the bear blends with the signer's non-

dominant hand to form a blend, the hand as the |bear|. The production of the depicting verb ANIMAL-BE-AT^{L1} places the hand to the side of the signer, indicating the |bear| in space. Then in the second phrase, when the signer's face blends with the girl's face, the signer's eye gaze directed toward the non-dominant hand blends with the girl's gaze to depict the |girl's gaze| toward the |bear|.

16) BEAR ANIMAL-BE-AT^{L1} GIRL FASCINATE$^{\rightarrow|bear|}$

There was a bear. The girl was fascinated [with it].

In (16) the |bear| is visually included in diagrammatic space. That is, the hand is significantly smaller than any live bear, and the space before the signer is much smaller than the bear exhibit and space in which the children stood. However, the whole event is depicted with only the signer's face, body, and signing space. The partitioning of the signer's body allows the hand to represent one aspect of the blend and the face to represent another aspect of the blend. Thus the stimulus and the experiencer of (16) are both visually represented in the blend simultaneously: the |bear| in a small scale, and the |girl| at a larger scale, represented by the signer's face.

Signers can also blend the stimulus on a larger scale by blending their face and body with the stimulus. For example, the sentence in (16) above may be preceded or succeeded by a surrogate blend of the bear, in which the signer blends her face and upper body with the face and front half of the bear's body. The signer can then "run the blend" (Fauconnier and Turner 1996), and depict the bear walking around the exhibit,

standing on its hind legs, or tilting its head in contemplation of the child. The signer may choose to depict the bear in this manner in one or more sentences, and then add the comment that the girl was fascinated with the bear.

Surrogate blends allow signers to demonstrate the behavior of a referent (e.g. the girl or the bear), which can lend itself to denoting certain events. Clark and Gerrig (1990) note that many things, especially gesture and facial expressions are easier to demonstrate rather than describe, and such demonstrations allow addressees to feel as though they had direct access to the event being demonstrated. This feeling of direct access can engage the addressee more than a description might, and Liddell (2003) suggests that surrogate blends are an involvement strategy in the same way constructed dialogue has been noted as an involvement strategy (Tannen, 1986; Metzger, 1995). Each has "immediacy and the ability to portray action and dialogue as if it were occurring in the telling time and… forces the hearer to participate in the sense making. Both these characteristics can be seen as resulting from the conceptualization of a real-space blend" (Liddell, 2003:173). The surrogate blend combines entities from the event space with parts of the signer's body in real space to bring the event into the here-and-now for the addressee, allowing the signer to demonstrate rather than simply describe the characteristics or behavior of referents.

2.5.3 Constructed Dialogue

So far, we have discussed how signers use surrogate blends to depict the action or appearance of a person or thing referenced in the discourse. A special type of depiction that makes use of surrogate blends is constructed dialogue. Critically, the term

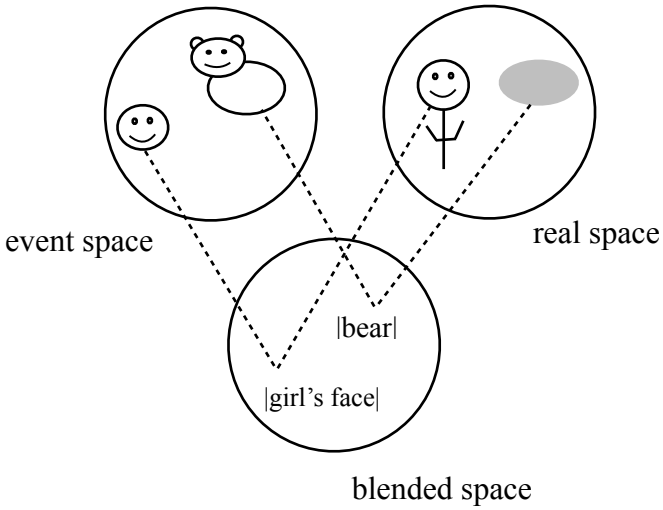

Figure 12. Mental spaces involved in a surrogate blend.

constructed dialogue emphasizes the fact that the quotations we present in our stories do not truly report the speech of our characters in our stories (Tannen, 1986). Tannen identified several uses of constructed dialogue which are not meant to represent actual previous speech, but are rather used to represent the implications of such language. For example, constructed dialogue can represent someone's internal discourse. If a speaker reports her own thoughts, it is unclear if it is meant as a direct quote of her thoughts or not. However, when we report another person's internal discourse, or even more decidedly, when we report the thoughts of animals, it is clear that the speech is indeed constructed, and not intended to represent actual discourse.

In the data for this project, consultants viewed a film in which the characters neither spoke nor signed. However, in narrating the story consultants regularly made use of constructed dialogue to depict the characters' thoughts, indexing their affective response to a stimulus. When signers use such quotations, they do not always include an explicit affect lexeme. Rather, the experience of the affective change is implied by the

quote itself. This type of affective construction is not unique to ASL; English speakers often indicate an affective response through constructed dialogue, including interjections that are spoken with prosodic markers representing the experiencer's affect, as in the comment in (17).

17) The snow is annoying. It's like, "Ugh!"

Clark and Gerrig (1990) analyze in-depth how English speakers use quotations as demonstrations, whether directly quoting previous speech or creating representative speech. They also note, as in Tannen (1986), that constructed dialogue, or quotations as demonstrations, fall on a continuum between direct and indirect speech. For example, if someone reported her friend's statement in (17), she could construct the reported complaint in a number of ways. The sentences in (18a-d) each describe the same situation, but are decreasingly depictive of the original discourse. In (a) the current speaker mimics the affective prosody of the original speaker (indicated by italics and an exclamation point), whereas in (b) the speaker quotes the original words, but does not exhibit the original affective emphasis. In both (c) and (d) the level of demonstration can differ depending on the speaker's prosody.

18a) Casey said, “The snow is pretty annoying. It’s like, ‘*Ugh*!’”

b) Casey said, “The snow is pretty annoying. It’s like, ‘Ugh.’”

c) Casey said the snow was annoying. She was like, “Ugh.”

d) Casey was annoyed by the snow. Ugh.

In (18d) the speaker does not directly attribute the interjection to Casey, but the addressee understands the *Ugh* to align with Casey’s feelings about the snow (and may interpret it to simultaneously reflective of the current speaker’s empathy with Casey’s feeling). This same varying level of direct versus indirect constructed dialogue has been identified in ASL with regard to constructed action (Metzger, 1995), and the various types of constructed dialogue noted in English by Tannen (1986) and Clark and Gerrig (1990) were also seen in ASL in these data. Consultants produced constructions with varied prosodic emphasis similar to that seen in (18a-d), as well as through changes in eye gaze and head movements that changed during the production of an affective lexeme. This change effectively ended a surrogate blend while signing an interjection that expressed the experiencer’s changed affect.

2.6 Symbols, Icons, and Indexes

Chapter II has outlined different means by which language conveys meaning: with lexical items and constructions, and through surrogate blends, specifically those with constructed dialogue. Another way to understand these categories is through conceiving of expressions as icons, indexes, or symbols. The definitions here are inspired by Peirce’s

(1932) semiotic trichotomy of signs as presented by Jakobson (1966). The categories as described here support the discussion of the three affective clause types identified in this project, and so this section reviews this categorization, and Chapter VI elaborates on how ASL affective constructions make use of symbols, indexes, and icons.

Symbols are arbitrary forms that through convention are understood to denote their referents. For example, the ASL sign SCHOOL has no relationship in form to the entity it denotes. Through linguistic convention, the ASL language community recognizes the form of SCHOOL to reference institutions of education. Symbols have been at the center of discussions about psych verbs and other linguistic expressions.

Icons can be conceived of as falling on the opposite end of the arbitrary/iconic continuum from symbols. Icons convey their meaning because they are similar in form to the referent they denote[3]. Observers perceiving an icon recognize the referent through the resemblance that the icon holds with the entity, such as a photograph of a tree serving as an icon for the tree itself. Linguistic examples of icons include constructed action and constructed dialogue. When a signer enacts a surrogate blend, the addressee understands the depiction as an icon representing another person's movements rather than the signer's own action.

Finally, indexes reference an object through "factual, existential contiguity" between the index and the object with which it is associated (Jakobson, 1966). Jakobson gives the example of smoke being an index for fire. Regardless of whether the fire was lit

[3] Sicoli (2014) points out that the resemblance of an icon to its object can be based on a cultural paradigm as well as a natural mapping between the forms, though this distinction did not play a role in the current study.

specifically for the purposes of communication, as in the case of smoke signals, or whether it was not even initiated by humans, as with many forest fires, a person seeing smoke infers the existence of fire (1996:16). This is also the case for affective facial expressions. An internal affective change in a person is non-visible since it is a psychological event. Through our own personal experience we recognize that typically facial expressions and body movements are indicative of an internal state; thus we perceive the external manifestation of emotions as indexes for the emotions themselves. While it is possible to have smoke without fire, and likewise it is possible for people to produce affective facial expressions without an internal affective change, observers seeing smoke or an affective facial expression infer the presence of the respective indexed object.

Symbols, icons, and indexes are used in ASL affective constructions to reference an experiencer's affect through conventionalized symbols, that is lexemes, and through surrogate blends that serve as icons representing visual indexes to non-visible psychological events. The Discussion chapter explores the distinct construals evoked by affective constructions with symbols, indexes, and icons.

2.7 Summary of Background

Chapter II has provided a review of the necessary background to set the stage for this study. The first section summarized investigations into psych verb semantics in both spoken and signed languages, and how verbs like *admire* and *amuse* can be in the same verb class and yet encode the experiencer of the affect as the subject or the object,

respectively. This dissertation contributes to the discussion by taking a new approach to the analysis of affective constructions using a Cognitive Linguistic view, and so Chapter II explained relevant concepts of this framework, specifically concepts necessary for a Cognitive Grammar analysis.

In a Cognitive Grammar analysis, linguistic expressions are viewed as falling on continuums of schematicity and complexity, rather than the lexicon and syntax being conceived of as autonomous categorical features of language. Language is created and understood by drawing on non-linguistic cognitive processes, and so this chapter presented examples to illustrate how these processes are capitalized on for linguistic expressions. Critically, grammar is considered symbolic, and so the meaning of expressions includes not only the denoted content, but also the construal of that content, such as relative focus evoked through different profiles of a conceptual base. Chapter II reviewed ways that various grammatical forms evoke distinct construals of events.

After providing foundational concepts from Cognitive Grammar, this chapter discussed the conceptual base of affective constructions and presented examples from two unrelated spoken languages, English and Atsugewi, to illustrate cross-linguistic variation in the ways languages present affective events. Previous studies indicating significant variance in affective constructions from one language to the next warrant an investigation into affective constructions in ASL. Prior to the current study, a pilot study was run with native ASL signers conducting a translation task. That study is summarized in this chapter, and its findings and how they informed this dissertation project are reported.

Part of the pilot study findings highlighted the need for a broader analysis of ASL affective constructions that includes an examination of depiction as well as constructions above the clause level. This dissertation's analysis included both aspects, and so Chapter II described how surrogate blends are used in ASL, reviewed functions of constructed dialogue, and defined the categories of symbols, indexes, and icons used to present meaning in different ways.

Chapter II explained foundational concepts that were used in the design and analysis for this dissertation. Chapter III describes this project's elicitation materials and processes, the demographics of the consultants who participated in the study, and the processes used for the coding and analysis of the data.